INFRASTRUCTURE MONITORING

# I – AUDIENCE AND GOAL

## Audience:

Technical Support Staff, IT, MEAL Staff

## Goal:

Able to automate all or most of the data migration and processing tasks from Commcare/redrose to ArcGIS online to make easier the update

# II – VARIABLES/KEY COMPONENTS

## Minimum Requirements from the Field :

Depends on the object and the data structure but in this use case, data collected with Commcare must contain at least:

* Photo (evolution of each infrastructure)
* Infrastructure description
* GPS coordinates of each infrastructure

## Data Preparation (common errors):

- Link Odata feed in Commcare

- Download photos that are not personal data (photo of beneficiaries...) in Commcare and upload them in Onedrive

- [Download](http://www.geo-informatie.nl/geodesk/AGP/index.html) and install Data interoperability extension for ArcGIS Pro (each user having ArcGIS Pro license have also Data interoperability license)

# III – INFRASTRUCTURE MONITORING AND PROCESS

The following sections describe the different steps and data treatment from Commcare to AGOL to automize the infrastructure information update.

## a - Process

-Get ODatafeed link from Commcare->remove duplicate value->put the result in an excel sheet or in n excel file in OneDrive

* Download all the photos from Commcare following [these instructions](https://confluence.dimagi.com/display/commcarepublic/Form+Data+Export) and upload them in Onedrive
* Get the link by using the sharepoint list transformers (ID and name)
* Transform the link to the right format for photo in ArcGIS online (replace transformer)
* See the details in the [e-Code section](#_e_-_Code)

For more information about how to use and choose transformer, please follow this [link](https://crsorg.sharepoint.com/:b:/r/sites/TM-DataTeamMeeting/Shared%20Documents/General/Models/Infrastructure_monitoring/Guidance/FME-Transformer-Reference-Guide.pdf?csf=1&web=1&e=6SVK7I).

- Join the photo link with the infrastructure description and GPS coordinates in the excel sheet obtained from the first steps

- Put the file which contains all the infrastructure description and the photo links in the right format in an excel online/google sheet

- Use this as feature source for ArcGIS online map

Process

Odatafeed Link from Commcare

Put the result infrastructure description and the photo links in an excel online/google sheet

Use this as feature source for ArcGIS online map

Join the photo link with the infrastructure description and GPS coordinates in the excel sheet obtained from the first steps

Download all the photo in Commcare and upload them in ondrive/googledrive

## b – Where is it located

If you are interested in the Infrastructure monitoring model for your program or project, [please fill out an ICT4D Services Support Request Form1!](https://crsprod.service-now.com/ess_portal/item_info.do?sysparm_item=194171c56f8262001a5abce0be3ee462)

The Data and Geospatial Analytics Team will help you to determine your needs as far as tailoring a custom model in ArcGIS Pro to provide more advanced analytics

## c – How do you replicate this

The fme file will be shared and will be customized according to the business need

## d – How do you modify this

These parameters in the fme file will be modified :

* Location of the photo,
* Excel file to store the result
* Odatafeed link from Commcare

## e - Code

Graphical user interface, diagram

Description automatically generated with medium confidence

# IV – PLANNING

## a – How long to get the data

Depends on the volume of data

## b – How long to run it

* Data preprocessing (12 hours)
* Test (24 hours)
* Run with a real data (12 hours)

## c – How long to modify it

* Depends on the business needs, but the mean customization time is 1 day and the test 1 day