IMSMA Core Engagement Strategy – Draft

# Introduction

This document serves to lay out a rough engagement strategy for an IMSMA Core Deployment with either a Mine Action Organization (“Operator”), a National Mine Action Centre (“NMAC”) or a National Mine Action Authority (“NMAA”). This strategy will differ substantially between Programs or Organizations that already use IMSMAng and those that use other systems or other information collection methods which they aim to augment or replace with IMSMA Core. For this reason these two different cases are separated in the document. This document is intended to provide a moderate level of detail which will be extended through available IMSMA Core documentation, tutorials and examples, as well as through the skills and background of GICHD IMSMA Advisors.

# Engaging with Existing IMSMAng Programs

Many NMAC/NMAAs are already using IMSMAng, the latest version of IMSMA released prior to IMSMA Core. This system generally contains a large amount of data that must be migrated into IMSMA Core, and also a series of business processes that have been created through the use of forms and custom-defined fields in IMSMAng.

## Gathering Existing Information about the Program

Once a program has been identified as a potential pilot user or as a party interested in migrating from IMSMAng to IMSMA Core, the following information should be gathered from the Program to help the GICHD IMSMA Advisor assess the level of effort involved in migrating the Program as well as which existing IMSMA Core workflows might provide good options for the Program:

* Full IMSMAng Database Export (backup)
* IMSMAng Staging Area Database Export (if available)
* Existing Information Management SOPs/Guidelines (if available)
* Existing GIS Data availability (types of features, use and sources)
* Overview of Program structure – IM staff, GIS capabilities HQ and field offices, relationship with other primary operators/NMAC/government organizations as appropriate
  + This data may be collected through a GICHD IM Assessment or other formal engagement, or may be available by request from the NMAC or Operator
* Existing IT resources, mobile devices, network configuration and level of internet access for their primary users
  + <https://cloudharmony.com/speedtest-for-aws> provides an excellent network speed test, which takes about 30 minutes to run but provides guidance on which AWS regions provide the best access and Internet speeds from a user’s location.
* Overview of ongoing Mine Action activities: is the organization engaged in land release, MRE, Victim Assistance, EOD Spot Tasks, etc.?

## Running IMSMAng database statistics

The GICHD IM team has created a series of PostgreSQL scripts that can be run against the IMSMAng database to provide a summary of various characteristics of the IMSMAng database such as:

* Use of custom-defined fields (# of fields and # of fields used in system)
* counts of features and rows in each data table in IMSMAng
* frequency of use of existing ISMSMAng attributes or columns
* types and counts of geographic features across object types

This script and report can be used to identify which types of features are widely in use across the organization, and which activity types might be piloted first during the Engagement process. The script also will be used for the design of the program’s Survey123 Forms, to identify which CDFs are actively used so that some may be proposed for deletion.

## Identifying level of IMSMAng Customisation

The IMSMAng Database Statistics file will indicate the number of custom-defined fields that were created in IMSMAng, as well as the level of data completion for these fields (i.e. are the fields used and worth retaining). This information will have a significant impact on how much the IMSMA Core schema should deviate from the default structure during configuration. When reviewing heavily-used custom-defined fields, it is important to assess whether these values need to be added to the IMSMA Core Schema or whether the recorded data could be inserted into a different column in the default IMSMA Core schema. This case may be useful for countries which created CDFs to store data which otherwise could have been stored in the IMSMAng schema.

## Obtaining copies of existing IMSMAng Forms

Existing IMSMA programs are likely using a series of well-reviewed and approved Forms for entering Field Reports into the various record types in IMSMAng. These forms can be saved as .ffml (Form Markup Files) and should be requested from the program along with screenshots of the Form interfaces so that the IMSMA Advisor can review existing data input methods. IMSMA Core includes a processing tool that can be used in conjunction with the country’s IMSMA database to convert the FFML forms to rough XLSForm representations that can be used as the starting point for Survey123.

