

Readiness Self-Assessment for Implementing a Unique PEPFAR DATIM4U Instance

Updated: July 26, 2016 (updates noted with **)





1. Overview

DATIM for Operating Units (DATIM4U) is a standalone version of the Global DATIM web-based application that can be implemented exclusively for your PEPFAR Country Team (OU) and Implementing Partners (IPs). With DATIM4U, OUs can collect MER Results on a monthly basis (** or on a Quarterly basis in some cases as described below) and submit the quarterly aggregations to DATIM Global at the press of a button.

Key Features:

- DATIM4U is preconfigured with the data entry forms needed to collect MER Results, and those data entry forms can be further extended by the Country Team to incorporate additional Indicators as needed.
- DATIM4U automatically synchronizes local data with Global data, including PEPFAR site lists, Implementing Mechanisms, and up-to-the-minute versions of indicators and disaggregates.
- DATIM4U is designed to be the base technology OUs can use to automate their data exchange with Ministries of Health (MoH). Enabling this feature requires coordination with your MoH.
- DATIM4U includes the industry-standard HMIS platform, DHIS2, and a collection of technologies (based upon OpenHIE specifications) which enable automated information exchange between OUs and S/GAC.

1.1. How to use this Document to Plan Your Own Environment

This document is designed to assist you in determining which DATIM version is the most appropriate to your needs, and – in particular - whether DATIM4U version is right for you. If DATIM4U appears appropriate, this document also identifies the additional considerations you will need to be aware of before moving to installation and deployment.

Step 1 - Answer the following question: Does your Country Team believe that you need to collect and analyze data in addition to that available in DATIM? Or do you believe you want to begin data exchange with MoH? Or, do you want to reduce the data synchronization required to operate your current in-country M&E system? If you answer ‘yes’ to any of the above, continue to read on. If you answer ‘no’ to all three of the questions, DATIM4U probably isn’t for you.

1.2. Current DATIM Implementations

Name	Status	Description
DATIM Global Quarterly (DATIM)	Open, Active	PEPFAR’s global quarterly monitoring and evaluation reporting system. Maintained and operated by PEPFAR HQ.

DATIM Global Monthly (DATIM-GM)	Open, Active	Maintained and operated by PEPFAR HQ. Allows partners to collect data monthly in line with typical health data collection practices. Automates aggregation for quarterly data submission to “Global” DATIM.
DATIM for OUs (DATIM4U)	In Pilot, upcoming	Stand-alone version of DATIM to be installed locally. Maintained and operated by local resources in conjunction with S/GAC. Built using Open Health Information Exchange (OHIE) reference technologies. Allows extension of the DATIM system for locally-specific needs (see below for examples). Automates metadata synchronization and automates data submission to Global DATIM.

2. Implementation Planning – Data Requirements

Listed below are some of the most common requirements which might lead an Implementing Partner or PEPFAR Country Team to investigate DATIM4U to see if it addresses their specific needs. The list below is far from exhaustive but is intended to provide a representative sample of the kinds of requirements which DATIM4U is intended to address.

To the extent possible, the requirements are discussed at a generic level (section 2.1). We then attempt to highlight where DATIM4U could be used in a fairly straightforward way and to further decomposed some of the complexities attendant to the requirements, providing a brief analysis of the possible issues and solutions for each (sections 2.2 – 2.4).

Step 2 - Initial Assessment:

The Initial Assessment is designed to allow you to determine whether DATIM4U can be of benefit to your country team – and, if so, how much work it is likely to require to address your specific needs. The first step is to determine whether your requirements fall into the ‘preferred’, ‘moderate’ or ‘complex’ category. The more complex your requirement, the more time and effort you will have to put in to address it. In the most complex cases, effort and cost will likely exceed the DATIM4U benefits.

Please read the sections below, as needed to define your requirement, and determine your level of effort category (preferred, moderate, or complex):

- Does your Country Team believe that you need to collect and analyze data in addition to that available in DATIM? Go to section 2.2
- Do you believe you want to begin data exchange with MoH? Go to section 2.3
- Do you want to reduce the data synchronization required to operate your current in-country M&E system? Go to section 2.4

Reasons for Implementing a DATIM4U

NOTE: Modification of the DATIM4U software is discussed below. Country Teams may modify the software in many ways, including those discussed below. The modification may result in disabling some

of the core data exchange features and functions between DATIM and DATIM4U. Country Teams MUST ensure that all modifications are fully tested and that all data exchange features and functions are fully operational prior to deploying of modified version of DATIM4U.

