

## Nexleaf/Village Reach OpenLMISv3 Discussion – 2017-08

### 1. Add RTM to facility

This is onboarding: associating the facility, the equipment (CCE), the RTM device, and the sensor. With an LMIS, the facility-equipment associations are generally made in bulk and then updated manually, **is that correct?**

**Questions:** If a country decides to install 10 RTMDs vs a country deciding to install 2000 RTMDs (or newly purchased fridges come with RTMDs) how do you envision entering/enabling all the RTMDs into the system?

*NL Feedback:*

- We don't recommend using the phone number. The IMEI is the unique ID of the device. In addition to the IMEI, if you are tracking the CCE-RTM association you will need to track the sensor port/sensor number. In some cases there may be multiple sensors per CCE, as in a cold room. Sometimes people also like to have a sensor measuring ambient temps, so that is associated with the facility and not necessarily the CCE.
- The RTMs on the market have multiple sensors. The RTMs may have sensors labeled as A,B,C,D,E or 0,1,2,3,4. Additionally they may have the device battery percentage and the power availability (indicating if the device getting power or not) and associate these with each equipment the RTMD is monitoring.
- We have a lot of uses in our system for knowing the make & model and facility of the CCE, so we would also like to track them.
  - **Question:** In terms of the MVP, when you do implement the associations in OpenLMIS, can you provide an API or at least a way to export? Each country may have slightly different processes and of installation and may determine a different approach for tracking/installation.

### 2. Parse RTM temperature alerts.

**Questions:**

- What type of notification do the users want from OpenLMIS? SMS, Email, popup when they are logged in?
- How many facilities +CCE is the DVIO typically responsible for?
- What is their capacity to respond to individual alerts? Are they intending to take action for each alert or do they generally want to track the status of the fridges via alerts and only take action if things progress too long? Or is every country going to be different?
- What are their responsiveness/latency requirements?

*NL Feedback*

I've attached a PDF which shows the different ways alarms can be configured/set in various RTM systems. Note not all RTM systems may support all these means of alarms/summaries/etc.

Briefly reviewed here:

- Device based alerts: The device sends SMS alerts per sensor as the problems happen according to the configuration (default WHO is 10 hours above 8C, 1 hour below -0.5C).
- Server based centralized alerts: These replicate the device based alerts but come from the server. The device notifies the dashboard when it would normally send out an SMS alert according to the configuration. It is then the dashboard systems responsibility to send the alert via SMS or email. Remember, these are individual alerts about individual CCE so someone monitoring multiple fridges will likely not want to subscribed up for these.
- Server based escalated/summary alerts: This is a once or twice a day summary that includes all the CCE that are having issues for a given region (district/province/etc). These also include 'no data' alerts. This is all to prevent someone that is responsible at a higher level from getting overwhelmed with the individual alerts. These can be reworked to post this information to openLMIS in a structured way instead of sending an email/sms.



- Finally, another approach to this could depend on what type of notification would be most useful for the DVIO from OpenLMIS. It could be data driven through aggregates available from RTM System on the openLMIS side... a scheduled status message highlighting based on some combination of frequency and duration of problems over a time period.

### 3. Automatically trigger 'needs attention' status.

#### Questions:

For this one, see below for all the types of data available that could be used. There are consideration to take here around:

- how frequently will they be looking at this?
- how long is the 'period' over which they want to know things have been bad?
- 'keeping track of maintenance' ... can you provide some more detail what they meant here?

#### *NL Feedback*

- Here you used the word excursion and alarms in the other user stories and I just want to make sure we all talking about the same things. We've defined excursions as when the temperature goes out of range (e.g. above 8C or below -0.5C) and incursion when the temp goes back in range. An alarm/alert (interchangable) is when there is an excursion lasts for a certain amount of time. Is this what you intended here and do you agree with this?
- For the user stories you have we can share a list of aggregates we have available within the system. It is straight forward for us to build API's on top of these. We can build metrics/indicators based off combining these.