The IMSMAng Database Statistics file also provides a summary of Field Reports and how they are actively used within a program for data entry and updates – this may help identify which FFML files should be translated.

## Identifying a project schedule and plan of action

IMSMA Core is a system of different tools, apps and components, deployed in a base configuration but configured for each program’s technical and business requirements, while maintaining a core Esri software component. Identifying the breadth of data collection activities undertaken by a program will allow the IMSMA Advisor to tailor IMSMA Core to the program’s needs, omitting modules that are not used or not relevant and focusing automation and customization efforts on the most relevant modules.

The IMSMA advisor should identify a proposed schedule for IMSMA Core trial, phased rollout and ongoing maintenance that can be presented to and eventually agreed to by the NMAC or Operator. The default length of schedule and content is still to be determined, but an example schedule could follow this structure:

1. Months 1-2
   1. Initial IMSMA Core scoping meeting (on-site with program) and production of materials related to existing IMSMAng current use cases
   2. Drafting and signature of IMSMA Core agreement – documenting the Esri Licensing, GICHD support and other components of the Implementation.
   3. Obtain and convert FFML forms with IMSMA Core tools to provide a starting point for Survey123 Development.
2. Months 3-6
   1. IMSMA Advisor preparation of IMSMA Core pilot materials, migration process and scope of support based on mutual agreement with NMAC or Operator
3. Months 6-8
   1. Field visit to NMAC or Operator for rollout of IMSMA Core Trial (validation with a select set of field users with real data collection examples)
   2. This activity should focus on the primary use cases for IMSMA Core (program-dependent)
4. Months 9-16
   1. Trial and final Data Migration to IMSMA Core, migration of existing attachments (photos and other) and related GIS and IM datasets
   2. Rollout of IMSMA Core to production usage, with ongoing support, maintenance, upgrades and bug-fixed by GICHD as appropriate.

In general, IMSMA core trials have focused on a single data type or form to begin, which supports the setup of the system and migration of one data type, followed by the migration of other activity types and forms as appropriate.

## Identifying IMSMA Core Components to apply to the Program

The IMSMA Core Module Library provides a navigable and searchable database of IMSMA Core configurations, such as Survey123 forms, Web App configuration patterns and other information, laying out the “default” deployment of IMSMA Core as well as a series of workflows that the IMSMA Advisor can follow to complete the following commonly-completed tasks:

* Converting a program’s existing data entry forms (likely spreadsheets or Word Documents) to Survey123 Forms using XLSForm templates. This process will include mapping data collected by the program to existing IMSMA Core fields in the database.
* Adding custom fields from IMSMAng to the default IMSMA Core schema based on an identification of which CDFs are used in the IMSMAng deployment
* Translating existing IMSMA users + privileges to IMSMA Core users and roles and identifying potential users of IMSMA Core workflows that may not have been able to make use of IMSMAng
* Identifying existing hardware resources and advising on IMSMA Core system requirements
* Migrating IMSMAng data into the new IMSMA Core data structure following the trial/testing period and with the organization’s approval.

## Initiating the IMSMA Core GitHub Repository and Content Folders

For each IMSMA Core project, the IM Advisor will create a new GitHub repository under the GICHD organization. This repository will have a standard Readme.md and will be set up with default folders for scripts, tools, forms and documentation. This repository will also allow the Organization IMSMA Core implementation lead to follow developments and submit issues.

The IM Advisor should also create a folder within the IMSMA Core Box folder hosted by GICHD, for storage of large files, IMSMA backups, etc. This folder can be created based on the country name (for national programs) or the operator name (for sub-national operations or international NGO operations).