2.1.1. Need Customized Data Entry Capability

In many instances, users of DATIM Global – whether they be Implementing Partners, PEPFAR Country Teams, or others – will find that they need more flexibility and control over data entry forms (data sets) than that which is provided by the ‘locked’ data sets provided in DATIM Global. Reasons for this may include:

- Country teams collect data in addition to that which is required by Headquarters
- Implementing Partners work with other donors beyond PEPFAR and would like to extend their M&E system to address other donor reporting requirements
- A host of other scenarios too numerous to detail here

2.1.2. Need to Exchange Data with Ministries of Health (MoH)

Integrated reporting – reporting to PEPFAR using a source of data that is common between the IP/OU and MoH – has long been a major program goal. Integrated reporting may be best accomplished using an approach known as ‘collect once – use often’. This approach envisions data collection at the point closest to the point at which the data is originally generated and then providing that data ‘up the chain’ to all approved consumers above that point.

Presuming the OU and the MoH have already established a data sharing agreement, the OU will likely be best served by maintaining their own DATIM instance locally so that they can fully implement, own, and operate the data exchange between their DATIM instance and the MoH HIV/AIDS data source. In general, support for this level of data exchange is not a feature supported by DATIM Global.

2.1.3. Need Local Data Repository (for example, if you derive aggregate data from patient level Electronic Medical Record system (EMR))

As with the data exchange with MoH discussed above, deriving aggregate data from patient level reporting systems has long been a major program goal. The proceeding discussion, relating to the need for an independently controlled DATIM instance in support of data exchange, is equally relevant to the need to exchange data between EMRs and DATIM.

2.1.4. ** Exploring the Need for the replacement of an existing M&E System

Metadata synchronization (ensuring that DATIM Global site lists, mechanism, indicators and disaggregates remain synchronized with your local system) is a key feature of DATIM4U. While you must administer this feature locally, the process is fully automated. (Note: this section will be fully described in the next update).

2.2. Exploring the Need for Customized Data Entry Capability

We now examine three scenarios for using DATIM4U to extend data collection. The scenarios move from straight forward use cases to complex use cases in order to provide context and to highlight potential pitfalls.

2.2.1. Preferred Case: Extending DATIM to collect data without dependencies on DATIM data elements

This use case assumes that DATIM4U has been implemented and is being used with pre-configured DATIM data sets in support of PEPFAR reporting. It assumes that the users would like to extend DATIM4U to allow them to report on non-PEPFAR data element using newly/locally defined data sets.

Adding new data sets with locally defined data elements is fully consistent with the DATIM4U concept and technical approach (though actual functionality will need to be verified during the DATIM4U beta test and pilot). The key is to ensure that the metadata (data elements, indicators, integrity checks, data sets, etc) which are added are all easily exportable and can be re-imported whenever the core DATIM4U metadata package is refreshed (or it could be that the DATIM metadata can be refreshed without needing to export/re-import the locally maintained metadata...we need to verify through testing).

2.2.2. Moderate Case: Extending DATIM to collect data with dependencies on DATIM data elements

A more complicated use case – though one we expect to see quite often – is where an IP/OU would like to modify/extend a PEPFAR-defined indicator. Let’s say, hypothetically, that a OU has decided that they would like to collect an enhancement to the list of PEPFAR-prescribed Key Population to include a further breakdown of drug user by the type of drug they use (let’s say heroin users vs users of other types of drugs).

First, the OU needs to identify the Indicators involved, for example ‘Number of key populations reached with individual and/or small group level preventive interventions’ and ‘Total estimated number of key populations in the catchment area’ – both of which have the subordinate disaggregation of ‘people who inject drugs (PWID)’. In this example, the OU would presumably define two new data elements, ‘PWID – Heroin’ and ‘PWID – drugs other than Heroin’ which, when aggregated, could be used to provide the PEPFAR-required disaggregate, PWID.

