

# Review of Aid Information Management in Somalia

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## Abbreviations and Acronyms

AIMS - Aid Information Management System  
AMP - Aid Management Platform  
CDDE Facility - UNDP's Capacity Development for Development Effectiveness Facility  
CoA - Chart of Accounts  
COFOG - Classification of the Functions of Government  
DAD - Development Assistance Database  
DFID - UK's Department for International Development  
DPs - Development Partners  
EU - European Union  
FTS - Financial Tracking Service/System  
FMIS - Financial Management Information System  
GoS - Government of Somalia  
HLPF - High Level Partnership Forum  
HQs - Headquarters  
IDPs - Internal Displaced Persons  
IATI - International Aid Transparency Initiative  
IMF - International Monetary Fund  
INGOs - International Non-Governmental Organizations  
MoF – Ministry of Finance  
MoPIC - Ministry of Planning & International Cooperation  
M&E - Monitoring and Evaluation  
MTEF - Medium-Term Expenditure Framework  
OCHA - United Nations' Office for the Coordination of Humanitarian Affairs  
OECD DAC - Organisation for Economic Co-operation and Development's Development Assistance Committee  
OECD CRS - Organisation for Economic Co-operation and Development's Credit Reporting System  
PSGs - Peacebuilding & Statebuilding Goals  
RCO - UN Resident Coordinator's Office  
SDRF - Somali Development and Reconstruction Facility  
UK - United Kingdom  
UNDP - United Nations Development Programme

## Executive Summary

**Monitoring aid flows is important.** It facilitates greater transparency and accountability between the government and the international community as well as with the citizens of Somalia. Analysis of aid flow data is an integral component of national planning and budgeting, aid and debt management, and monitoring and evaluation (M&E).

**The current system for tracking aid flows is currently not working, but experience shows better aid data is possible in Somalia.** Recognizing the potential for improved aid data, government authorities requested support from UNDP and the World Bank to conduct a review of the current system and develop a pragmatic strategy for an improved Aid Information Management System (AIMS) in Somalia.

**This report presents the key components of the proposed strategy.** It has been developed through consultations with federal and sub-national government authorities, development partners and AIMS experts between January and March 2015.

### Demand: Priority aid information needs in Somalia

**Most people looking for aid data in Somalia want to know *who, what, where* and *how much*, with an emphasis on information for forward planning.** The AIMS should be the primary source of basic aid data in Somalia, but it cannot answer all questions users may have about aid. Rather, the AIMS should point users with complex questions toward sources of information where they may be able to find answers (e.g. document links, channels for contacting project teams).

**The AIMS should limit data collection to approximately 20 core fields, which can address the vast majority of needs and will reduce the reporting burden.** A complex system discourages reporting and makes it difficult for users to access the information they need, which outweighs the benefit of adding the extra fields. User-specific markers can also be added and shared to create custom fields with which to track and filter projects.

### Data: Potential data sources to meet priority needs

**No single data source can supply all the information needed for each project.** Funders, implementers and the government all have different pieces of information that together provide a picture of who, what, where and how much.

**Just as different partners collaborate to implement projects, a collaborative reporting process is needed to enable different users to contribute the pieces of information they hold.** In practice, a development partner can initiate reporting of a specific project, tagging other entities involved in financing and/or implementation. These entities can suggest additions and changes to the data for that project, ensuring that the information for a specific project is as complete and up-to-date as possible. Information should also be inputted from existing sources, such as the Financial Tracking System (FTS) managed by OCHA to track humanitarian aid, reducing the reporting burden for development partners and improving the quality of aid flow data.

**In addition to reporting project-level data, the AIMS must enable development partners to report their overall funding envelope for Somalia, with an emphasis on forward spending.** Envelope reporting should strive to capture development, humanitarian and peacekeeping financing.

### Capacity: Capacity and institutional requirements to manage an AIMS

**While about ten percent of AIMS management requires technical IT skills, ninety percent of the work necessary to make an AIMS successful is about organization, coordination and communication.** The workflow needs to be well defined and managed, there must be coordination with those who input data and those who utilize data, and the analysis of aid data need to be clearly communicated and disseminated. Development partners are most incentivized to report data when they see it being used.

**International experience shows that an AIMS needs to be functional (producing outputs) for three years for it to be sustainable.** At this threshold, there is sufficient institutional capacity and memory to ensure that the system does not fall out of use. The government already has many of the necessary competencies to manage organizational, coordination and communication processes. However, it would benefit from technical assistance to support the establishment of clear workflows and procedures to develop institutional capacity in these three critical years of establishment. This support needs to be provided through on-the-job coaching at key stages of the AIMS workflow, rather than one-off trainings.

**The system must also be tailored to the capacity of the users who input and use data in the AIMS.** A governor or minister wanting a list of projects in his or her region or sector should not have to undergo extensive training to access the relevant data. Nor should a development partner with dozens of programs have to click through 79 complex fields to report a single project. The system should be as easy to use as Facebook, if it is to be successfully used by users with varying levels of IT capacity.

#### **Workflow: The workflow required to collect and manage aid data**

**The workflow for AIMS has three main stages: i) request, ii) input and validation, and iii) analysis and dissemination.** The government needs to send requests for data twice a year. In February or March, the request focuses on updating figures for the previous year. In August or September, the request focuses on forward spending for the following year, in order to feed into budget preparation processes.

In the input and validation stage, development partners review their existing data and submit data for new projects, with the help of partners involved in funding and implementation. If development partners adopt the habit of reporting new projects as they are finalized, the bi-annual reporting cycle should become an easier process of validation, with less new reporting.

**Nurturing strong demand for AIMS data and analysis is the only way sustainability can be ensured in the long run.** Data must be analyzed and disseminated at regular intervals in order to feed into various government and aid coordination processes. **The AIMS must make data accessible to users who actively search for it; but the ACU should also actively push data out to users such as ministries, federal states, coordination forums (e.g. PSG Working Groups, the SDRF Steering Committee), and the general public.**

#### **Outputs: Key analytical products**

**The AIMS should be output focused and accessible.** As such, the first page users land on in the AIMS should provide pre-packaged information designed to fit the needs for different types of users. A set of automated, “one-click” reports, based on regular recurring data requests, should be downloadable as PDFs. Filter tables allow a degree of customization for users with specific questions (e.g. which projects are targeting the health sector in a specific federal state?). For ambitious users, data can be downloaded in excel format for maximum customization. The data should be available to the public, therefore no log-in should be required.

#### **Next Steps**

AIMS development is difficult. Many current AIMS around the world are failing. They lack up-to-date data, they do not meet the needs of government and development partners, and they are time and resource intensive to maintain.

**This strategy is an attempt to do better by taking the needs for aid data in Somalia as its starting point.** The involvement of federal and sub-national government stakeholders has been critical throughout the review process to ensure the recommendations presented in this report match the reality on the ground. It is furthermore grounded in consultations with development partners who would be responsible for supplying the system with most of its data. This collaborative approach must be maintained throughout the development of the improved AIMS in order for the system to be successful.

**Somalis must be involved in the development of the system.** The AIMS must be developed in such a way that it can be maintained in the long run through local IT support, with only occasional external/international support if necessary. Capacity building within government needs to be regular with on

the ground presence. It must emphasize the organization, coordination, and communication functions that are required to build institutional capacity for AIMS management within government.

Next steps for implementing the strategy include:

- 1) The recommendations in this report have been developed through technical consultations with both government and development partners. Sharing with a wider group of stakeholders is now encouraged to ensure broad ownership of the recommendations.
- 2) An interim aid mapping exercise is being managed by the ACU to collect data for the identified core fields using a basic excel template from development partners. This data will be inputted into the improved system so it will be populated when it goes live.
- 3) In collaboration with the government, UNDP and the World Bank will work together to determine arrangements for contracting the development of the improved AIMS (dependent on the availability of funds), based on the strategy set forth in the report.

# 1 Introduction

**Monitoring aid flows is important.** It facilitates greater transparency and accountability between the government and the international community as well as with the citizens of Somalia. Analysis of aid flow data is an integral component of national planning and budgeting, aid and debt management, and monitoring and evaluation (M&E). Aid flows are also used for monitoring the implementation of the Somali Compact. With this multiplicity of purposes, a well-functioning aid information management system (AIMS) can serve as an important resource for multiple stakeholders within government, the international community and the general public.

**The current system for tracking aid flows is currently not working.** Government authorities and development partners have expressed dissatisfaction with the existing Development Assistance Database (DAD) established with UNDP support in 2011. The platform itself has been criticized for being overly complicated and in recent years, there has been very limited use of the data collected both within government and by the international community. Tracking of aid flows has been largely stymied or replaced by other ad-hoc systems.<sup>1</sup>

**Experience shows better aid data is possible in Somalia.** Between June and November 2014, the Aid Coordination Unit (ACU) within the FGS conducted an interim aid mapping exercise with the support of the World Bank requesting a “focused” dataset from development partners collected via Microsoft Excel templates. The high level of coverage and quality of the reported data demonstrated willingness to report amongst development partners if provided with the right tools, methodological and institutional support, as well as a reduced reporting burden, alongside high-level political engagement. The exercise also demonstrated an interest from the FGS to enhance its on-going monitoring of aid flows. It was the first time the FGS had had access to a consolidated overview of reported aid flows and allowed them address several aid issues that had previously been hidden.

**Somalia can learn from the lessons of AIMS in other countries,** which have evolved significantly in recent years. A number of aid recipient countries, including several fragile states, have well-functioning AIMS. Lessons from these systems indicate that successful AIMS rely not only on technological solutions but on establishing the right incentives, institutional arrangements to encourage participation and reporting, and a “demand-driven” approach to collecting, verifying and disseminating data. In particular, experiences show that aid data must inform key coordination, planning and budgeting processes in order to create a sustainable government demand and to incentivize development partners to report timely and accurate data.

Recognizing the potential for improved aid data, government authorities requested support from UNDP and the World Bank to conduct a review of the DAD, examining both the technical platform and the institutional arrangements for collecting and sharing data, and to develop a pragmatic strategy for aid flow monitoring that is adapted to the special needs of the Somali context. This resulting review was based primarily on consultations carried out between December 2014 and March 2015 with AIMS stakeholders including government and development partners, system providers, as well as AIMS experts and practitioners in multiple countries.<sup>2</sup>

The report itself is structured around 6 key topics, which also indicate the sequencing of the review.

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<sup>1</sup> For example, parallel systems have been initiated by budget planners, regions and line ministries to meet data needs, without linkages to centralized data collection efforts.

