PROGRESS UPDATE DOCUMENT

Describing CURRENT functionality and outputs of the revamped EID database system

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The revamped EID Database will have 3 main modules:

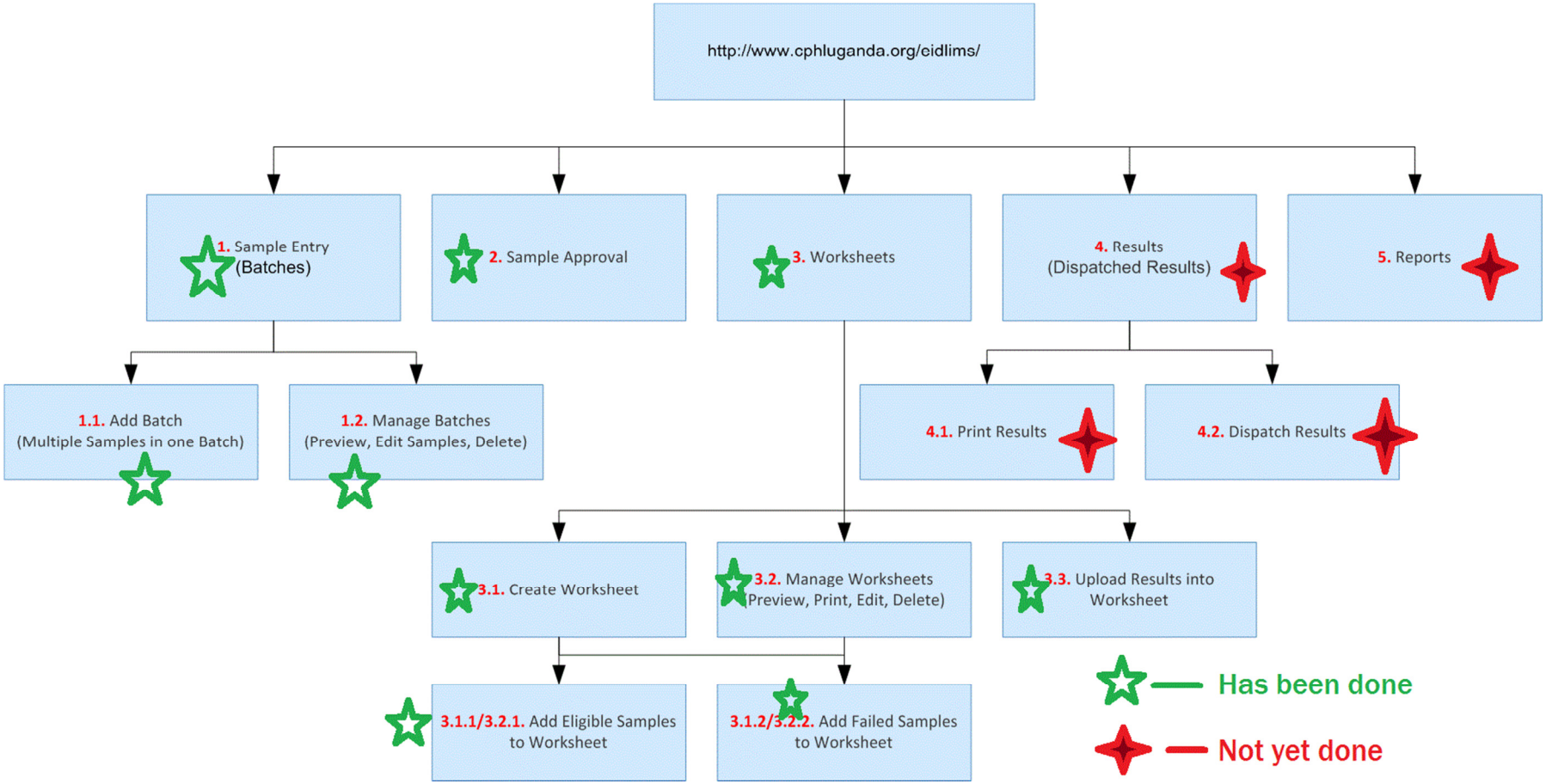
1. **LABS**: To support CPHL workflow
2. **ADMIN**: To support programmatic interventions by CHAI, et al
3. **DASHBOARD**: To support reporting functionality

1) LABS MODULE: SUPPORTING EID WORKFLOW AT CPHL

The LABS module coordinates all CPHL's activities in the EID workflow (shown in table below). This will be done in 3 main ways:
1) Speeding up data entry 2) Simplifying error checking & QA approval 3) Making it easy to create, find or print all needed reports/documents.
The progress so far is as follows: Green = necessary functionality has been built. Red = Not yet done.