The issue the OU now faces is whether to associate the new data elements with an existing PEPFAR-maintained data set by ‘forking’ the data set (creating a modified version that would thereafter need to be locally maintained) or by creating an independent data set that would augment or replace the PEPFAR indicators identified above. The table below spells out some of the considerations to be taken into consideration:

Approach	Pros	Cons
Scenario 1: Fork the data set (replace the official data set through modification or redevelopment) – see 2.2.3 below	Provides the most logical and consistent user interface by keeping relevant data in a single place	Mean the OU must now assume responsibility for incorporating all PEPFAR HQ required modifications to the data set which will almost certainly be difficult and expensive

Scenario 2: Create data set to augment the identified data elements in the official data set	Allows OU to continue to benefit from HQ maintenance of the official data set	Requires that some of the data associated with the PEPFAR data elements be entered on the official data sets and then that users jump to another dataset to complete the data entry activity for that indicator
Scenario 3: Create data set to replace the identified data elements in the official data set	Allows OU to continue to benefit from HQ maintenance of the official data set	Provides more logical flow insofar as users are instructed to use a separate data set for entry of all data associated with the identified indicator.

In all three scenarios described above, the OU is responsible for writing the code necessary to move the data from the locally defined data elements into the official data elements (or coming up with an alternative process to effectively meet this requirement) and providing it to HQ correctly formatted for the current period.

2.2.3.Complex Case: Replacing pre-configured data set with your own data set

This case is effectively the same as Scenario 1 in 2.2.2 above except taken to its logical extreme. The issues involved with it are the same, the key drawback being that the OU assumes all responsibility for maintaining sync with the (seeming ever changing) HQ data requirements. This has proven over time to be a very difficult and expensive task and is strongly discouraged.

2.3. Exploring the Need to Exchange Data with Ministries of Health (MoH)

We now examine three scenarios for using DATIM4U to exchange data (specifically, Indicator Results) with other partners, placing particular emphasis on exchanging data with Ministries of Health. The scenarios move from straight forward use cases to complex use cases in order to provide context and to highlight potential pitfalls.

2.3.1.Preferred Case: Exchanging data elements which have a one-to-one mapping

The key to exchanging PEPFAR Indicator data with the MoH is to ensure that all metadata is synchronized before the exchange is attempted. The term metadata – literally the ‘data about the data’– can be defined, for the purpose of MoH to PEPFAR data exchange, as summarized in the table below and further elaborated afterwards:

Metadata Domain	Data Elements	Mapping Requirement	Stability
Who	Implementing Partner/Implementing Mechanism ID	Not required for submission of Results if Targets have previously been mapped (discussed below)	Unlikely to change during defined contract period (generally 4-5 years)
What	Indicator/Data Element	One-to-One Mapping	A small percentage will

	& Disaggregates	Required	change occasionally – generally stable over multiple years
Where	Facility/Site ID	One-to-One Mapping Required	A small percentage will change occasionally – generally stable over multiple years
When	Period for which data values are valid	One-to-One Mapping Required	Once aligned, generally quite stable

Who:

The ‘Who’ domain defines the entity which submitted the Indicator Result value; the Implementing Partner - along with the specific contract mechanism – responsible for performing the work that the Indicator Result is reporting against. While this discussion will need to be further elaborated when this document’s intended audience is extended beyond the IP/OU to whom it is currently directed, for the time being, we assume the audience understands the context for these data elements.

The note under the column ‘Mapping Requirements’ means that S/GAC currently expects that Indicator Targets will be set at the lowest level of granularity for which Results are expected to be collected and that these Targets will be set in DATIM Global prior to Results collection. It further assumes that the Target data will be entered including valid DATIM contract/cooperative agreement IDs. Provided that this expectation is met, Results data submitted by the MoH can ignore this metadata requirement because Results submitted against Indicators at a given Site can be associated with the Implementing Partner and Implementing Mechanism based upon the information stored when the Indicator Targets that were previously set.

What:

The ‘What’ domain defines the Indicator (for example, Number of People Currently on Treatment for HIV/AIDS) and Indicator Disaggregate (for example, that number further broken out to reflect gender and/or age categories) against which the Result is being applied. In this ‘preferred’ case there is an assumption made that the mapping between Source Indicators and Disaggregates (generally the MoH system) and DATIM (the presumed destination system) is a one-to-one mapping and no data ‘transformations’ are required (this is why it is considered the ‘preferred’ case – more complex cases are discussed below).