<sup>2</sup> For a full list of consultations, please see Annex 8.1

1. **Demand:** Priority aid information needs in Somalia
2. **Data:** Potential data sources to meet priority needs
3. **Capacity:** Capacity and institutional requirements to manage an AIMS
4. **Workflow:** The workflow required to collect and manage aid data
5. **Outputs:** The design of the key analytical products and their uses
6. **Next Steps:** Specifications and the way forward

## 2 Demand

### Key findings and recommendations:

- Most people looking for aid data in Somalia want to know *who, what, where* and *how much*, with an emphasis on information for forward planning.
- The AIMS should limit data collection to approximately 20 fields, which can address the vast majority of needs and reduce the reporting burden.
- Users with more specific data requests should be able to use the AIMS as a starting point for answers to their questions, either by accessing project contact details and linked project documents, or by creating user specific markers.

### 2.1 Core Project-Level Data Needs

Most people looking for aid data in Somalia want to know a few core elements about a specific project: *who, what, where* and *how much*, with an emphasis on information for forward planning. These questions are not limited to development projects; there is strong demand for an overview of all aid flows – be they for development, humanitarian or peacekeeping purposes. There is also demand to capture aid flows from non-Western development partners (e.g. non-OECD DAC donors and Islamic charities) in a centralized system.

- **Who:** Users want to know which organizations are involved in funding and implementing projects. *The specifics of how much an individual development partner is giving, or how much a specific implementer is receiving on a specific project, and the detailed contracting between them is not a priority.* For this level of detail, users (e.g. PSG Working Groups and Line Ministries) said they would be more likely to discuss their questions directly with those involved in the project.
- **What:** A basic description, identifying the general purpose or objectives of a project, along with a categorization by sector(s), would meet most needs for understanding what a project is trying to achieve. Users who wanted to know more about a specific project's activities would read a project document or contact someone working on the project.
- **Where:** Many users requested a geographic breakdown of project activities and the share of financing going to different locations (Box 2.1). *Few users are concerned about precise financial details at the more disaggregated levels at this stage. It was agreed that the project managers would be the best source if this level of detail were needed for a specific project.*
- **How Much:** Most users wanted approximate information about the volume of funding so that they could understand and coordinate with what a project would be delivering. Users are interested in the total value (and therefore duration), the share that had been spent to date (but little interest in the exact dates or even quarter) and the anticipated spending in upcoming years. *No users systematically wanted expenditure (as opposed to disbursement) data in the AIMS as they would go to implementing partners when they needed it.*

The AIMS will be unable to answer all questions users may have. While some of these needs could be met by expanding the data collected, the increased complexity and reporting burden outweighs the value of adding the extra fields. A complex system discourages reporting and makes it difficult for users to access the information they need. The AIMS should be the source of basic data that is not collected in any other system and provide a base from which to point users with more complex questions to further information, as explained below.



The AIMS should limit data collection to approximately 20 core input fields (Table 2.1), which can address the vast majority of needs and reduce the reporting burden. Additional output fields can automatically be calculated. For example, development partners may report using OECD DAC sectors, the most commonly used sectors for aid. These sectors can be mapped against a variety of other relevant sectors, based on changing needs (e.g. Chart of Accounts (CoA), PSGs, etc.) Thus, the development partner enters one response, but the data can automatically be filtered using a variety of breakdowns. Similarly, the duration can be calculated from the start and end dates.

**Table 2.1. Core vs. Specific Data Needs for Projects Financed through Aid**

<b>“Core” data needs</b> <i>(requested by a majority of users)</i>		<b>Relevant AIMS Fields</b>
Who	Who is providing funding? Who is involved in implementation?	<ul style="list-style-type: none"> <li>• Funders</li> <li>• Implementers</li> </ul>
What	What is the project name? What is its objective? Which sectors does it target?	<ul style="list-style-type: none"> <li>• Project title</li> <li>• Project objectives/purpose</li> <li>• Sectors</li> </ul>
Where	Which projects are active in Somalia? Which projects target a specific state or region?	<ul style="list-style-type: none"> <li>• Location (federal state or similarly sized entity)</li> <li>• Region</li> </ul>
When	When will the project be implemented?	<ul style="list-style-type: none"> <li>• Start date</li> <li>• End date</li> </ul>
How Much	What is the overall budget of the project? How much has been spent to date? How much was spent last year? How much will likely be spent next year?	<ul style="list-style-type: none"> <li>• Project value</li> <li>• Share of project value by location</li> <li>• Amount spent to date</li> <li>• Amount spent previous year</li> <li>• Amount expected to be spent next year</li> <li>• Project reporting currency</li> <li>• Exchange rate of reporting currency to USD</li> </ul>
Additional information	Where can I find out more information?	<ul style="list-style-type: none"> <li>• Document uploads or links</li> <li>• Project contact details</li> </ul>

### **Box 2.1. Geographic Breakdown of Aid Data**

In an ideal world, all aid data could be mapped to specific regions, municipalities, or even villages. While certain types of activities lend themselves to comprehensive geo-mapping, for others it is more difficult. If a project finances an advisor who works across four municipalities, how is the financing mapped geographically? Is it split evenly across the four, or does it depend on the number of days spent in each? If a radio program is broadcast in three regions, is the financing attributed to the city in which the radio station is based or in the area of broadcast? While solutions for these questions could be determined on a case-by-case basis, they touch on the bigger issue that development partners reporting data often do not know how to disaggregate their data geographically. Even when they do, it is rarely done using the same level of geographic detail.

Consultations with government representatives revealed that while more granular data is desirable, the current priority for geographic disaggregation is to be able to say with more precision how much aid is flowing to Somalia. Projects can further be tagged to regions, but this reporting would not include the precise flow of funds to a specific region.

Once location-based reporting is significantly improved, the AIMS could be adapted to allow for financial breakdowns at the regional level if it is deemed necessary. However, the benefit of adding core fields should

always be weighed against the potential of discouraging reporting. If additional fields decrease the level or quality of overall reporting, it is better to try to access the data through other channels when specific questions about a project arise (e.g. project documents, conversations with project teams, etc.).

## 2.2 Use of Markers for Secondary Project-Level Data Needs

User-specific markers can also be added and shared to create custom fields with which to track and filter projects. Many users would like to use project level aid information in combination with fields unique to them. For example, government is interested in tracking on-treasury projects that make use of government systems or have recurrent cost implications. Other users are interested in thematic issues, such as gender, environment or youth. Another area of interest is aid effectiveness indicators. The AIMS will need to allow individual users to add their own fields (which they then populate) to augment the core data provided by all users.

These indicators change more often than core indicators, which very rarely change. While an AIMS should offer flexibility, it cannot be redesigned several times a year to add new fields. Adopting all these new indicators (and being unable to remove the ones that are no longer needed) also makes an AIMS overly complex and increases the reporting burden. Moreover, reporting agencies may not have the information needed to fill in the fields relevant to another user.

To minimize these pressures, much of this information can be collected outside the AIMS (especially for one-off tasks) using a list of projects exported from the AIMS as their starting point. However, where users desire to share their new field, or want to use their field to disaggregate an AIMS report, the AIMS requires a system of user added markers (fields). Each user can define and share their own fields and add the relevant data. Certain markers may still require data from development partners. For instance, gender was identified as a priority by development partners reporting data. It would be very difficult for another user to apply a gender marker without specific knowledge about how individual projects address gender in their programming. This marker could be included with the core fields for development partners to report against. It is not considered “core” because the way in which it is measured is not standardized. The OECD gender marker uses three classifications to indicate to what extent gender equality is a focus of the reported activity (principal, significant, not targeted). Other interviewed development partners used a larger scale to distinguish gender mainstreaming in their activities. A clear system and guidance need to be established for tracking this marker, to ensure consistent reporting.

### Box 2.2. Examples of Potential Markers

AIMS users can develop specific markers that may be of their interest. These fields complement the information in the core data fields. For instance, the PSG working groups may be interested in mapping projects against specific PSG priorities as a means for analysing alignment. The group would filter projects for their PSG and add a marker specifying the different priorities of their respective PSG. Using the project objectives field as a guide, the group could use this marker to identify which projects they think target a specific priority. This marker system can be kept private or made public. Other examples could be markers for tagging projects that are channelled through the treasury, benefit Internal Displaced Persons (IDPs) or support environmental sustainability.

## 2.3 Solutions for Additional Data Needs

This section proposes solutions for addressing specific data needs not covered in the core project-level data fields.

**Development partner funding envelopes:** Both government and development partners are interested in seeing an overview of total development partner contributions to Somalia, both historical and forward looking. This information cannot be collected at the project level, as future contributions are typically unprogrammed at the time the information is needed. It is most easily collected by asking development partners to report their overall funding envelope for Somalia. This is especially important for bilateral donors, but this data should also be collected from multilaterals providing financing from their own core funding. Several users are interested in breakdowns e.g. the development/humanitarian shares, the use of government systems, or the amount to be spent within Somalia. A small separate set of development partner level data entry fields are needed and could be collected and analysed separately or they could be added to the AIMS given the shared users and data collection processes. Envelope reporting should strive to capture development, humanitarian and peacekeeping financing.

**Detailed project information:** Several sets of users e.g. civil society, sector coordination forums (e.g. PSG Working Groups or Sub-Working Groups), and monitoring and evaluation (M&E) users want detailed information about a project. International experience has shown that efforts to collect specialized data through an AIMS results in low levels of reporting; the data that is collected is of a poor quality and is often out of date. However, the AIMS can help these users by supplying up-to-date project lists and contact details of project staff, as well as a space to store (or link to) uploaded project documents containing the necessary detail.

**Types of organizations:** Government entities are interested in the type of partners involved in project implementation (INGOs, National NGOs, private sector, government, UN agencies, etc.). Rather than including “type of organization” as a core field in the AIMS, the listed organizations can be categorized in the back office to automate this sorting process and ensure consistent reporting.

**Budget data and the Chart of Accounts (CoA):** The Ministry of Finance uses a Financial Management Information System (FMIS) to track fiscal information related to planning, budgeting, purchasing, accounting, reporting and auditing using Chart of Accounts (CoA) codes. An AIMS is designed to capture a broader picture of aid flows – both on and off treasury – with less granularity and frequency. As a majority of aid in Somalia is not channelled through the treasury, the AIMS provides important information for planning that is complementary to data captured in the FMIS.

