

| Section                                | Questions  | Response  |
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| Functional Requirements - Data Sources | 1. What are the source systems we need to consider for the project?<br>2. Do we need to take data (source) from GHSC-BI&A Supply chain Data only ? If yes then how many tables are there in total?   | For Phase I, you will need to import from the GHSC-BI&A system as well as a secondary country system. The database schema for the GHSC-BI&A system is now available on the wiki referenced in the RFA. We are still confirming this secondary data system for import but it is expected that it will already adhere to the Information Specification. For Phase II, we expect that there will be additional data sources that will be imported. We are planning on releasing a second request for proposals/awards during the upcoming Notice D, currently planned for February, to support additional source data systems to contribute data to the DC&A platform.   |
| Page 2                                 | "USAID has developed a robust cloud-based system to support actionable and rich analytics on USAID" 1. Is this system already developed, and if yes then by whom and what are the technology stack used in it? 2. How will this data be made available (VPC to VPC ) or any other method?  | This is the BI&A-GHSC tool referenced in the RFA. The GHSC-BI&A vendor will be available to assist with the migration of the existing data. The method of data transfer will be determined by Digital Square in conjunction with the the successful submitter and the GHSC-BI&A vendor.   |
| Page 2                                 | Digital Square, with support from USAID, is accepting applications to establish a multi-tenant cloud-based system to be utilized for a Data Collection and Analysis (DC&A) platform for supply chain data from electronic logistics management information systems (eLMIS) based on open infrastructure. 1. Does that eLMIS system needs to be built? 2. Does the Multitenancy Cloud need to be on same Platform or will different Clouds work? 3. What are major expectation on CD&A -Just Dump the data on Data Lake or something else ?   | There are multiple eLMISs that are in operation and supported by USAID and other donors in LMICs. It is not expected that an eLMIS system be developed under this scope of work.<br><br>There are no restrictions on the cloud service platforms that can be proposed. One of the objectives of this RFA is to control recurrent costs for cloud services.<br><br>The major expectation of Phase I is to move the existing GHSC-BI&A data into a data lake and provide the indicated visualizations of the data. In Phase II, the major expectations are to support the addition of data sources within the same data model or other open data models, to allow for segmented views of the data for security or privacy reasons, and to provide additional visualizations and analytical tools. |
| Page 2                                 | Proposed Project Timeline: The project is split into two phases with a proposed timeline outlined in Table 1 below. However, all submissions should include a full application with budget and technical approach for both phases. Submissions for one phase only will not be accepted. For the full application, do we need to integrate it with new system CD&A?   | For Phase II of the full application, the assumption is that new data sources and visualizations would be built upon the DC&A tool developed in Phase I. It is expected that there will be multiple vendors working on connecting data systems into the DC&A tool and as such full documentation and the ability to rapidly deploy a DC&A development environment should be considered priorities for Phase II.   |
| Page 2                                 | Timeline are very stringent, with a project start date April 1, 2019 to 15 April 2019 and final deliverables 30 April. Please share more inputs to choose this kind of timelines against the work quantity.  | The database schema for the existing data sources has been shared on the wiki.  |
|  | Final deliverables due:<br>Confirm with partners that data feeds are accurate, and dashboards, reports, alerts, and data visualizations are working.<br>Final migration of GHSC-BI&A supply chain data.<br>Development of representative data visualizations for achieving visibility of the Global Health (GH) supply chain, and a country's supply chain. (See Subtask I.2). Development of representative alerts, reports, and dashboards for monitoring the performance of the GH supply chain, and a country's health program. (See Subtask I.3). Who will be responsible for develop this systems ?  | The applicant should propose a solution that includes the indicated visualizations. Additional visualization and analytical tools may be added in Phase II either by the successful applicant or other vendors, for example though an expected call for applications in the upcoming Notice D announcement.   |
| Page 4                                 | On-time delivery of order lines<br>•Fulfillment cycle times<br>•Product quality assurance<br>•Budgets and expenses<br>• Product, manufacturer, and wholesaler master lists<br>• Procurement<br>• Freight forwarding<br>•Inventory management<br>•Financial tracking and reporting<br>•Metadata where possible<br>•Data quality assurance, including completeness, timeliness, and accuracy of the data<br>•Data exchange between the DC&A solution and several United States Government (USG) data sources, including, but not limited to all USAID supply chain contractors, country eLMIS instances, The Global Fund (TGF), Reproductive Health Supply Coalition (RHSC) , ForLab (OpenSource) tool, Open Logistics Management Information System (OpenLMIS) instances and others as directed by USAID in consultation with interagency supply group (ISG) representatives<br>1. Who will be responsible for development of above systems | A number of vendors are currently contributing to these systems and they are supported through a variety of donors. It is expected that the DC&A platform will be capable of ingesting data from these systems using standard open data models and APIs.  |