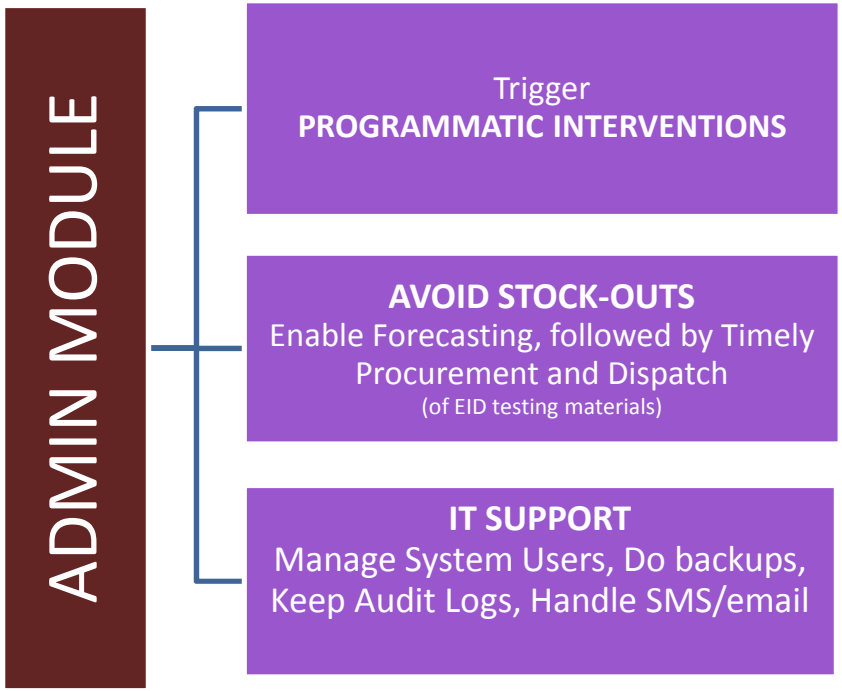
EID WORKFLOW AT CPHL		
	Office	Activities at that office
Step 1	Sample Reception	**Receive Envelopes** containing DBS samples.
Step 2	Sample Reception	**Check Samples**: Compare them to DBS forms included in the envelopes to make sure that the samples match the DBS forms • Generate an envelope number and write it on each envelope and each DBS form inside that envelope • DBS Forms are sent to data room for data entry • Samples are retained
Step 3	Data Room	**Data Entry**: The DBS forms are entered into the database which creates accession numbers. • DBS forms are then returned to Sample Reception
Step 4	Sample Reception	**Data Checking** to confirm that data entry from step 3, above, was done correctly. • Corrections re made if necessary • DBS forms are then sent to the lab for testing
Step 5	LAB	**Testing DBS samples for HIV** • Create worksheet with data about all the patients to be tested in the next run of the testing machine • Print worksheet and use it to prepare corresponding samples for testing • Scan barcodes on worksheet (that's how data is entered into the HIV testing machine) • Run the HIV tests (output is a CSV file with the results) • Upload the CSV file to EID database • After tests are completed, send the relevant DBS forms to Dispatch desk
Step 6	Dispatch/Reception (Front Desk)	**Sort the DBS forms** by HUB and by facility (or more likely by envelope number) • After sorting, send the forms back to data entry room
Step 7	Data Room	**Print Results** • Print any other relevant documents e.g. dispatch envelopes and ART initiation forms (if needed) • Send envelopes to post office for delivery to relevant hubs and facilities

The information in the table above can be represented using this picture, below:



2) ADMIN MODULE: SUPPORTING PROGRAMMATIC INTERVENTIONS BY CHAI & IPs

The admin module is being handled in parallel and a detailed update will be provided next week.
When completed, it will have the 3 modules shown in the diagram below.



Currently, a lot of progress has been made on the bottom 2 modules: IT support and Stock-Outs.
By necessity, the top module (triggering of programmatic interventions) depends on information and technology from the other modules so it had to be done last.

Conclusion

The Labs and Admin modules are very important because they control information entering the system.
The most quoted computer proverb is “Garbage In, Garbage Out” – and for good reason.
If bad data enters, or good data is badly stored, you can expect garbage out.

I therefore spent a lot of time and energy understanding the information that will be required out of the system, and then worked backwards to make sure the “raw materials” (i.e. incoming data) required to produce it is thoroughly checked and then correctly stored.

So in summary a lot of my time and thought have gone into ways of improving technical design and usability.
My goal was to enable you to achieve your long term goals of accuracy, extensibility and speed by focusing on…

1. Re-designing the database from the ground up for accuracy and speed. [Remind me to show you a before-vs-after demo.]
2. Inter-operability: Ensuring that when the new modules are installed, they work well with existing EID modules and also with viral load system.
3. Usability: A lot of effort was put into improving the user experience. [Remind me to show you a before-vs-after demo.]

- END -

PS:
For completeness, I must mention a few of the unresolved loose ends that exist as at the time of writing, although we are tying them up quickly:
Integration:
Many of the features exist as separate but fully functioning self-contained modules. This one-at-a-time approach enables us to build features much, much faster. It also makes testing easier. **BUT**, we do need to assemble all these modules into a single piece of software.

This will be done without further discussion because we have now completed enough work for end-user testing with a few selected CPHL staff.
This testing should start in 10 days and so by then we must have assembled all our modules into a single unit.

Appearance/Beauty:
Sam was kind enough to make us a beautiful graphical design that we shall use for the revamped EID.
But in order to move the development process faster (see integration, above) the focus, for now, is on creating features before beautifying them.