Consultations with budget teams in the Ministry of Finance confirmed that the AIMS does not need to capture data in the exactly same format as the FMIS for it to be useful for budget planning. To be completely compatible, AIMS data would need to be highly disaggregated data, have a different definition of spending (expenditure, not disbursements) and require data within two weeks of month end. 2 below shows the classifications available in the FMIS, with the level of disaggregation likely to be available in the AIMS shaded darker. The AIMS cannot meet these requirements whilst staying user friendly and the FMIS already performs this role for relevant (on-treasury) projects. Nor would meeting these requirements add much value for the Ministry of Finance. Therefore, the AIMS will maintain compatibility where relevant but should not expand into the role of the FMIS.

The Ministry of Finance budget teams identified two key data needs from the AIMS: one would be a listing of projects with basic disbursement data for the annex of the budget to be submitted to Parliament, the second is an overview of forward spending by donors, providing insight into the predictability and volatility

of future aid flows. The International Monetary Fund (IMF) recommends the use of first and second level Classification of the Functions of Government (COFOG)<sup>3</sup> in the back office of the AIMS – mapping OECD DAC aid sectors against the COFOG – for preparing the annex of the annual budget.

**Table 2.2. Somali Chart of Accounts**

*The boxes highlighted in grey indicate the areas of potential alignment for the AIMS*

Admin/Organization	Fund	Economic/Program	Object	Location
Sector (1)	Source (3)	Sector (1)	Category (1)	Region (2)
MDA (3)	Agreement (5)	Sub-sector (3)	Type (2)	District (4)
Section (5)	Fund (6)	Project (5)	Classification (3)	
		Component (6)	Group (4)	
		Sub-component (7)	Object (6)	

**Box 2.2. Alignment of AIMS data for Budget Processes in Liberia**

The Liberia AIMS<sup>4</sup> aligns key data fields with the government's Integrated Financial Management Information System (IFMIS) used to manage the government's own finances (budget, projects, and expenditures). The same numbering system (i.e. unique project identifier) is used to reference projects in both the AIMS and IFMIS. This helps prevent double counting and enables the government to track individual projects more easily across both systems. Also, each project in AIMS is aligned with nomenclature used in the government's own Medium-Term Expenditure Framework (MTEF) - the sector codes; sector names; ministry and agency code; ministry and agency name; MTEF policy code and; MTEF policy area name. The Liberia AIMS is updated before the budget preparation process starts to ensure that it is used for planning. This example demonstrates how an AIMS can be aligned to support budget processes, without being fully integrated with the IFMIS.

<sup>3</sup> [www.oecd.org/gov/48250728.pdf](http://www.oecd.org/gov/48250728.pdf)

<sup>4</sup> The system used in Liberia is an Aid Management Platform (AMP).

### 3 Data Sources

#### Key findings and recommendations:

- No single data source can supply all the information needed for each project. Funders, implementers and the government all hold important pieces of information.
- Just as different partners collaborate to implement projects, a collaborative reporting process is needed to enable different users to contribute the pieces of information they hold.
- Information should also be inputted from existing sources, such as the Financial Tracking System (FTS) managed by OCHA to track humanitarian aid, reducing the reporting burden for development partners and improving the quality of aid flow data.
- In addition to reporting project-level data, the AIMS must enable development partners to report their overall funding envelope for Somalia, with an emphasis on forward spending. Envelope reporting should strive to capture development, humanitarian and peacekeeping financing.

There are a wide range of sources of aid data available for Somalia. In this section the recommended sources are reviewed and matched against the demands for data from the previous chapter.

#### 3.1 Main data sources

**Development partner country offices:** All development partners have an office responsible for relations with the government (although often in Nairobi or further afield). This is the likely location for an AIMS focal point, as it is typically where the project/sector managers are and is where the government can exert political leverage to request data. Development partner country offices have access to databases where spending is tracked and can use these to enter many of the core fields, especially for bilateral projects.

**Implementers:** Implementers are a broad group ranging from UN agencies (which may also be funders), to managing agents, to International NGOs, National NGOs and the private sector. Much of the data on location, contact details and documents are likely to come from the implementers. In the case of multi-funder projects, or projects where the funder does not have a country office, the managing agent/lead development partner is also likely to enter many of the other fields e.g. the value, name, objectives as they will be best placed to know these. **Where the government is the implementer for on-treasury projects they will also enter relevant data.**

**ACU:** The ACU will be responsible for maintaining the data in several “back office” fields required to make the AIMS function. **The ACU will maintain a mapping between development partner and government sectors, will maintain the list of organizations, which can be funders and implementers and other fields such as the exchange rate between USD and Somali Shillings.** It is also likely that the ACU will take responsibility for several key markers that have multiple users e.g. a marker for projects financed through the **SDRF**.

**FTS (Financial Tracking Service):** Development partner country offices find humanitarian projects much harder to report as the funding channels are complex and include many projects run from outside the Somalia country office e.g. development partner HQ contributions to the Common Humanitarian Fund. The majority of humanitarian projects are already reported to the OCHA FTS (United Nations Office for the Coordination of Humanitarian Affairs Financial Tracking System)<sup>5</sup> therefore the AIMS can import the majority

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<sup>5</sup> <http://fts.unocha.org>

of the data for the core fields by automatically importing them (via an FTS Excel file import or the OCHA IATI feed) and at the same time, reduce the data entry burden. Given the scale of humanitarian support in Somalia and the 'grey areas' and growing need for coordination between humanitarian and development support (e.g. in areas such as resilience and livelihoods) the AIMS needs this information to capture the full picture.

### 3.2 Supplementary data sources

**Development partner headquarters and regional offices:** Where a development partner does not have a Somalia office, or where some projects are run from the HQ or regional office, they can register as a data entry user and enter projects directly rather than channelling them via the country office or not at all.

**Line and regional ministries:** Line and regional ministries are likely to be aware of projects in their location or sector. By registering as data entry users, they can suggest updates or changes to make corrections and fill gaps in the project data – which once verified, will improve the data quality and increase their ownership.

**IATI:** Through the International Aid Transparency Initiative (IATI) a growing number of development partners report aid data directly (and publicly) from the development partner HQ. At the time of writing, some key development partners have good reporting (EU, UK, Denmark, Sweden, Norway) while others do not (e.g. the US). For those that are reporting, IATI data is generally not yet of sufficient quality to have as a primary data source for the AIMS.<sup>6</sup> Notably, IATI data is often currently missing data for start/end dates, sector, location and share of funding.

Several other factors suggest that IATI data integration is not yet ready (including the lack of a fully functioning solution in the marketplace). Most development partner focal points in development partner country offices are unaware of IATI data and unwilling to spend the time resolving the differences between it and the manually entered data. Somali ACU capacity/experience is low compared to many other AIMS managers, and therefore, managing the automatic import and the potential for issues such as double counting and merging with user entered data would be very difficult. Despite several years of work across multiple countries, none of the IATI import systems available in the market has yet been successful; however, as the situation improves, this may be increasingly worthwhile in a few years' time.

**OECD CRS / Aiddata:** The OECD DAC Credit Reporting System (CRS) and Aiddata are comprehensive, public, and verified sources of data on development partner aid. To achieve this level of quality, their data collection focuses on actual disbursements, not planned disbursements. As such, their data is typically between 12 and 24 months out of data and therefore not useful for the AIMS.

**Users:** For the markers, the user specifiable fields, users will need to enter their own data. For example, a user making a field to mark whether a project targets youth employment will need to establish this on a project-by-project basis using their own sources of information (and probably also the project description, contact details and uploaded documents).

### 3.3 Fields and sources

No single data source can supply all the information needed for each project. Therefore, different inputters will have to collaborate, adding the data that they hold. For example, only the project manager or the lead development partner knows the full cost and spending to date. Only the implementing partners know the

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<sup>6</sup> See for example: [www.developmentgateway.org/news/iati-and-country-systems-data-evaluation-results](http://www.developmentgateway.org/news/iati-and-country-systems-data-evaluation-results)

detailed project locations. The AIMS will need to allow each project to accept data from multiple users. It does not matter who enters what data as long as all users can see it to validate the parts relevant to them.

**Table 3.1. Data Fields and Likely Sources for the Somali AIMS**

	Data field	Dev't Partner country office	Project managers	Implementers	Government	Users
1.	Project name	X	X			
2.	Project Value	X	X			
3.	Project reporting currency	X	X			
4.	Exchange rate to USD	X	X			
5.	Amount spent to date	X	X			
6.	Amount spent previous year	X	X			
7.	Amount exp. to spend next year	X	X			
8.	Location(s) and share of project value	X	X	X		
9.	Sub-location(s)		X	X		
10.	Description (project objectives / purpose)	X	X	X		
11.	Funders	X	X	X		
12.	Implementers	X	X	X		
13.	Start date	X	X	X		
14.	End date	X	X	X		
15.	OECD DAC Sector(s) and share of project value <sup>7</sup>	X	X	X		
16.	Gender marker	X	X	X		
17.	Project contact details <sup>8</sup>	X	X	X	X	
18.	Document uploads or links	X	X	X	X	
19.	User-specified markers (e.g. On/Off-treasury, Humanitarian) <sup>9</sup>				X	X
20.	Somali-relevant sectors (OECD DAC sectors would be mapped in the back office against COFOG, CoA, PSGs or other Somalia-relevant classifications; thus, this field would be automatically reported at the project level)				X	

**Table 3.2. Fields for Development Partner Envelopes**

*The envelope reporting would primarily be conducted by bilateral donors. However, multilaterals could use this reporting tool for core funding.*

	Development partner name	Source
1.	Expected spending envelope for next year	Development partner country office
2.	Breakdowns (e.g. humanitarian share, share spent in country, use of government systems)	Development partner country office
3.	Expected annual spending envelope for next 3-5 years	Development partner country office

<sup>7</sup> Where OECD DAC sectors lack specificity, additional breakdowns could be applied to facilitate back office mapping against other sector categories (e.g. COFOG, CoA, PSGs, etc.)

<sup>8</sup> Name, organization, phone number, email address

<sup>9</sup> Users (e.g. government to mark on-treasury, OCHA to mark Humanitarian).



### Box 3.1. Integrating Humanitarian Aid in the AIMS

Development partner country offices find humanitarian projects much harder to report as the timelines are short, funding channels are complex and many projects are managed from outside their offices. This mirrors international experiences where humanitarian data is seldom reported to AIMS. A funder may, for example, provide contributions to the Common Humanitarian Fund as well as have bilateral allocations to humanitarian agencies and actors. Development partners may also mix locally mobilized resources with funds from global pooled funding mechanisms and/or resources from their core budgets. In terms of forward projected spending, humanitarian aid is largely programmed according to needs as they emerge throughout the year, which makes forward-looking reporting complicated. Projects in the Strategic Response Plan (formerly the CAP) are the exception as a list of projects is presented to funders who commit to projects. However, the location of projects may be unknown as the needs again are identified along the way.

