\* This e-mail originated outside of Mindtree. Exercise caution before clicking links or opening attachments \*

+ Shravan, Romila, Resham  - Pls read the mail below to get context.

Dear All,

Based on discussion, below mails and my understanding, I am writing the draft note below.

I need all to give your suggestions, so we can finalise the note.

**This note will be modified by SANJAY and sent to GOM as our acceptance on what we will do in addition to the MOU. This is a critical note, so pls focus critically.**

The Draft Note:

Based on Extensive discussion with GoM via Mr Nanavati, here is our understanding on work to be done by MOSIP team and other for the integration with CNIE, EC & other miscellaneous topics.

1. CNIE system
   1. CNIE is a GoM owned system containing Finger Prints & some demographic for resident above Age 18.
   2. A system is required, to access CNIE data, MOSIP data (from field), compare the two data, make suitable modification to MOSIP data and send the updated data in the MOSIP system
   3. MOSIP will build and provide **API specification** for pulling residents data from the MOSIP system and pushing updated resident data (including biometrics) in the MOSIP system.
   4. CNIE (or others) to build and provide **API specification** for accessing resident data (including biometrics) from its system.
   5. SI/GOM/PwC to build, test, deploy & maintain the new GOM specific system which performs the pull/push of data from CNIE & MOSIP system ( as per their individual published APIs), builds the interface & process flows for comparing/manipulating/processing the resident data as per GoM defined business rules.
   6. MOSIP will review & support the entire process flow for CNIE integration as being developed under supervision of GoM for critical feedback & suggestions
   7. Fingerprints received from CNIE system (meeting MOSIP standards and interface) will be part of Authentication gallery to be used in MOSIP Auth Services.
2. NIU System
   1. MOSIP to provide a NIU generator out of the MOSIP system
   2. MOSIP will provide an API for consuming the NIU for external systems beyond MOSIP
   3. MOSIP’s NIU generator will be used for RNP system & the GoM’s EC system
   4. Since NIU generator will be effective for uniqueness, only if there is one database of unique numbers generated & consumed (across various systems), it's the Sis responsibility to migrate/maintain the common database across EC & RNP system.
3. EC system
   1. EC is a GoM owned system containing demographic data for child residents
   2. A system is required, to access EC data, MOSIP data (from field), compare the two data, make suitable modification to MOSIP data and send the updated data in the MOSIP system
   3. MOSIP will build and provide **API specification** for pulling residents data from the MOSIP system and pushing updated resident data in the MOSIP system.
   4. EC (or others) to build and provide **API specification** for accessing resident data from its system.
   5. SI/GOM/PwC to build, test, deploy & maintain the new GOM specific system which performs the pull/push of data from EC & MOSIP system ( as per their individual published APIs), builds the interface & process flows for comparing/manipulating/processing the resident data as per GoM defined business rules.
   6. MOSIP will review & support the entire process flow for EC integration as being developed under supervision of GoM for critical feedback & suggestions
4. Miscellaneous
   1. MOSIP will additionally test for Hadoop storage (GoM’s SI request). MOSIP will be default tested for CEPH
   2. MOSIP will test integration of 3 set of enrolment devices (FP, IRIS). The devices need to meet MOSIP SDK specifications before testing.
   3. VDM - ???? (Sanjay/Anadi/Shravan to elaborate)

Since GoM will be the eventual owner of all the system, it is requested for GOM to visualise and provide a highlevel process flow diagram of how the various systems (MOSIP, RNP, EC, CNIE, UIN etc) are connected for the various functionalities.

Best Wishes & Regards

**From:** Arunkumar Gurumurthy <[arun@mosip.io](mailto:arun@mosip.io)>  
**Date:** Wednesday, 31 October 2018 at 1:14 PM  
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**Subject:** Call between Sanjay and Nanawati - Notes

Dear all,

Sanjay and Nanwati had a couple of calls on some of the issues raised by Morocco and how MOSIP can help. Here are the notes from the call. Let us understand what are the implications of this discussion. We need to create a clear note integrating these points and send it to Morocco through Prof or Sanjay.

1. External integration: The APIs will come from Morocco - these are their systems and they will build the APIs into their systems. We will help define the workflow and  the specifications. But the actual steps in the workflow, which is code writing, building the APIs etc will be done by the SI. The SI will also be responsible for full workflow, including the portal. Division of labour:

                a. Responsibility of getting the specifications for us-  PWC

                b. building the APIs into external systems - Morocco

                c. Workflow and specification – MOSIP, with support from PWC

                d. implementing the workflow steps in Code – SI

1. VDM : We will give the specifications for the VDM, but the writing of the VDM is responsibility of device vendor, since this is device specific. However, we will have a basic test suite which will allow us to test if the enrolment client works with the device. ( I dint not understand this point technology wise. Anadi can you please help us understand this and frame this accurately?)

1. We will test with 3 devices instead of 1 device.

1. Storage : We will test MOSIP for Hadoop as well. (This can be taken care of by the testing agency? Krishnan can you help us understand and frame this better?)

Action Points:

1. Create a note and send to Morocco on the above discussions.
2. Understand the implication on MOSIP, and sit with Mindtree to operationalize these.
3. work with PwC to get hold of necessary specs and first draft of workflows from them.

Also, below is the minutes written by Nanawati for Morocco on the previous call. Sanjay missed a couple of these points in the brief – like the NIU generator. We can take those from the below minutes.

*a. CNIE validation and integration:   
  
MOSIP will publish an API for integration of IDMS workflow for CNIE validation. This API will make available the enrolment packet to be passed on to CNIE system for obtaining CNIE specific demographic data. Can  CNIE system  expose an API to transfer the CNIE specific demographic data to the RNP System for manual verification of CNIE and RNP Enrolment data. That CNIE specific API should be published by CNIE system as MOSIP will not have access to their system and code to develop this API.   
    
b. NIU Generation:   
  
It was discussed  that MOSIP will provide a new NIU generator outside the IDMS for meeting Morocco RNP requirements. This NIU generation will have a common database and cater to both EC and RNP system. Existing EC database will be required to be migrated in the common database by SI for which MOSIP will extend support.   
    
c. EC Validation:   
  
Similarly, MOSIP will publish API for validation of  demographic data in RNP with EC data. That EC specific API to share demographic data from EC with RNP should be published by EC system as MOSIP will not have access to their system and code to develop this API.   
     
We further intend to discuss with MOSIP team  regarding the workflow of enrolment packet to update the demographic data in IDMS, both for CNIE and EC validation. We expect a strategy of implementing this concept from MOSIP to cater to our requirements.  Please provide us your inputs on  the aforementioned points for closure of these points with MOSIP*