Where:

The ‘Where’ domain defines the actual physical location reporting the Results. Typically the Where domain will either be a Health Facility or a Community (generally a geopolitical boundary such as a district), though there are exceptions to this rule that will need to be further elaborated in future iterations of this document.

When:

The 'When' domain defines the timespan covered by the Results. PEPFAR Indicator Results are collected either on a quarterly, semiannual or annual basis, depending upon the specific Indicator. Results need to be submitted using the correct PEPFAR period for a given result.

Summary:

Assuming a one-to-one mapping exists for each of the metadata elements discussed above, data can be exchanged between any two aligned systems with relative ease. The expectation here is that the metadata 'keys' (the internal system identifiers used to uniquely represent the specific items within each designated domain) are transformed and resolved between the source and the destination at a predetermined location along the transmission process path.

2.3.2.Moderate Case: Exchanging data where some data transformation is required

While the 'Preferred Case' discussed above is fairly straight forward, such one-to-one mapping of all required metadata is much more the exception than the rule. In most cases, at least some transformation of the source data will be required to ensure it complies with the destination system's metadata requirements. The 'Moderate Case' discusses the case in which only simple data transformation (in this case, data aggregation) is required. A single example, a 'What' example, is used to illustrate:

What:

The 'What' domain is assumed to be a one-to-one mapping at the level of the Indicator, but here we assume that the disaggregates for those Indicators are not the same between the two systems intended to participate in data exchange. This 'Moderate Case' does however assume that the source disaggregates (in the MoH systems) can be further aggregated to create a one-to-one mapping to the disaggregates expected by the destination system (DATIM). We leave it to the 'Complex Case', below, to discuss instances in which less straightforward transformations are required.

The Moderate Case envisions a situation in which a source system Indicator (for example, Number of People Currently on Treatment for HIV/AIDS) is mapped one-to-one with the destination system Indicator, but where the source system Indicator Disaggregates (for example, that number further broken out to reflect gender and/or age categories) are not the same as the destination system disaggregates, as presented in the screen shots below:

Screen shot from source system showing finer level of Indicator disaggregates (Age and Sex)

DSD: OVC_SERV								
1	Number of active beneficiaries served by PEPFAR programs for children and families affected by HIV/AIDS							
	Numerator	<input type="text"/>						
1	Disaggregated by Age and Sex							
	Female	<1	1-4	5-9	10-14	15-17	18-24	25+
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Male	<1	1-4	5-9	10-14	15-17	18-24	25+
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Sub-total	<input type="text" value="0"/>						

Screen shot from destination system showing coarser level of Indicator disaggregates (Age and Sex)

DSD: OVC_SERV		
Required	Number of beneficiaries served by PEPFAR OVC programs for children and families affected by HIV/AIDS	
	Numerator	<input type="text"/>
Required	Disaggregated by Age and Sex	
	<18	18+
Female	<input type="text"/>	<input type="text"/>
Male	<input type="text"/>	<input type="text"/>
Sub-total	<input type="text" value="0"/>	

Clearly the finer source disaggregates can be summed and provided in the correct coarser Age and Sex disaggregate categories required by the destination system. This data transformation is required in order for a valid exchange of disaggregated data to occur. Such transformation may be required in and among any of the metadata domains and all must be identified and addressed prior to the exchange of data between two production systems.

2.3.3. Complex Case: Exchanging data where data is not 'the same' (including mismatched reporting periods)

The 'Moderate Case' discussed above is fairly straight forward, and transforming data from a source system format to a destination system format can be easily accomplished wherever such transformations are legitimate. The 'Complex Case' envisions a scenario in which the data cannot simply be transformed to create a valid submission to the destination system because the source system

format is in conflict with the destination system requirements. The 'Complex Case' uses a single example, a 'When' example, to illustrate the case in which data is incompatible and cannot be validly transformed.

There may be instances where the source system is the IP/OU DATIM4U version of DATIM and the destination system is owned and operated by the MoH. DATIM4U could be either a Monthly DATIM4U version or copy of the Quarterly Global DATIM. For purposes of this example, we assume that the Quarterly DATIM4U version is being used as the source of the data exchange and that the MoH wants some of the PEPFAR data that MoH does not collect itself.