The majority of humanitarian projects are already reported to the OCHA FTS (United Nations Office for the Coordination of Humanitarian Affairs Financial Tracking Service); therefore, the AIMS can import the majority of the data for the core fields automatically (via the FTS API or the OCHA IATI feed) and at the same time reduce the data entry burden for development partners. Given the scale of humanitarian support in Somalia and the growing need for coordination between humanitarian and development support (e.g. in areas such as resilience and livelihoods programming), the AIMS needs this information to capture the full picture. In other countries, humanitarian aid is included but has been provided by OCHA and other development partners, rather than through a data import from another system. **In the case of Somalia, an import from the FTS may include projects reported elsewhere by donors, so an effort must be made to identify double counting. Also, humanitarian partners (funders and implementers) must provide additional data when necessary to ensure that the AIMS core data fields are complete.**



## 4 Capacity

### Key findings and recommendations:

- About 10% of AIMS management requires technical IT skills; 90% of the work necessary to make an AIMS successful is about organization, coordination and communication. The government would benefit from technical assistance to support the establishment of clear workflows and procedures to develop institutional capacity.
- The system must also be tailored to the capacity of the users who input and use data in the AIMS. The AIMS should be easy to manage and not require unreasonable resource commitments from the already capacity-constrained government and development partners. In developing the AIMS, it should be ensured that local capacities are being developed to maintain and manage the system.
- It is key to enhance the short-term capacity of the government to engage actively in the process of developing and rolling out the AIMS including for training government counterparts.

Strengthening capacity for aid information management is key for improving national ownership and leadership of the aid management and coordination processes, as well as for sustainability and cost-effectiveness. Effective aid coordination is not a question of having the right system but rather of putting in place the right capacities, incentives and processes. In general there is agreement on the need for an easily manageable and accessible system with simple and light processes, which should not unnecessarily burden either development partners or government counterparts. Somalia remains a low-capacity environment on both the government and funder side and the AIMS must reflect these constraints. The greater the level of detail and the broader the scope of data gathering, the higher the transaction costs for those reporting data to the system and for those involved in data validation, and dissemination. In the trade-off between sophistication and manageability, focus should be on the latter.

### 4.1 Capacity Needs for the Aid Information Management Cycle

Different types of capacities are needed throughout the aid information management cycle. This section seeks to describe these capacities drawing on experiences from elsewhere as well as present an assessment of the currently available capacity in Somalia as well as capacity development needs.

<b>Capacity to manage the development and roll-out of the AIMS</b>	The ACU must have adequate capacity to meaningfully engage in the process of developing the AIMS. This will include ensuring that the government's needs are met and that the AIMS meets the requirements identified by the government (through quality control and testing).
<b>Capacity to maintain and manage the AIMS</b>	Throughout the process of developing the AIMS, it must be ensured that technical capacity is developed locally to maintain and manage the AIMS.
<b>Capacity of development partners to report</b>	On the side of development partners, focal points inputting data into the AIMS will need to be trained. The development partner community and the ACU must ensure an up-to-date list of development partner focal points for AIMS and provide training at regular intervals.
<b>Capacity to liaise with development partners</b>	The ACU must ensure that liaising with development partners on AIMS data quality assurance is an integrated part of all their staff ToRs. During the bi-annual data collection exercises, all ACU staff must assist the process.
<b>ACU capacity to analyze aid data</b>	The ACU should have the capacity to continuously analyze the data collected to identify trends and patterns and generate reports that can nurture and trigger discussions of relevance to aid effectiveness.

<b>Capacity to disseminate/communicate analysis</b>	The ACU should have the capacity to produce reports that convey at times complicated data analysis in intuitive and accessible formats that cater to the needs of the AIMS users.
<b>Capacity to utilize data within government</b>	Capacity development should be provided to key government entities to ensure that each of these is aware of the AIMS and its potentials.

## 4.2 General recommendations for capacity development

The ACU has built its capacity in the areas of organization, coordination and communication over the past year. The challenge will be to apply these skills to the field of aid management by defining the roles and tasks existing staff will play in the development and management of a Somalia AIMS. The ACU would benefit from technical assistance at regular intervals throughout the AIMS development process for the first 2-3 years of the improved AIMS. Such support should consist of on-the-job coaching at key stages of the AIMS workflow, rather than one-off trainings. The ACU is planning to hire an AIMS manager, who would need to provide the necessary technical capacity for database management and data analysis. Exposure to working with well-functioning AIMS and associated data collection processes may also be beneficial as part of a process of practical peer learning.

Management of an improved AIMS will require teamwork within government. The following roles were identified through the consultations:

- **Development partner coordination:** The donor coordinator within the ACU should be the main point of contact, requesting development partners to submit their data to the system. The PSG WG focal points would need to deliver a consistent message (managed by the donor coordinator) to development partners, encouraging them to report their data on a biannual basis. They would all extract PSG reports for use in WG meetings. The SDRF Secretariat representative in the ACU would need to extract the SDRF report in advance of each steering committee meeting.
- **Intra-governmental coordination:** The ACU intra-governmental coordinator will need to work with sub-national ACUs and other government users (e.g. New Deal Committee, Ministries and agencies) to ensure data and reports are accessible and that the pre-defined reports continue to be relevant for users. Line ministries could appoint focal points to extract reports, circulate them on a regular basis within ministries and verify projects in their areas.
- **Sub-national coordination:** Sub-national ACUs will need to regularly extract reports and circulate them to sub-national government stakeholders. They will also have an important role in identifying data gaps and coordinating with the federal ACU to ensure development partners update their data.
- **Budget preparation:** Budget teams would need to export their custom reports to inform budget planning processes. This information would be focused on forward spending projections.
- **AIMS management:** The AIMS manager in the ACU is needed to ensure the system is regularly maintained and adjusted to meet shifting needs for aid data.

The current ACU staff are all project funded and thus temporary contracts. While this has allowed the ACU (under a broader UNDP capacity development project) to offer competitive salaries and thus recruit strong candidates, the ACU staff will eventually need to be on government payroll to ensure longer-term sustainability. A capacity development process addressing the capacity needs identified in the table above must accompany this process and adequate resources to fund this process must be mobilized.

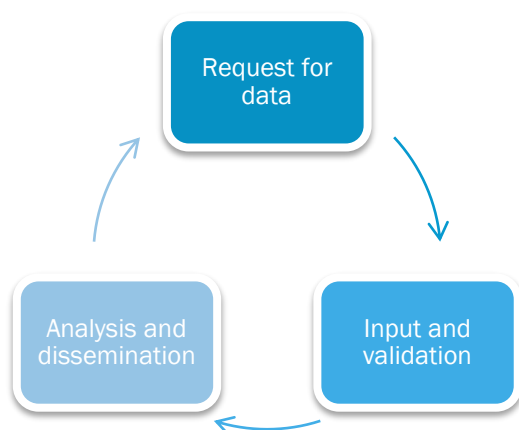
## 5 Workflow

### Key findings and recommendations:

- The workflow for AIMS has three main stages: *i)* request for data, *ii)* input and validation, and *iii)* analysis and dissemination.
- The government needs to send requests for data twice a year to verify the previous year's data (in Feb-Mar) and to inform the budget preparation process (in Aug-Sept)
- Nurturing strong demand for AIMS data and analysis is the only way sustainability can be ensured in the long run. Data must be analysed and disseminated at regular intervals in order to feed into various government and aid coordination processes.

In countries where the AIMS has become a sustainable and widely used source of information such as Malawi and Rwanda, it is not only because of the technical solution but also because strong processes have been established around the collection, validation, and dissemination of aid data (based on the identification of key demands). To date, the processes around aid data collection have been unclear or inconsistent in Somalia. International experiences also show that the government must own the aid information

Figure 5.1. AIMS Workflow



management process. This means that while many actors will be involved in the provision, verification and use of data, the

process must be initiated by the government and must be aligned with other key government processes relating to planning and budgeting

This chapter seeks to outline a proposal for an effective process for AIMS data generation and dissemination. Figure 5.1 describes the proposed AIMS workflow.

### 5.1 Data Requests

The Federal Government of Somalia (FGS) should put out a request for data twice a year. States and regions should not issue separate requests as this will lead to confusion and “reporting fatigue” amongst development partners. However, in turn, the FGS must ensure that the data it collects is fully accessible. Ideally, it should not just be accessible to sub-national governments, but also the public at large.

Around February or March, a request should be sent out to development partners to provide data on the previous year's spending. In August or September, a request needs to be put out to development partners to obtain forward spending projections to inform budget preparation processes. This includes planned spending at the project-level and the overall envelope for the coming years disaggregated, to the extent possible, on the funding channels (bilateral, pooled funds, etc.) as well as breakdowns for humanitarian and peacekeeping support)

### 5.2 Input and Validation

In the input and validation stage, development partners review their existing data and submit data for new projects, with the help of partners involved in funding and implementation. If development partners adopt

the habit of reporting new projects as they are finalized, the bi-annual reporting cycle should become an easier process of validation, with less new reporting.

The categorization of development partners can become complex, as a single organization may be a donor, a managing agent and an implementer for a given project, depending on the component. **To simplify this process, the AIMS can refer to “funders” and “implementers,” recognizing that a single entity can be both.**

Funders will typically provide core data (unless an implementer is explicitly given this task) including project name, project description and objectives, duration, implementers, overall value, implementers, contact information etc. Funders include:

- Bilateral funders (traditional and non-traditional)
- Multilateral actors contributing with core funding to projects
- Global funds and global multi-donor trust funds
- Country-specific multi-donor trust funds
- NGOs using core funding from private sources
- Islamic organizations

In the February data collection phase, partners will report the finalized status and value at the project level of activities in the previous year. In the August data collection cycle, partners will report on projected spending at the project level for multi-year projects and projects that have already been approved. Besides that, funders will report (for as long as possible period ideally at least three years) on their expected funding envelope for Somalia. This should include all types of funding including for peacekeeping and humanitarian activities. Funders should also to the extent possible, indicate if funding is committed, for example, to a pooled funding mechanism. These numbers are evidently indicative and subject to change. This will mean that from the perspective of the funder, a report on the total commitments can be generated. From the perspective of the project level, reports can be generated that show the commitment to projects and programs.

#### **Box 5.1. Reporting for Multi Donor Funds**

In the case of multi-donor trust funds, the fund managers will likely take the responsibility for initiating reporting, as they often have the most complete and up-to-date information on a specific project. They will tag other funders for each project, reducing the reporting burden for bilateral donors channelling financing through pooled funding instruments. Bilateral donors will be able to see all projects in which they have been tagged. This will enable them to propose revisions, but they will not be expected to initiate reporting on a specific project.