|  | Apply a search index to both structured and unstructured data sources and map them into a classification structure of dimensions and measures that users can easily navigate and explore using a search interface. Unstructured data will come from documents (including pdf, doc, xls, ppt, etc.) stored through a knowledge management feature, as well as through social media sources such as Facebook and Twitter<br>1. Knowledge Repository criteria ? 2. Who will be responsible for Master Data Management ?   | You are free to propose a solution for a knowledge repository for unstructured documents with relevant data. There will also be a knowledge repository for the DC&A platform available for end-user documentation, tutorials, etc. This later repository will be based on DSpace.<br><br>Master Data Management will happen through a variety of stakeholders and is dependent on the jurisdiction in which an electronic LMIS is deployed. Key metadata sources are Master Facility Lists and Master Product Lists that may be managed by registries in a country. Through other investments, Digital Square is and will be promoting the deployment of facility registries adherent to the mCSD standard from IHE and product registries adherent to GS1 standards.                           |

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| Does Phase 1 last only one month as stated on page 2 and 3? It looks like a very tied deadline to produce such a software.  | Yes, there is a time constraint for Phase I for the development of the data lake and the visualizations. We recognize that not everything can be done for a full product to be delivered in that timeframe, in terms of documentation and tutorials and productization. Phase II is expected to account for some of that.  |
| Phase 1 time allocation is just 1 month. Tasks as described in I.1 (Data Lake), I.2 (Data visualization) and I.3 (Data Analytics) requires setting up a fully functioning dashboard and analytics platform with current data warehouse and with linkage to current data providers. For a potentially new contractor, this 1-month timeline may essentially mean that, current platform may need to be taken over "as is" and make it operational. However, RFA does not appears to contain technical details of current platform. What additional information can be made available and what assumptions can be made to meet this 1-month deadline? | There are things in the wiki page that's referenced in the RFA, you can find a link to the database schema for the current platform as well as the various data models that are used.  |
| Who is the end client?  | There are two types of end clients envisioned for this platform. One are the global procurers of the medical commodities, particularly USAID, but also represented by other members of the inter-agency supply group. The second main client would be ministries of health. We envision it as a platform to be used by the ministry as well as the global purchases and allow them to share data amongst the purchasers and the ministries.  |
| There is a substantial amount of business analysis required for all the different dashboards, etc. Who is the end client for this? If you had to estimate how much of the current analysis is already spelled out vs. new types of analysis that will be requested.   | ...and by that client you mean who you will be interacting with on a daily basis? Digital Square will be working with the successful submitter in terms of business analysis and requirements finalizing, working with USAID and the current vendor to further specify any further information that's needed in the visualizations and analytical tools.   |
| What about the license of the software? Can we use the code we have generated for other purpose?  | Digital Square is making investments in global goods which are generally open source digital health tools. We recognize this is being deployed by the cloud and not all cloud services are open source, however, we are working with the OpenHIE Devops community to develop a set of guidelines on how cloud services should be utilized and software licenses. That Devops community is linked in the RFA and you can find meeting notes from yesterday's call and notes for the upcoming call in February where we will continue the discussion, but all the source code should be open source, documentation should be creative commons and public repositories and registries should be used. |
| Can you please briefly describe the what is this project all about and what are the key takes and objectives and what is expected output in technical terms?  | We have multiple donors that are doing global purchasing of medical commodities for use in low- and middle-income countries, we also have national ministries of health that manage supply chains for the health system. The goal of this project is to create a platform to bring all of these information sources together to improve the purchasing and forecasting the purchasing of medical commodities and be able to one required segment of sensitive data between partners but in general to share data amongst partners so they can collaborate on the planning of purchased.  |
| Is it centralized, or will it be across different countries?  | One central platform. It would be reasonable that a ministry may wish to stand up their own version of this tool if they have jurisdictional requirement on where data can be housed, but some of this will be data coming from the countries and some will be coming from the donors.   |
| How many end users are expected by the end of year 1?   | We expect one primary end user being USAID and another country (to be determined) at a minimum, but we expect it to expand to include other countries and global purchases, but an exact number, we don't have that at this point.   |
| Is the existing Intellicog vendor still available to support export of data and support this hand-over? Given the very short timeline, their participation may be valuable.   | Yes, it is our understanding they will be available.   |
| If we are selected for Phase 1, are we automatically selected for Phase 2?  | The ideal scenario is that yes, the same organization would conduct both phases of work in this RFA. However, Phase II will be contingent based on performance of Phase I.   |
| To whom can we write an email to get a copy of this discussion?   | The wiki link that's referenced in the RFA will post the Q&A and a recording of this meeting, and you can get it from there.   |
| Are you looking for hadoop based software like cloudera , hortonwork or MapR on cloud like AWS or Azure ?   | That is up to you to propose in your submission.   |
| What are Digital Square's views on proposals submitted in partnership between 2 or more vendors?  | We are open to that, there is no criteria on whether one is preferred over the other.  |
| Is it permissible to combine the technical response and cost narrative in one document or is there a requirement to separate these into 2 documents? Knowing already that a separate Excel of the detailed budget is required in addition.  | I would suggest to have it in one doc so we know all was submitted at the same time. The budget itself should be in an unlocked Excel.   |