Let us presume that the MoH system collects data on a monthly basis and DATIM4U maintains only data collected on a quarterly basis. Clearly, quarterly data cannot be meaningfully disaggregated to become valid monthly data as required by the exchange. In this case, the most likely solution path involves creating a policy – rather than a technical solution - to enable the exchange. Two possible alternatives come to mind:

Alternative One: A policy is defined that asks PEPFAR to take the quarterly values and to divide them by 3, providing a single monthly data value that sums to the correct value when seen from a quarterly basis.

Alternative Two: A policy is defined that asks PEPFAR to submit the quarterly values as a total and to provide them as values in the last month of the quarter to which the values apply, while providing '0' values for each of the two preceding months.

Each of the alternatives introduces issues which could lead to data misinterpretation. Neither artificially dividing the Results into three equal parts, nor adding zeros to the first 2 months of the quarter and resulting the aggregate at the end, factually represents the work that was actually undertaken. Regardless of which solution is selected, the data requires well publicized documentation so that users can fully understand what the data represent.

2.4. Exploring the Need for a Local Data Repository or the replacement of an existing M&E System

Metadata synchronization (ensuring that DATIM Global site lists, mechanism, indicators and disaggregates remain synchronized with your local system) is a key feature of DATIM4U. While you must administer this feature locally, the process is fully automated.

In certain instances, IP/OUs may identify a need to use the DATIM-provided data in conjunction with other data they maintain, as in the case of developing a local Data Warehouse. Typically, such a need will not automatically lead to a requirement to deploy and maintain a DATIM4U, as all of the data that an IP/OU has stored in DATIM can be accessed directly or via the DATIM Application Programming Interface (API). However, there are two cases in which a local DATIM4U may be of use and these are discussed below (note that these are not the only cases, simply two which come to mind).

2.4.1. Integration with a Pre-Existing DHIS2 Implementation

A growing number of organizations have selected the DHIS2 platform for their business tracking and reporting needs. In many cases, these organizations have already developed the required infrastructure and expertise needed to deploy and maintain a full local DHIS2 instance. In such cases – particularly where the business data collected is additive to the PEPFAR-required data – simply extending an in-

house instance to incorporate DATIM-specific features and functions may be preferable to using DATIM in other configurations (such as periodic access to the DATIM Global Quarterly instance).

Three things to note when considering the merging of systems, functions, and features:

- DATIM routinely updates its core (trunk code) components of DHIS2 to remain consistent with the latest DHIS2 version. The developers of DHIS2 maintain a regular schedule of quarterly releases, so any incorporation of DATIM must take routine release updates into account.
- DATIM's DHIS2 core is tightly coupled to the Open Health Information Exchange software stack (as defined by and available through OHIE.org). The data exchange features needed to exchange DATIM4U data with DATIM Global - using the pre-defined data exchange console and apps – required that the OHIE components be in place and correctly configured.
- There are a significant number of components required to fully implement the DATIM features and functions in a pre-existing DHIS2 instance beyond the two critical elements discussed in the bullets above. Specifically, there are PEPFAR-defined apps (including Deduplication, Data Approval, and others) that may be required in addition to all requisite metadata. Requisite metadata includes, but is not limited to, datasets, data elements and disaggregates (CategoryOptionCombos), validation constraints, GIS shape files, Pivot Table Program Groups, etc.

2.4.2. Leveraging Core DATIM Features to Extend a Local Data Repository

Due to the complexities involved in integrating DATIM features and functions into an existing DHIS2 implementation, IP/OUs may find it easier to simply implement DATIM4U and then integrate the features and functions that they need from their previous DHIS2 instance – effectively the reverse of the approach discussed in 2.4.1, above.

Estimates for the level of effort required by this approach will vary by the extent to which an IP/OU has customized or modified their DHIS2 instance – and the extent to which they have maintained currency with the DHIS2 quarterly releases. That said, an IP/OU with a current DHIS2 instance is probably better situated than most to implement and extend the DATIM4U based upon their demonstrated ability to deploy and maintain DHIS2. IP/OUs can contact O/GAC to further discuss the viability of undertaking this activity.