After funders have provided the core data, some fields may need to be filled out by implementers. It is the implementer to which the funder transfers funds who is responsible for filling in the rest of the information. This first level implementer may need to liaise with a range of sub-contracted implementers to obtain the information needed. Specific focus should be given to identifying the geographical locations of project activities (which is a mandatory field) as this is needed to populate the state and region-specific views of the AIMS. A key challenge will be ensuring that implementers are incentivized to report to the AIMS. Funders should consider making reporting a mandatory requirement through their agreements and contracts with implementers.

The Resident Coordinator's Office should ensure reporting compliance from UN agencies, funds and programs (maintaining a contact list, distributing requests for data, follow up and track reporting etc.). The NGO Consortium should take in a similar role to encourage reporting amongst this group of implementers.

Subsequently, the FGS will undertake an initial validation and cleaning of the data. This includes identifying double entries and projects that have been erroneously reported. It should also include an initial assessment of which types of data that are missing for each of the projects and if some development partners haven't reported at all. A list of the missing fields and of reporting non-compliance by development partners will be distributed to funders. For non-compliant funders, the IATI registry or donor websites may be consulted by the FGS to get an idea of reported (from capital level) activities in Somalia.

As data becomes public, all stakeholders will play a role in validating and improving data on an on-going basis. For example, if a state government identifies that a project has been erroneously reported as being implemented in that state or if changes need to be made, they can work with the development partners to update the data. Funders may prefer to enter new projects into the AIMS as soon as they are approved so that the data only needs to be reviewed and validated when the government requests data.

### **5.3 Analysis and Dissemination**

Nurturing strong demand for AIMS data and analysis is the only way sustainability can be ensured in the long run. Data must be analysed and disseminated at regular intervals in order to feed into various government and aid coordination processes. The AIMS must make data accessible to users who actively search for it; but the ACU should also actively push data out to users such as ministries, federal states, coordination forums (e.g. PSG Working Groups, the SDRF Steering Committee), and the general public. The next section provides greater detail on the outputs the AIMS should deliver.

The annual AIMS workflow may need to be adjusted to feed into critical events such as high-level meetings but should, as a rule, follow a predictable and transparent cycle. See Annex 8.6 for a proposed schedule of the annual reporting cycle.

## 6 Outputs

### Key findings and recommendations:

- The AIMS should be output focused and accessible. It should provide pre-packaged information designed to fit the needs for different types of users.
- A set of automated, “one-click” reports, based on regular recurring data requests, should be downloadable as PDFs.
- Filter tables allow a degree of customization for users with basic questions. For ambitious users, data can be downloaded in excel format for maximum customization. The data should be available to the public, therefore no log-in should be required.

The primary purpose of an AIMS is not only to collect data, but also to produce outputs<sup>10</sup>, to respond to information and analytic demands, and will facilitate and improve planning, budgeting and accountability processes, as well as the functioning of coordination structures. These two aspects are linked in a vicious (or virtuous) circle. Most AIMS (including the Somali DAD) fail because the users see so few outputs that they are reluctant to spend the time and effort necessary to input the data. This is especially true when development partners are the main data inputters as whilst the data entry burden can be minimized it cannot be removed entirely. Once a critical mass of data is reached and reports are made public, development partner incentives to provide good quality data in a timely manner increase. There are several types of outputs needed and they should be directly linked from the front/home page of the AIMS and publically accessible i.e. without requiring any login. Information from AIMS outputs may be complemented with information provided by other systems (e.g. the FMIS, Debt and M&E systems, Aid effectiveness and Compact monitoring data) to contribute to issues such as budget planning, aid effectiveness and the results based management.

**Regular reports:** The vast majority of the information needs (perhaps as high as 90%) from an AIMS are repeated requests on a regular (monthly/quarterly) basis for the same data. To save time and effort producing these they can be pre-programmed into the AIMS and then produced (and downloaded as pdf or Excel files) at the click of a button by any user, even without any AIMS training. Over time, the pre-defined reports will need adjusting by a developer/programmer as the demands change. Ideas for the initial set are presented in Table 6.1.

**Specific one-off queries:** Most of the remaining queries can be answered by producing a table showing a filtered list of projects and a few columns giving the project name, value, spending to date and one or two breakdowns, e.g. location or sector. In this way, users are able to develop reports based on their specific needs. An example of this could be a case in which the ACU is requested to produce a report on which UN agencies are involved in projects in a specific state. Such searches will require some minimal knowledge of the AIMS fields in order to filter the data.

**Ad-hoc/one-off, information lookups and searches:** Users may require information about a specific project, for example finding out who is the implementer for a project, checking how much has been spent, finding out when a project started, downloading a copy of the latest project appraisal. Users can filter the list of projects e.g. by funder/implementer, sector and location to find the project they are looking for and then

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<sup>10</sup> This also suggests that the “home” page of an AIMS should be a list of outputs for users, not a data entry page, with outputs hidden behind a menu. This is increasingly the trend see for example the Myanmar AIMS <http://mohinga.info> or the Nepal AIMS <http://amis.mof.gov.np/portal/> although both are confusing for untrained users.

click the name to be taken to the project overview page giving all the details and showing the uploaded documents and with a form to request the project contact details.

**Table 6.1. Pre-defined reports produced by the AIMS<sup>11</sup>**

Report	Information
<b>Project Profile</b>	Basic information about a project, listing all the fields (name, value, funders, implementers, etc.) and calculating various other fields e.g. the percentage of time elapsed, share of funds disbursed alongside basic charts and maps. See for example DFID Devtracker profiles <sup>12</sup>
<b>Aid overview report</b>	An overview of aid to Somalia giving a 'dashboard' e.g. showing the value of ongoing projects, in the past and future, charts showing the breakdown by sector and location, key funders and implementers. Also useful e.g. for SDRF steering committee when combined with a user marker identifying funds channelled through the SDRF.
<b>Sector/PSG/NDP reports</b>	Key information to line ministries, Clusters, PSG Working Groups and sub-Working Groups showing the current and upcoming value of projects, locations, new and recently closed projects, etc., all filtered by the relevant sector/PSG/National Development Plan category.
<b>Location reports</b>	As with sector reports, but filtered by the selected sub-national location and with sector breakdowns.
<b>Budget report</b>	Table giving data for budget preparation and expenditure reporting such as project names, funders, sectors, value, previous year spending, spending to date, spending in upcoming year, etc., with Chart of Accounts codes and national/PSG sectors and locations as appropriate. User just needs to select the appropriate Financial Year. Primarily exportable to Excel and usable in combination with a user marker – such as one filtering for 'on-treasury' projects only.
<b>Development partner reports</b>	Based on development partner envelope data in combination with the project level data focusing on forward spending, disbursement of funds and a breakdown of sectors, locations and implementer types etc.
<b>Administrator reports</b>	For maintenance and management of the AIMS, the AIMS managers will require reports showing which projects have missing data, etc.

**Maps:** Mapping functionality was a requested feature of the AIMS mentioned by a number of users; however, it was not deemed a priority in consultations. Somali stakeholders have expressed preference for a simple and cost-effective AIMS. This feature can be incorporated into the system in the future if national stakeholders express interest. Filter tables will still enable users to sort projects by location (at the level of federal states or similarly sized entities) or regions.

**Accessing and exporting the raw data:** Very few users are aware of the built-in data analysis features of most AIMS. Even fewer use them, complaining that they are too complex and do not fit their needs. Given the level of complexity they add to the AIMS, it is better not to have these features and instead provide a simple export (download) of the raw data so that users can analyze the data in the software of their choice, that they are already trained to use. Typically, this is Microsoft Excel<sup>13</sup> and an AIMS can never hope to equal its feature set and capability. For simplicity and speed, the raw data export should export all fields and users can then remove those they do not need.

**Branding and awareness.** Very few stakeholders are aware of the DAD (even when they are using DAD outputs). This reduces demand and pressure on development partners and government to fill in the data. **AIMS outputs need to be strongly branded with the AIMS logo so that they contribute to creating a virtuous circle.**

<sup>11</sup> The standardized outputs will have significant inputs from stakeholders before their design is finalized.

<sup>12</sup> <http://devtracker.dfid.gov.uk/projects/GB-1-203742/>

<sup>13</sup> Microsoft Excel or equivalent spreadsheet program e.g. Libre Office Calc. In very few cases, users may wish to use statistics programs such as STATA, SPSS, S or R, or a database. All should be catered for by a CSV or XLSX export.



## 7 Next Steps

AIMS development is difficult. Many current AIMS are failing. They lack up-to-date data, they do not meet the needs of government and development partners, and they are time and resource intensive to maintain.<sup>14</sup>

**This strategy is an attempt to do better by taking the needs for aid data in Somalia as its starting point.** The involvement of federal and sub-national government stakeholders has been critical throughout the review process to ensure the recommendations presented in this report match the reality on the ground. It is furthermore grounded in consultations with development partners who would be responsible for supplying the system with most of its data. This collaborative approach must be maintained throughout the development of the improved AIMS in order for the system to be successful.

### 7.1 Specifications

Programming the AIMS will require the developers to work to develop and agree detailed specifications in collaboration with many partners such as the government (both the ACU as managers and users and other departments and ministries), development partners (country offices and HQs), implementers, other users (including civil society and the public), and data providers e.g. IATI stakeholders and FTS administrators. This is in addition to the more technical discussions with e.g. hosting providers and server administrators, and the development of collaboration with the longer term support structure/team. This document has already outlined several key features of the functional specification such as the availability of data without logging-in and the need for 'one-click' reports and these are outlined further in Annex 8.7. This wide group of users must also be heavily involved in testing and specifying what may be significant adjustments the system prior to deployment.

### 7.2 Recommendations for the AIMS development process

**Somalis must be involved in the development of the system.** The AIMS must be designed and developed in such a way that it can be maintained and modified in the long run through easily accessible (preferably local) IT support, with only occasional external/international support where necessary. Capacity building within government needs to be regular and proactive, not just responsive and have a regular on the ground presence. It must emphasize the organization, coordination, and communication functions that are required to build institutional capacity for AIMS management within government.

Building local capacity and using local skills are vital for the ownership and sustainability of the system (Box 7.1). The AIMS will need supporting by developers who are easily accessible (i.e. with a response time of no more than 24 hours by email, and no more than a week in person) and have Somali language skills, for several years after the initial implementation. In this way, minor programming changes and queries will not serve as a blockage to using the AIMS as they often do elsewhere.