| How many source systems are present in all? Is there a Staging area, or do source systems directly talk to the Warehouse layer?   | For Phase I there will be two source data systems. For future work we can expect that where there are investments in low and middle income countries for purchasing, that those are potential data sources and whether that is at the national store, at the country level providing data, or more further down in the supply chain there may be one or multiple sources in a country, but it's not expected that all those systems will be covered in this scope of work, particularly in Phase I.  |
| Are all your data sources relational as of today?   | Yes, it's a relational database that is the main data source. In Phase II that may change.   |
| For non-relational data, what are the data formats or data points expected to be ingested?  | We did provide the data model and logical reference model and the information specification, there is no messaging format for that, that would be a part of your submission. As a messaging format for ingestion, there are other standards as well that might be of interest, the GS1 or some of the HL7 standards that deal with supply chain that should be considered for future development but not for Phase I.  |
| What are the types of data formats expected to be ingested? Flat files, real time APIs, database dumps, shared databases?   | In Phase I, we have a limited data pool based on the information specification, in the future we may have flat files, real-time APIs as well as other systems.   |
| What is the ETL Logic in place currently? What are the capabilities required for the new ETL Layer?   | I don't have the details of the current ETL logic in place, for the DC&A platform the ETL layer should be capable of ingesting data in a variety of open data formats, particularly the ones just mentioned.   |
| How many times is data expected to be ingested into the warehouse - every day/month/week/hour/real time?  | Various load levels should be expected depending on the deployment. The platform should be readily scalable to ensure that various load levels can be met.   |

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| How do you decide on what is the most valuable data to be maintained in your warehouse that you will need for analytics? Is it time based – hot (data < 6 months), warm (6-12 months) and cold (>12 months) for example?  | It is the purchasing data primarily that's the focus on Phase I coming from USAID.  |
| What is the end user audience of this warehouse? How many people/tiers in the organization?   | Multi-tenant. Looking for a platform that can be deployed for USAID and for another donor that they can selectively share data that's not sensitive, across partners. We're looking for a platform that can be deployed in multiple instances but with a central instance for USAID data.   |
| What are the capabilities required for the visualization layer? Drill down, graphs, dashboards?   | Those requirements can be further specified during Phase I and more in Phase II, as we work through documenting the requirements, one of the intentions in the visualizations in Phase I is to show that the system is capable of the visualizations and we are expecting Phase II to be the refinement of those visualizations.  |
| Can we reply to the RFA as a joint venture between two companies? Or have a sub-contractor?   | Yes   |
| Is there an estimated number of reports that we're looking for?   | In Phase I, we are looking for the visualizations and reports that were provided as screen shots in the RFA, and that's the extent. For Phase II that's not defined, but will be defined through interactions with various stakeholders.  |
| Can the proposal submission deadline be pushed further down the line as Europe had a shutdown of two weeks due to the Christmas holidays and that the RFA was released on Dec 19th?   | At this point we are not pushing back the deadline and continuing forth with the indicated deadlines. Application submissions are due by 5pm EST on January 24, 2019.   |
| For Phase 1, will it take 2 sources as scope and dump data on data lake on cloud as of now for other sources will it be part of change request?   | Yes, Phase I we have the two data sources we will dump into the data lake and then produce the visualizations based on those and other data sources will be a part of the change request for Phase II or developed by other vendors as well. For that reason it should be made easy for another vendor to stand up the platform for their development and testing.  |
| Do you expect the vendor to propose an open source solution stack?  | Yes, we want to maximize utilization of global goods. That being said, if at a later point if someone wants to tie in a commercial system such as an additional visualization platform, that should be capable in the platform architecture. For further information check the guidelines in the OpenHIE Devops call linked in the RFA.   |
| What support engagement Model is expected? Onshore / Mixed / Shared Service- Are you Looking for TNM model or Fixed Price Model? Garbage Data Cleaning will be a part of this project?  | Expected that at least for Phase I and priority for Phase II that we will have normalized data coming in, however, tools to help clean data would be appreciated. In the RFA is a discussion in Phase II on what that maintenance model would look like.  |
| Is there any feasibility to keep the existing BI&A tool running a couple extra months to alleviate the risk of the short 1-month timeline to move data out of that into the new platform? Or a gradual or phased move from the existing BI&A to the new platform? | That is a contingency that can be explored but not the preferred model. We want to keep the timeline of April 30th for handover if at all possible.   |
| What kind of metadata or ER diagram is available in the current source systems? Can it be shareable or any technical docs which are sharable to selected vendors?   | We don't have currently available the metadata, but we will clarify as soon as possible, but the data model for that metadata has been shared already. All of the technical specifications and documentation available will be shared and put into the knowledge repository for the platform. The metadata may not necessarily be shareable as some is jurisdiction defined and requires the approval by the Ministry of Health or other national authority. Some of the data such as the master facility lists are already online for some of the countries we are looking at for Phase I and Phase II but those are jurisdiction dependent. |
| Should submission be in a specific format ( like Word or PPT )?   | We advise that you send files in commonly recognized MS formats. We will not accept responsibility for resolving technical transmission problems with applications. A hard copy of the application should not be sent. Except the budget should be in an unlocked Excel.  |