Step 3: Determine your likely gross level of effort

- If your review of Section 2 shows that DATIM4U can assist you and that your challenge falls into the 'preferred' case, go on to Step 4.
- If your review of Section 2 shows that DATIM4U can assist you and that your challenge falls into the 'moderate' case, while you should go on to Step 4, think first about availability of funds and technical support options as described in Section 4.
- If your review of Section 2 shows that DATIM4U can assist you and that your challenge falls into the 'complex' case, you should discuss implications with S/GAC before proceeding to Step 4.

Step 4: If your initial assessment – based upon a review of Section 2 - suggests that DATIM4U can solve challenges facing your country team, you should now do the following:

- Impanel a group of technology savvy Country Team members and ask them to review this full document. They should prepare a ‘go/no go’ decision document, based upon the balance of costs vs. benefits they find. They should also recommend a timeframe for adoption if adoption is recommended. The management team should accept or reject the recommendation prior to September 1, 2016.
- If the management team decides to implement DATIM4U at any time during FY’17, the following will be important dates:

Timeline:

1. By September 1: Notify S/GAC if you want to implement DATIM4U in FY’17. [Note: If interested, please submit a HelpDesk ticket copying your Country Coordinator, SI Advisor and SI Liaison. OUs must use DATIM Global Monthly (DATIM-GM) beginning October 1 to be eligible for DATIM4U **unless you qualify for the exemption as noted in Section 3.1 below].
2. By November 15: OUs enter the first month of MER2.0 Results into DATIM-GM and S/GAC identifies DATIM4U Pilot OU
3. By February 1: Pilot OU enters Month1/Quarter2 Results into DATIM4U
4. By February 15: DATIM-GM OUs submit Quarter1 Results to DATIM
5. By April 15: Any/All DATIM-GM users are ready to use DATIM4U
6. By May 1: The pilot is successfully completed
7. By May 1: Other DATIM-GM users begin to use DATIM4U

3. Additional Important Considerations: Implementation Planning

3.1. ** Deploying a Quarterly version of DATIM4U rather than the Monthly version:

S/GAC has heard that some OUs would prefer to use a Quarterly version of DATIM4U and asked if we could make a quarterly version available. S/GAC has determined that a Quarterly version can be made available. However, there are important considerations to note:

Comments from the field have correctly pointed out that having a Quarterly based reporting system almost necessitates that Partners maintain alternative system solutions capable of collecting the monthly results that most Partners then aggregate to provide to the Quarterly-based DATIM. The Monthly version of DATIM4U represents S/GAC’s effort to address this issue. S/GAC strongly recommends that OUs use a monthly version if Partners collect data on a monthly basis – this avoids the need to maintain secondary data collection tools.

For OUs which have been using their own data systems and providing data to DATIM via Data Exchange, and where the process for reporting through those existing systems is codified as a monthly reporting cycle, replacing your current system with a Quarterly version of DATIM4U may make sense.

Any other OUs considering DATIM4U as a Quarterly system should consult with S/GAC to determine a way forward, as moving to a monthly version of DATIM Global (DATIM Global Monthly or DATIM-GM) by October 1, 2016, has been set as a critical milestone for OUs planning to implement DATIM4U during FY'17. Therefore, S/GAC's Country Impact Team will need to work with you to establish a replacement milestone.

3.2. System Requirements

3.2.1. Requirements for Unmodified DATIM4U

If an OU wishes to implement DATIM4U without modification, the requirements definition activity can be limited to documenting the changes that result from (1) moving to a monthly data collection cycle and (2) the changes that result from local data review and analytics as well as data exchange.

In terms of moving to monthly data collection, the requirements largely involve communications and training strategies, as both are generally within the purview and capacity of existing Country Teams. Local data review and data exchange are very similar to current data review and approval process in DATIM, but can require additional steps such as reconciling site lists prior to data submission, in the event that the DATIM4U site list has been extended or changed. These processes are fully automated but require human review and decisions for issues such as whether to 'add new' or 'use an existing site'.

3.2.2. Requirements for Modified DATIM4U

The level of effort involved in developing requirements for modifying DATIM4U will depend upon the extent of the planned modification. In all cases, requirements must be fully specified, meaning that they are defined in enough detail that the functionality can be tested against specific use cases. 'Preferred' style use cases will be fairly straightforward and can likely be handled by existing Country Team personnel. The Moderate and Complex cases will likely require that the Country Team engage systems professionals via a fully specified Statement of Work. The Country Team will need funds for the requirement effort and time to develop the SoW.