There are a range of technical skills needed such as remote server administration, database management, general web application development and UI / UX (user interface / experience) development. Where

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<sup>14</sup> Good surveys of these issues are the two papers by Aasmund Andersen: [Better Data, Better Aid? Practical Guidance Note on Aid Information Management Systems](http://www.aideffectiveness.org/images/stories/AIMS_GuidanceNote_Draftv2f_ReviewVersion_Jan10.pdf) [www.aideffectiveness.org/images/stories/AIMS\\_GuidanceNote\\_Draftv2f\\_ReviewVersion\\_Jan10.pdf](http://www.aideffectiveness.org/images/stories/AIMS_GuidanceNote_Draftv2f_ReviewVersion_Jan10.pdf) and ["Aid Management Information Systems in Post-Conflict and Fragile States,"](http://www.undp.org/content/dam/aplaws/publication/en/publications/capacity-development/aid-information-management-systems-in-post-conflict-and-fragile-situations/UNDP_AIMS_in_Post-Conflict_and_Fragile_Situations.pdf) [www.undp.org/content/dam/aplaws/publication/en/publications/capacity-development/aid-information-management-systems-in-post-conflict-and-fragile-situations/UNDP\\_AIMS\\_in\\_Post-Conflict\\_and\\_Fragile\\_Situations.pdf](http://www.undp.org/content/dam/aplaws/publication/en/publications/capacity-development/aid-information-management-systems-in-post-conflict-and-fragile-situations/UNDP_AIMS_in_Post-Conflict_and_Fragile_Situations.pdf) both 2010 for UNDP/CDDE.



beneficial, Somali (and potentially government) capacity should be built e.g. to take over the server administration, and also modifying the web app, e.g. to add new one-click reports or to add new fields.

### 7.3 Next Steps for Strategy Implementation

- 1) The recommendations in this report have been developed through technical consultations with both government and development partners. Sharing with a wider group of stakeholders is now encouraged to ensure broad ownership of the recommendations.
- 2) An interim aid mapping exercise is being managed by the ACU to collect data for the identified core fields using a basic excel template from development partners. This data will be inputted into the improved system so it will be populated when it goes live.
- 3) In collaboration with the government, UNDP and the World Bank will work together to determine arrangements for contracting the development of the improved AIMS (dependent on the availability of funds), based on the strategy set forth in this report.

#### Box 7.1. Developing a home-grown AIMS<sup>15</sup>

Sierra Leone has two aid management units and two AIMS. One is a DAD from Synergy funded by UNDP, the other is a home-grown system funded by the Islamic Development Bank and developed by a local consultant. Development of the local AIMS ([www.mofedprojects.org/](http://www.mofedprojects.org/)) was a response to the need for project management, debt data provision and budget integration not easily achievable in the DAD. Development was done by a local IT consultant (without AIMS experience) who outsourced the programming to an Indian firm (again with no prior AIMS knowledge). The government appreciated being able to call the developer in for updates on a regular basis and continues to do so. The success of the final product relied very heavily on international TA to supply the design and program logic inputs. The cost was around USD 60,000, roughly a fifth of the price of most DAD and AMP systems.

The most prominent homegrown AIMS is that of Cambodia (<http://cdc.khmer.biz/>) which has been operating since 2007 with continuous improvements demonstrating the sustainability benefits of local development (and ownership)

Bangladesh has just launched a homegrown AIMS (<http://aims.erd.gov.bd>). A government led design process for an AIMS specific to local data needs, institutions and aid data approach implemented by a local programming firm without AIMS experience and supplemented where necessary by international technical assistance has resulted in an AIMS costing around USD 80,000 in development costs and with many sustainable features such as easy access to the developers and a high level of data demand.

In all cases, it appears that the combination of local skills (or contacts) and responding directly to needs expressed by the government (without international interference) are key to sustainability and ownership. Prior AIMS programming experience may not be a prerequisite for a successful AIMS, especially when support for ongoing refinement is provided.

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<sup>15</sup> Other notable home-grown AIMS include Egypt, Sri Lanka, Bangladesh, Nigeria, Ghana, Gambia, Philippines, Mongolia and to some extent, Myanmar.

## 8 Annexes

### 8.1 Consultations

#### Federal Government of Somalia

- Aid Coordination Unit
- Ministry of Finance
- Ministry of Planning and International Cooperation
- Central Bank
- Office of the Prime Minister
- Ministry of Health
- Ministry of Education

#### Other states and Regions

- Aid Coordination Unit, Puntland
- Ministry of Planning, Puntland
- Aid Coordination Unit, IJA
- Aid Coordination Unit, ISWA
- Aid Coordination Unit, Galmudug

#### Other countries

- Myanmar
- Sierra Leone
- Tanzania
- Rwanda
- Liberia
- South Sudan

#### Development Partners

- DfID
- European Union
- Germany
- IMF
- Italy
- Kuwait
- OCHA
- Resident Coordinator Office (Mogadishu and Nairobi)
- UN Women
- UNDP (Nairobi)
- UNHCR (Mogadishu and Nairobi)
- USAID
- WHO
- World Bank

#### Others

- World Bank Institute
- Synergy
- Publish What You Fund
- International Aid Transparency Initiative
- International Business & Technical Consultants (Nairobi)

### 8.2 Observations on the DAD

- The DAD is an online tool (hosted outside of Somalia) for monitoring aid flows. It is an online database with a graphical interface, through which development partners and/or government counterparts can enter data, stakeholders can verify the inputs and a variety of reports can be generated.
- It is developed and supported by the private company Synergy International Systems based in the United States and has been implemented in more than 20 countries. It is one of the two most widely used systems globally together with the Aid Management Platform developed by the Development Gateway Foundation.
- The system is designed to generate a range of different reports on the projects in the database – for example projects by region or projects by implementing partner but can only report on data that has been entered.
- In its current configuration, users need to be granted access to the system to use it. There is a perception that access is somehow restricted and many key users on both the government and development partner side have not had access to the system.
- Another general perception is that the DAD is difficult to use and not very intuitive. Examples include that reports are difficult to generate and cannot calculate percentages, the exported data is not easy to manipulate and that the templates for reporting are too complex and ask for a range of data that is never used for anything.

- A study in 2014 also found that the DAD had difficulty with multi-donor and multi-sector/location projects, that the automatic exchange rates caused difficulty and the DAD was not able to use the most recent sector definitions in Somalia.<sup>16</sup>
- Very little data has been added by development partners since 2012 with the majority of data stemming from an externally funded update by a private consultancy in 2014.

### 8.3 DAD field list

Project	Budget Breakdown (SOS)	Implementation Status	UNSAS Outcomes	1st Level Implementer	Last Modified On
Funding Type	Asset Amount (SOS)	Year	UNSAS Sub Outcomes	Implementer Type	Last Modified By
Project Budget (USD)	Asset Type	Month/Year	UNSAS Cross Cutting Themes	2nd Level Implementer	RDP Pillar
Committed (USD)	Types of Expenditures	# of Projects	PD Indicator	National Counterpart	RDP Sub Pillar
Disbursed (USD)	Contract End Date	Data Quality Grade	Percent Of PD4 Indicator	Contract Reference #	MDG
Expended (USD)	Disaggregate Budget	Data Quality Reason	PDI Response	Beneficiary	Sector
Budget Breakdown (USD)	Expended Cost Type	Reason	KPI Output	Beneficiary Types	Sub Sector
Asset Amount (USD)	Title	Solution	KPI AchievedToDate	Number Of Beneficiaries (Target)	Administrative Region
Project Budget (SOS)	Project Type	Cross-Cutting Themes	KPI BaseLine Value	Number Of Beneficiaries (Actual)	Region
Committed (SOS)	MultiDonor	Project Status	KPI Target	Duration	District
Disbursed (SOS)	Start Date	Project Nature	Funding Agency	Created On	Accepted costs of action (SOS)
Expended (SOS)	End Date	KP Indicators	Funding Agency Type	Created By	Accepted costs of action (USD)
Direct eligible costs of action (SOS)	Eligible costs of action (SOS)	Eligible costs of action (USD)	Subtotal direct eligible costs of action (SOS)	Subtotal direct eligible costs of action (USD)	Gender Marker
Direct eligible costs of action (USD)					

### 8.4 Data users and requests

**Debt:** Somalia doesn't currently report any external loan debt. If there were loans, the data requirements would be for disbursement data (from Development partners to projects) giving the value, date and currency of the disbursements and the details of the loan financing agreement that they are linked to at the disbursement level and on a quarterly basis. Debt sustainability analysis also needs forward forecasts of Development partner envelopes (with loan/grant splits for debt forecasting at an aggregate level on an

<sup>16</sup> For details see USAID (2014) Final Progress Report: Somali Development Aid Database (DAD) Update

annual basis. The AIMS will not collect data on aid flow type and the individual disbursements (and their financing agreements) as required for debt management. When concessional financing resumes a debt management system will be required for this role and project containing loan financing can be identified and the loan agreements uploaded.

**Macro:** This section provides additional detail on the specific demands for data that were taken into consideration for the selection of the core data fields.

**Budgeting** requires forward spending estimates for the upcoming year and in-year spending updates for reporting progress. This allows development partners and government to coordinate their activities. Government spending is coded using the Chart of Accounts, classifying by the use (salaries, capital, transfers etc.) as well as the funding source, organizations, location and activity. The AIMS would need to replicate this where possible but is unlikely to add the complication of disaggregating projects by government economic classifications or be able to link all projects to a specific government agency. There are also issues around reporting timelines and the difference between disbursement and expenditure data. For projects where this data is essential (on-treasury projects) it is already recorded in the IFMIS and the AIMS should not produce a parallel system, rather focusing on being able to supply information on off-treasury projects for planning and coordination purposes.

**Macroeconomic** departments in the Ministry of Finance (and the IMF) require resource envelopes split by type (loan/grant) and modality (budget support/project support) for forecasting growth and inflation and calculation of the Balance of Payments. The AIMS will be able to supply both a list of projects with and the Development partner envelope projections.

Several government representatives expressed interest in using the AIMS to collect data related to **Monitoring & Evaluation**. Simple visits to project sites and monitoring of implementers require a list of projects, locations, project contacts and project objectives which are covered by the AIMS. More sophisticated M&E requires project expenditure detail (e.g. how many vehicles, salaries of project staff members, etc.), details about project beneficiaries, or information about project impact. While the basic data required is covered in the core needs, capturing detailed data specific to M&E needs would require a much more sophisticated system which would be difficult for the government to manage, and it is unlikely that that data would be entered due to the huge burden this would impose on reporting partners. The AIMS will generate an overview of projects, which can subsequently be used to engage individual projects for M&E purposes. Project staff should be encouraged to upload existing M&E reports to the document upload facility in the AIMS to make this information available with a much lower reporting burden.

