

# DATIM4U Technical Overview and Purpose

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## DATIM4U Overview

The DATIM4U System features a Health Information Exchange or HIE for DATIM Global and one DATIM4U Health Exchange for each USG's in-country PEPFAR team implementing DATIM4U. The diagram below depicts how a DATIM4U HIE interacts with the DATIM Global HIE.

The aggregate data exchange (ADX) message that is sent from the DATIM4U system carries the aggregate reporting data containing the MER targets or results data that is required by the DATIM system. However, for the DATIM Global system to understand that transaction and properly interpret the data, both the 4U and Global systems need a way to ensure that they are working with the same sites and mechanisms. In DATIM4U, this interoperability is supported by ensuring that both systems are using site and mechanism data from the proper data sources.

## Key System Components:

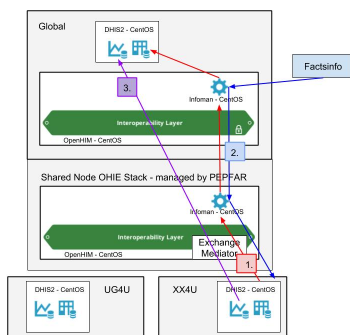
The key components are based upon the [OpenHIE Architecture](#).

- HMIS (Health Management Information System) - In both the 4U and Global HIEs, DHIS2 is depicted as the Health Management Information System. This can be any HMIS, but IN DATIM4U DHIS2 is being used.
- FR (Facility Registry) - In the current DATIM4U pilot, the Facility registry for managing the site hierarchy and facilities is DHIS2.
- ILR (Interlinked registry) - The ILR support the transactions for exchanging site and mechanism metadata.
- Interoperability Layer - This layer manages the transactions and provides a layer of security to ensure that transactions are only received by authorized senders.

## Data Sources:

- Mechanisms are managed by the FACTS Info system. On a regular basis, mechanism updates are transferred to both DATIM Global and DATIM4U systems.
- For DATIM4U implementers, their country's site data is managed by the country team in the DATIM4U system. That site data is then be propagated to the DATIM Global system.

## Transactions:



The following transactions are supported by the DATIM4U system.

1. [Overview - DATIM4U Site Exchange Process](#) - The DATIM Global facility hierarchy is kept in sync with PEPFAR by ensuring that any changes or additions that are made in the DATIM4U site hierarchy are propagated to the DATIM Global system on a regular basis.
2. [Overview - DATIM4U Mechanism Synchronization](#) [Overview - DATIM4U Mechanism Synchronization](#) - The mechanisms in DATIM4U come from FACTS Info which is the source system for the mechanisms. This data is kept in sync by a nightly transaction that updates DATIM4U.

3. [Workflow - DATIM4U ADX \(Aggregate Data eXchange\) Process](#) - The ADX interaction submits the country's collected indicator data to DATIM Global. It is initiated by a DATIM4U user using an application in the DATIM4U's DHIS2 System. This transaction will also initiate a site exchange to ensure that any new or updated sites are present in the global system.

## Other Key Functions:

### 1. Security

- For the transactions above, security in transit is managed by the 4U and Global OpenHIM software. The communication between the two OpenHIMs ensures authentication to verify the sender, authorization to ensure that the sender is allowed to send that content to the recipient and encryption in transit.
- Ability to enter and access target and results data is managed through the DHIS2 interface user roles.

### 2. DATIM functionality supported by DHIS2

In many cases the functionality of the DATIM4U DHIS2 system has replicated functionality from the DATIM Global DHIS2 system. The following are some of the main features that are supported by DHIS2. The Links to DATIM are provided where there is no significant difference in technology.

- [Entering](#) or uploading MER Target or Results data
- Site management is very similar to the [DATIM process](#).
- Like the Global DATIM process, [Data set assignments](#) are applied when new sites are entered.
- [User administration](#) functionality for adding and managing users is the same as DATIM.

## Interoperability Matrix

The following is a matrix of the data that is exchanged between systems.

Data	Source System	Destination System	Current Method	Cycle	Notes
<b>Mechanisms</b>	FACTS Info	DATIM4U	OHIE	Daily	Ideally change to an automatic metadata migration from DATIM via OHIE
<b>MER - Targets</b>	DATIM4U	DATIM	OHIE	Annual	Triggered by DATIM submission app
<b>PSNU (target setting)</b>				Annual	
<b>MER - Results</b>	DATIM4U	DATIM	OHIE	Quarterly	Triggered by DATIM submission app
<b>OU Hierarchy</b>	DATIM4U	DATIM	OHIE	With MER - Targets and Results	Triggered by DATIM submission app
<b>PEPFAR/MOH Data Alignment - MoH Results</b>	DATIM4U	DATIM	Manual	Annual	
<b>ER</b>	DATIM4U	DATIM	Data sync: Java filesystem watcher app, approvals: CRON	Annual	Triggered by DATIM4U ER app
<b>Eval SOP</b>	DATIM4U	DATIM	CRON	Nightly	
<b>SaS (Survey and Surveillance)</b>	DATIM4U	DATIM	CRON	Nightly	
<b>PSNU</b>	DATIM4U	DATIM	TBD	Annual	
<b>Metadata - Favorites, Indicators</b>	DATIM	DATIM4U	CRON	Daily	
<b>SIMS</b>	DATIM	N/A	N/A	Quarterly	No plans for SIMS integration
Metadata - Data elements/disags, Datasets	DATIM	DATIM4U	TBD		
Metadata - Reports	DATIM	DATIM4U	TBD		

Metadata - ?	DATIM	DATIM4U	TBD		
[monthly reporting consideration?]	?	?	?		