3.3. System Modification and Development

3.3.1. Preferred Case Modifications

Even preferred case modifications will require a level of DHIS2 technical skills that are not typically found among Country Team staff. There may well be local DHIS2 resources – often already working for the Country Team – sufficient to undertake the required work. If the required skills are not currently available, the Country Team will likely need to engage systems professionals via a fully specified Statement of Work. A list of them can be found here: <https://www.dhis2.org/expert-community>

3.3.2. Moderate Case Modifications

Moderate case modifications will definitely require a level of DHIS2 technical skills that are not typically found among Country Team staff. There may well be local DHIS2 resources – often already working for the Country Team – sufficient to undertake the required work, but the work at this level requires

sufficiently detailed technical understanding to envision creative work-arounds. If the required skills are not currently available, the Country Team will likely need to engage systems professionals via a fully specified Statement of Work. A list of them can be found here: <https://www.dhis2.org/expert-community>

3.3.3. Complex Case Modifications

Complex use cases are generally beyond the scope of this document and should be discussed with S/GAC.

4. Next Steps for Implementing a Modified DATIM4U

4.1. A 'Go' Decision – Identifying Contractor Support

4.1.1. Funding Requirements

OUs considering implementing DATIM4U will almost certainly rely upon Information Technology (IT) contractors for implementation and, more than likely, for on-going systems operational support. This section assumes this to be the case and discusses issues related to procuring contractor support.

4.1.2. Types of activities likely to be funded

The types of activities likely to need support from contractors will vary by local institutional capacity and levels of available support available from current staff. In general, hosting of a DATIM4U instance will be provided by S/GAC and hosting-specific costs will be covered in a FEDRAMP certified environment to ensure required levels of security certification are addressed. Installation is a subclass of hosting that this is assumed to be included in the above.

Configuration is the next important step. Configuration encompasses everything covered in sections 2.1 through 2.4 and much much more. Engaging with contractors who already have detailed understanding of DHIS2 and DATIM is strongly recommended as this will greatly speed the configuration process. DHIS2 maintains lists of certified contractors on their website.

Training and on-going technical support are also key considerations. S/GAC can assist in helping OUs think what levels might be reasonable given a variety of possible scenarios and would be happy to assist with an introductory call.

4.1.3. Identifying mechanisms with existing scope

Those hoping to implement DATIM4U in the current year will almost certainly need to identify an existing contracting mechanism with sufficient scope and remaining ceiling to undertake this work. Each OU will be best positioned to review their current portfolio to identify potential cooperative agreements and contracts. In general, mechanisms used for Monitoring and Evaluation (M&E) support and/or systems development and support may be viable candidates. It is important to stress that contractor support will likely be required for at least some core components of DATIM4U deployment and support and – if DATIM4U is to be implemented in a timely fashion, say within a year – then finding a suitable pre-existing mechanism probably represents a OU's best chance.

Note that the search for suitable mechanisms need not be limited to a OU's existing portfolio. OUs can most likely find suitable mechanisms in the portfolios of Agency Headquarters teams, both within PEPFAR and beyond.

4.1.4. Funding a new procurement

If no pre-existing mechanism can be identified, then a OU may opt to release a new procurement. Contracts and grants officials will be the key informants to this type of undertaking (as the will with the identification of existing mechanisms discussed above). While there are numerous exceptions to this rule, experience shows that the process of planning for - through awarding - new procurements can often be a multi-year process. This reflects the program requirement to enter the planned procurement into the COP, await COP approval, and then begin the soliS/GACation process.

Due to the complexities involved, OUs may want to discuss their requirement with other OUs and issue a multi-country, or 'central' mechanism. Here again, S/GAC's Country Impact Team would be happy to assist.

4.1.5. Other possible funding alternatives

Creative OUs will undoubtedly identify additional strategies for funding DATIM4U implementation work. For example, there have been numerous examples of systems work being undertaken quickly and effectively by leveraging private sector participation in the form of Public-Private Partnerships (PPPs). While no one strategy is likely to be a perfect for a significant number of OUs, sharing possible or anticipated funding strategies by be of wide benefit. The Country Impact Team would be happy to create and host such a forum if OUs think that would be of use.