The **Presidency / Ministers of Finance and Planning** want to hold development partners to account for their pledges in an evidence based way and also convey information to its citizens, civil society and local representatives to counter the perception that aid seldom reaches the intended beneficiaries but is wasted in layers of bureaucracy. The consultations identified broad agreement on making the AIMS data publicly accessible and the AIMS will provide lists and maps of projects by sector, funder and location, and giving key details such as the timeframe and value. Collecting data on Development partner spending envelopes should allow the bigger picture of international support to be discussed in an evidence-based way.

A common use for aid data is for **project management**, for example, identifying which projects haven't disbursed for a while, have been signed but not become effective, or are about to close. The aid coordination unit or line ministry can use this information to follow up with the implementer to make progress or request information on results. This requires data on the key project dates, the sector, expected and actual disbursements and project contacts, all of which will be included in the AIMS except for key

project dates which can be uploaded to the document storage or are best discussed with the project managers via the contact details.

**New Deal Compact** monitoring and **aid effectiveness** processes typically need a list of projects, which can be split and aggregated in different ways to calculate the various indicators. Project level data required includes the value, disbursements, forward spending, modality, type, sector, and PSG. Exact values are needed on an annual basis and the AIMS will provide a far better starting point than is currently the case. These users are likely to make use of the markers system for their specific indicators.

**Development partners** want information on where and when other development partner funded (and government funded) projects are taking place. The exact financing is not that important but they are interested to be able to see what impact is targeted. They want this information on a real-time basis and to be able to access it independently.

Sector/PSG/Cluster/National Development Plan **working groups** are interested in the details of projects and planned projects within their sector (especially for those development partners who don't attend the working group meetings). They wanted this data in real-time to pass on lessons learnt when designing new projects and sharing conclusions and M&E reports when projects finish. Detailed financial data is not needed (but multi-sectoral projects are) to build a picture of gaps in provision e.g. location gaps (one district is not covered) or objective gaps, e.g. Development partner X is doing vocational schools, Development partner Y is doing SME training, but no development partner is doing access to finance. If detailed financial or location data was required, sector groups would go straight to the Development partner or implementer, especially as the level of detail, confidentiality or real time nature required is beyond the level that development partner would be prepared to enter into an AIMS.

The second sector working group data demand was for data that could strengthen coordination with the government. Line ministries were often not aware of flagship projects in their area and many Development partners did not attend meetings. Working groups wanted this data/analysis/output pre-prepared by the AIMS system so that it was quickly replicable and they felt that a few simple tables and charts would meet 90% of their needs. Pre-defined reports showing key data was deemed more useful than the ability to tailor-make specific reports.

The consultations had limited focus on **civil society** groups but it is expected that they will demand data to answer common questions such as 'why has the road that was promised not reached my village yet' or 'where is all the money for the health sector in my state ending up'. Typically this requires project name, location, objectives, detailed expenditure data, timelines and project contacts and these will be provided in the project profiles which should not be overly technical.

**Regions/Regional Governors/States/Districts/Towns** demand data to answer common questions such as 'what is coming to my region?' and 'are we getting a fair share?'. This requires data on on-going and planned projects, implementers, objectives and project value as well as project contacts which should all be available (state level only for financial data) in the project profiles and location based reports.

## 8.5 Capacities for aid management

This section details the wide variety of capacities required for a sustainable AIMS.

**Capacity to manage the development and roll-out of the AIMS.** The government emphasized the need for additional capacity while developing and rolling out the AIMS. This may require international support to ensure that the government's needs are fully reflected and the system meets the requirements. As

demonstrated elsewhere e.g. Bangladesh, there is no requirement for the developer to have prior AIMS experience as long as this can be provided by the international support.

**Capacity to maintain and manage the AIMS.** Throughout the process of developing the AIMS technical capacity should be developed locally to maintain and manage the AIMS. This will require complementing with a multi-year plan for proactive technical assistance to also train local staff in the associated aid management processes upon which the AIMS depends.

Where possible, this should be an opportunity to build local IT capacity both inside and outside of government. In some countries, the government physically hosts the database and application/web server for AIMS. Given unstable supply of electricity, low internet bandwidth and poor access to high quality server environments (contingency, monitoring, redundancy etc.), it is not likely to make sense at this stage and with administration/data backup rights held locally, offers few actual benefits despite being a major point of failure for AIMS worldwide.

As a consequence, the technical capacities needed to manage AIMS will be more on the software side including for example, the ability to remotely manage a database or to manage a contractor doing so. Therefore, skills will include remote database management, customization and trouble-shooting of the AIMS application, user management and configuring customized reports. The developer should provide proactive technical back up as well as resources for adjusting and reprogramming every 6 months for the initial 1-2 years after implementation. A model in which all maintenance and customization requires that a technical expert flies in occasionally from abroad is not feasible and preference should be given to providers who can offer a mix of Somali language, remote and near immediate fly-in support.

**Capacity of development partners to report.** Development partners, especially those staff expected to provide input to the AIMS will need to be trained. As most are Nairobi-based, the training should be provided there. High staff turnover rates will likely necessitate on-going training of development partner focal points. While the requests for data and dialogue with development partners on the data provided should be managed by the government, there may be a need to recruit a training focal point to be based in Nairobi. On the side of development partners, processes and capacity should also be put in place to ensure timely and accurate reporting. Regular meetings where reporting from the AIMS is being discussed as well as a repeated dissemination of AIMS data is likely to incentivize development partners to ensure that capacity is allocated to report to AIMS. One development partner may wish to take the lead on ensuring that other report on time and in compliance with the requirements that have been agreed. The Resident Coordinator's Office could take on this role on behalf of the UN System.

**Capacity to coordinate with development partners.** There is also a need to enhance the capacity of the government to continuously liaise with development partners to ensure that data is being provided, that development partner focal points are aware of their responsibilities and that development partners understand how they can benefit from AIMS reporting. In Rwanda, Liberia and Sierra Leone, for example, the aid coordination units employ 5-6 aid information officers tasked with supporting designated development partners during the critical phases of data collection and analysis. The government must ensure that working on AIMS is an integrated part of the job description for all officers to assist with data collection twice a year.

**Capacity to analyze and disseminate/communicate aid data.** Experience from other countries demonstrates that demand is nurtured when aid data is analysed centrally and reports "pushed" to key users. The aid coordination unit should continuously analyse the data collected to identify trends and patterns and generate reports that can nurture and trigger discussions of relevance to aid effectiveness. The

AIMs should have a very simple interface with a range of pre-defined reports (and no requirements for the ordinary user to engage in complicated customization through the interface). This will mean that most ad-hoc reporting will need to be generated by exporting the relevant data to MS Excel and generating reports manually. Most staff already used MS Excel and existing skills will need building upon. There is also a need to enhance the capacity within the ACU to produce reports that convey complex data in an intuitive and accessible format. This capacity could easily be developed through participation in standard courses on report design. External actors such as development partners should also be engaged in how to best utilize the availability of AIMS data/reporting to support their own decision-making and communications needs.

**Capacity to utilize data within government.** The capacity required across government and other partners to translate data and information into action is beyond the scope of the AIMS process. However, as part of the rollout of AIMS, trainings should be held for line ministries and key government entities on the newly available data. The interim capacity needed to support the aid coordination unit throughout the development and rollout phase of the AIMS could initially undertake these trainings but a dedicated Training of Trainer component for aid coordination staff would seem useful.

Particular focus should be given to developing the capacity of the government to integrate aid data into the budget preparation process. As mentioned elsewhere, each project in the AIMS should be coded to the degree possible to the government Chart of Accounts so that alignment with government resources and systems can take place. Short-term capacity may need to be recruited at least for the first years to ensure, that the department of budget receives aid data exactly in a format that is useful to them and that aid data is integrated in the budget.

## 8.6 Proposed Annual Reporting

Time period	Activity
<b>February</b>	Government requests development partners to confirm spending on projects and envelope in the previous year. Funders provide core data and request implementers to provide additional data. Facilitating actors (RCO, SDRF Steering Committee, aid working groups, NGO forums etc.) accompany the process.
<b>March</b>	Government validates data (identifies double counting and erroneous reporting, identifies missing fields and funder non-compliance) and follows up to obtain corrected data and fill gaps.
<b>April</b>	Final validation of data and production of annual aid report
<b>May</b>	High-Level meeting to evaluate the previous year and publication of report
<b>August</b>	Development Partners requested to update projected spending for the upcoming year at the project level where known and supply envelope projections to capture as yet unallocated funding. Funders liaise with implementers to fill gaps in project level data.
<b>September</b>	Government validates data (identifies double counting and erroneous reporting, identifies missing fields and funder non-compliance) and follows up to obtain corrected data and fill gaps. Facilitating actors (RCO, SDRF Steering Committee, aid working groups, NGO forums etc.) accompany the process.
<b>October</b>	Data sent to budget department and sector working groups for budget preparation process
<b>November</b>	Presentation of budget for following financial year including aid data



## 8.7 Detailed technical specifications

This section follows a UNDP provided outline for procurement of software and notes all the relevant information identified during the study. As the AIMS discussions continue these specifications will undoubtedly be added to and adjusted further but this should be done within the boundaries set out in the main report so that the changes to AIMS practice embodied are not diminished.

### 1. System architecture

#### a. Software design

- i. The AIMS is not a complicated web application. It consists of a database, with number of frontend pages to both display data and generate reports, to allow data entry and to manage users and a small number of administrative functions.
- ii. The following components are currently envisaged (non-exhaustive):
  - a. Homepage/menu and help page
  - b. List of all projects with sorting, aggregation and filtering
  - c. Project profile pages including project data, maps and charts
  - d. Premade reports with tables, charts and maps for common data requests
  - e. Bulk data export for custom analysis and backup
  - f. Export of all pages to pdf/csv/xlsx where appropriate
  - g. User logins for administrator, manager and data entry users
  - h. Project data entry including responsive elements to identify similar projects already in the AIMS
  - i. Email notification from other users of suggested data changes and ability to authorize other organizations
  - j. Data entry for funder envelopes and reporting
  - k. Facility for the creation of user specific fields
  - l. Management pages for adjusting key exchange rate, regions/sectors, managing user field visibility, maintaining lists of organizations, adjusting sector mappings and restoring backup data
  - m. Management page for users including linking to organizations
  - n. Geographical portals which show only a geographical subset of the data

#### b. Functional specifications

- i. A technical document should be developed in consultation with all stakeholders explaining clearly how different system functions will be implemented i.e. prototype screen shots, wireframes and mock-ups showing the different features e.g. the process of customizing a location based report or of adding a project. This level of detail is too complex to be included here but would for example specify that:
  - a. Persistent links are needed for all reports and embedded into pdf/xlsx outputs
  - b. Users need to be able to enter data according to their own financial year with the AIMS converting it to calendar years
  - c. A system is needed to be able to map different sector types and allow entry and conversion between different sector coding systems
  - d. Project data entry must take place on a single page and autosave/publish
- ii. The functional specifications will need subjecting to a variety of usability guidelines which will need developing, for example, excessive scrolling or lengthy dropdown menus are not sufficiently user friendly. Similarly, many users will find links embedded in images non-intuitive and slow internet connections mean that all fuzzy-search will need to take place on the client browser.