# Engaging with Independent Mine Action Programs (Not Current IMSMA Users)

## Gathering Existing Information about the Program or Operator

Once a program has been identified as a potential pilot user or as a party interested in migrating from existing IM processes to IMSMA Core, the following information should be gathered from the Program to help the GICHD IMSMA Advisor and other involved parties to assess the level of effort involved in migrating the Program’s existing processes as well as deciding which existing IMSMA Core workflows might provide good options for the Program:

* Review Program Structure
  + How is the operator, program or organization structured in terms of reporting, responsibilities and staffing?
  + Do they have staff in multiple locations and different office/field office locations?
  + Do they employ their own field teams or work with local partners?
  + How do they interact with the NMAC or NMAA (if they do)?
* Review Existing Data Collection Process and IM Program
  + Excel-based recording of results
  + Existing use of mobile applications
  + History of data collection patterns
  + Necessary operational indicators and reporting details
  + Paper Forms already in use?
  + Type of Information Management tools in use at the country level or at the international level if appropriate
  + Project Management tools – project and donor tracking and project ID generation.
* Review Reporting and Operational Requirements
  + How are field teams tasked with specific operations or locations?
  + When and how often is data submitted from field teams?
  + How does existing data get used in operational decisions?
  + What type of daily, weekly or monthly reporting is currently in place?
  + How is Quality Management considered, tracked and implemented?
* Explanation of existing partnerships with other data collection vendors or systems
  + What other groups are working in the same area, and how do they interact?
* Assess Existing resources
  + Does the country program have a dedicated and long-term IM management team?
    - Is there an international program that supports this task as well?
  + Does the program have available IT resources, IM and GIS Staff?
  + Is there good access to provisioning or personal mobile devices and mobile data in the country?
  + Is there an existing network environment and internet connectivity to support IMSMA Core connections?
  + Identify the available geospatial datasets that can support IMSMA Core deployment – administrative boundaries, settlement and community locations, and other points of interest that will be used as part of the gazetteer for IMSMA Core

## Identifying a project schedule and plan of action

IMSMA Core is a system of different tools, apps and components, which can be deployed in a focused task-specific configuration, in a standard base configuration tweaked to each program’s needs, or in a highly configured deployment with sufficient staff time investment. The three factors that will control the schedule and scope of an IMSMA Core deployment are as follows:

1. Identifying the breadth of data collection activities undertaken by a program
2. Identifying the complexity of existing data structures and data collection systems
3. Assessing the willingness and ability of the organization’s staff to learn and take ownership of IMSMA Core.

Identifying these considerations early in the project will allow the IMSMA Advisor to tailor IMSMA Core to the program’s needs quickly, omitting modules that are not used or not relevant and focusing automation and customization efforts on the most relevant modules. This will also help the Advisor to identify key early Pilot presentations and outputs which can show progress and continue to grow the interest and involvement in the IMSMA Core system.

Early in the process, the IMSMA advisor should identify an initial schedule for the IMSMA Core trial, rollout and ongoing maintenance that can be presented to and eventually agreed to by the NMAC or Operator. The default length of schedule and content is still to be determined, but an example schedule could follow this structure:

1. Months 1-2
   1. Initial IMSMA Core scoping meeting (mission to visit the program) and preparation/sharing of materials related to existing IM systems and data collection processes
   2. Identification of one or more areas for an IMSMA Core trial – specific Mine Action processes or data collection methods that are well-suited to prototyping with IMSMA Core
2. Months 3-6
   1. IMSMA Advisor preparation of IMSMA Core pilot materials, migration process and scope of support based on mutual agreement with NMAC or Operator
3. Months 6-8
   1. Field visit to NMAC or Operator for rollout of IMSMA Core Trial (validation with a select set of field users with real data collection examples)
4. Months 9-16
   1. Rollout of IMSMA Core to production usage, with ongoing support, maintenance, upgrades and bug fixed by GICHD as appropriate.
   2. Expansion of IMSMA Core usage to cover other aspects of Mine Action workflows as the NMAC or Program expands into new programmatic areas or identifies additional areas for further work

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The Advisor should also create a folder within the IMSMA Core Box folder hosted by GICHD, for storage of large files, IMSMA backups, etc. This folder can be created based on the country name (for national programs) or the operator name (for sub-national operations or international NGO operations).