- iii. A technical document showing the underlying data relationships and data types needed to produce these features will need developing.
- iv. The functional specifications should be signed off by the government and other stakeholders before development starts.

**c. System administration**

- i. The majority of the AIMS will be publically accessible for read access e.g. all data and reports. Data entry will be protected by user accounts with one available for all development partners. Each organization can either share a single account or make multiple accounts linked to each organization.
- ii. The AIMS should require a minimum of system administration. All administration tasks will be carried out by the manager user group to which all aid coordination unit staff should belong. There are a few fields such as the lists of regions and sectors that can be edited, the exchange rate, and the visibility of user markers. Managers can also restore the database to a previous version (any user can make a backup) and create/edit/delete user accounts and passwords.
- iii. It is not currently envisaged that features such as user system access history i.e. a date/time stamp for all user activity data such as login details, record of data update edit/delete activities, reports access details and associated data integrity audit trails will be required. The AIMS is designed along the same trust basis as the MS Excel sheets that it replaces. Responsibility for the data (and all modification) rests with the user who enters the project.

**d. Software development technology**

- i. The AIMS should be developed using open source technology in common enough use that the appropriate capacity is likely to develop locally and be of general use independently of the AIMS. This will make it easier for a wider variety of providers (potentially including an open-source community) to be involved in the development or subsequent maintenance and adaptation of the AIMS. It will also minimize the licensing costs and avoid dependence.
- ii. On the frontend this could mean using HTML plus CSS and Javascript. For the database either MySQL or PostgreSQL should be used. Backend languages could include PHP, JAVA (OpenJDK if so), Python or Ruby. Preference should also go to solutions that use a common open source framework such as Ruby-on-Rails, Laravel, Django or Node.js as the common structure in these frameworks increase the ability for other developers to understand the application structure and operation.

**e. System hosting environment**

- i. The AIMS should be able to be hosted using either Windows or Linux servers to maximize flexibility and minimize additional costs e.g. if self-hosted, Linux servers are open source and if Windows, licenses are likely to already be in place for hosting other applications. The hosting should use any common stack available for such systems e.g. LAMP for Linux.
- ii. The AIMS is unlikely to be a resource intensive system to host however the requirements for 24/7/265 server uptime and moderate speed internet connectivity are currently unlikely to be met locally for the time being. It will be advantageous to use a cloud hosting provider to benefit from the services offered (for far cheaper than a local solution) such as managed infrastructure (so no server maintenance and patching), automatic backup and the ability to easily add resources e.g. processing power, space, etc.

#### **f. Security and user access**

- i. The AIMS system seems an unlikely target for hacking however, sensible precautions should be outlined by the developer including a security audit of the code and hosting arrangements and intrusion monitoring system and recovery strategy.
- ii. In terms of users, the majority of the system will be publically accessible e.g. viewing all data and reports (with the likely exception of project contact details).
- iii. Data entry users will require a username/email and password (granted by a management user and non-expiring) which will grant them the ability to add new projects (which will go live immediately) and to edit data on projects for which they have been added as either an implementer or a funder. Where the user is not the user who initially setup the project, changing data fields may not make immediate changes but instead notify the user who set up the project of the suggested change with the option to accept/reject the change.
- iv. Management users (which should include most members of the aid coordination unit) will have the ability to manage the users and logins (but not their data, for which they will need to contact the appropriate user to update it, therefore maintaining the link between users and the data they provide) and adjust various fields e.g. the choice of sectors and regions, the exchange rate from USD to Shillings, the visibility of any 'markers' and similar including restoring old backups of the data. Note that any user (including the public) will be able to make a full back-up by exporting the user entered fields to e.g. a csv or xlsx file.
- v. The administrative user should not have any ordinary purposes and should not be in use, and until capacity is in place, should sit with the contracted technical support (and even then should not be used). Currently, the only use would be if all management users forgot their passwords.

#### **g. Compatibility**

- i. The AIMS should be operating system independent, only requiring the user to have a modern standards compatible browser (Firefox, Chrome, Safari, Internet Explorer 7+ etc) and not require any installation on the user end such as plugins (e.g. Adobe Flash). Therefore the AIMS should run on all operating systems Windows, Apple OS, Android, Linux etc and independently of any operating system upgrades.
- ii. The AIMS interface should be fully functional on screens ranging from a resolution of 1024\*768 and upwards, reflecting the minimum standard of monitors available to most users and also allowing full use on many tablets. It is not currently suggested to spend development resources adding compatibility for smaller screens (such as on mobile phones, which might be better met through the development of a native app) or to develop a touch focussed interface (although maintaining simplistic design will assist greatly in this)

### **2. Software development**

#### **a. Software development methodology**

- i. The developer should select their own software development methodology. It should take into account the context, e.g. the likely need for adjustments to the functional specifications, collaboration across geographically diverse teams and clients with low IT capacity.
- ii. The developer must outline how they will seek and incorporate user feedback. The low levels of IT capacity and restricted engagement by many key users (e.g. development partners) means that it is likely that minimal feedback will be provided if the system is

periodically opened up for feedback in a passive way. Instead, the development process must demonstrate that each group of users have been taken through (used themselves) all appropriate features and their feedback recorded.

- iii. The business models of many currently available AIMS products are based on minimal customizations between countries. This issue lay behind many of the failures of the DAD and the inability to adjust its underlying system to meet local needs. This replacement system must be customized to local needs and therefore it will not be acceptable for the developer not to implement user feedback/requirements on the basis that this will excessively alter the AIMS system that is being provided.

**b. Policies**

- i. The development team should share their coding standards or any other relevant policy for ensuring that the software code generated complies with international standards such as code comments and using re-usable code.
- ii. The development team should share their software quality assurance policy and procedures i.e. how will software testing plans be developed, what is the testing methodology (manual or automated), how will the testing process be documented i.e. tests conducted, pass/fail, bug reports etc.

**c. Documentation**

- i. The documents used to develop the AIMS should be made publically available e.g. the requirements document and functional specifications, workflow documentation and quality assurance reports.
- ii. The AIMS should be provided with a combined technical installation, administrator, manager, data entry and user manual. However, these manuals rarely provide the support required by users who have difficulty linking the manual to the particular difficulty they are having. All user assistance must also be built directly into the AIMS through linked/popup help available in the interface which takes users directly to the relevant sections of the manual for the feature that they are using and this also extends to the glossary feature. As such, the manuals should be, for the most part, a combined set of these user assistance tips.

**d. Training**

- i. The training to be provided for IT teams (installation, system admin etc) and end users will need developing following the guidance in the report. It should be integrated into the long term (multi-year) capacity development plan that covers aid management as well as AIMS technical issues and should be delivered where possible using local, or at least regional, providers to achieve the low cost, regular contact and rapid response times required.

**3. Maintenance & Support**

- a. Implementing an AIMS is far more than just the initial development. The following aspects should be covered. As capacity develops, some will be taken over by government staff or local suppliers and may therefore be tendered separately.
- b. The AIMS will require regular scheduled maintenance such as making backups, identifying unused user accounts, and monitoring the status (uptime) of the site and all associated services on the server e.g. the email sending process, pdf exporter and others. In addition, the server DNS, hosting service, domain registration will need monitoring.
- c. During use, bugs in the software will be identified after the AIMS has been signed off as accepted by the government. These will need collecting and correcting, either immediately if serious, or on an agreed timeframe.

- d. Several times a year, periodic updates and service patches will be required to incorporate fixes of any minor bugs and updates in the software platform (e.g., new versions of the technologies used e.g. to take advantage of performance or security updates to the underlying technologies, as well as security updates to the AIMS code to respond to new security risks identified).
- e. At the same time, the government's function requirements will evolve (e.g. with the advent of loan funding). These changes to the code will need costing depending on the effort required and implementing e.g. adding a new custom report will be a minimal cost, whereas adding a debt management module will cost far more. A budget or ceiling will be needed and the new features prioritized.
- f. Irrespective of the level of maintenance and upgrading, technical support will be needed to backstop the aid coordination unit in assisting users and to answer their own questions. This should be provided by every means possible including in person, via telephone, and online via email, skype, chat and screen-sharing.

#### **4. Intellectual property rights**

- a. The distribution of the proprietary rights (patent, copyright, trade secret and other proprietary rights, in and to the AIMS and any corrections, bug fixes, enhancements, updates or other modifications) to the AIMS code has an important role to play in ensuring the ownership and sustainability of the AIMS.
- b. While a legal experts need consulting, the desire is to open-source the AIMS but with geographical restrictions. The licensing intends to achieve two main things:
  - i. By allowing giving the government (or anybody) full rights, i.e. open-sourcing it, government is able to see and modify the code in whatever way it sees fit. Government may for example, chose to modify the code, and host it locally. This also means that government is not restricted in any way to a single developer or supplier as all are able to see and modify the code. Future features/upgrades may be developed and supported by an open-source AIMS community with significant benefits for the sustainability of long term support.
  - ii. At the same time, the geographical restriction should help to both attract the widest range of developers (by allowing for subsequent resale in other countries) therefore introducing the possibility that the development costs may spread across multiple countries, lowering the cost.
  - iii. The AIMS code should not include or solely rely on technology encumbered by any patent, copyright, trade secret or other proprietary rights other than those included under open-source licenses e.g. GPL v2 or v3, MIT or BSD licenses and therefore there should be no need for the government to obtain, maintain, or pay for any licenses.
  - iv. The AIMS should not include any binary code 'blobs'.
  - v. The AIMS code should be licensed in such a way that has the following features:
    - a. The government (or potentially anyone) inherits full rights to use the AIMS code when for all government (or potentially any) purpose.
    - b. This includes the right to modify the code and reuse it, as long as when creating and distributing derived works, the source code of the derived work is made available under the same license and attribution of the original code is given.
    - c. These rights do not extend outside the country.