McAID
Mother & Child AID System
an information management system
McAID is an internet-based software database system designed to gather & manage operational program data from remote locations through GSM/CDMA-supported mobile handsets or modems.
McAID was first developed between 2005 and 2010 during the Jibon-O-Jibika program, funded by USAID.

It was a Windows PDA-based system. 150 PDAs were made functional to gather primary data in an offline format from hub offices having no internet connectivity.

It’s mobile version was distributed and installed into PDAs having SQLCE database linked with it.
Original functionalities of McAID were reviewed to:

- make the new McAID more adaptable for data management requirements
- make use of GSM mobile services for more efficient data management: higher data security and faster outputting.
- make a shift to online centralized data MGT from offline distributed data MGT.
The new generation McAID is an online centralized data management system that has replaced PDAs with internet-enabled smartphones for primary data collection.

However, the functionalities of the offline module of McAID has not been removed considering the success with it.
Objective

- Efficiently access beneficiary-level data.
- Reduce paper-based manual compilation.
- Cost effective data management.
- Accurate and consistent information flow for commodity management.
Accessing McAID

Any internet-enabled device can be used to access McAID globally through the URL –

http://119.148.6.44
Current Uses: Data Gathering

Primary data inputs are mostly made by frontline staff through handheld internet-enabled SmartPhones. Staff having access to the office desktop or laptop can also feed data using office internet or modems. Current uses of McAID are -

- Beneficiary Registration
- Service provider/Volunteer List
- Service Records
- Food Distribution
- Commodity Accounting
- Progress Monitoring
- Monitoring Check List
Current Uses: Smartphone

425 SmartPhones are distributed to frontline staff in 4 partner NGOs. Necessary trainings are provided on how to operate for data gathering.
Current Uses: Monthly Operation

Registration records of over 250,000 beneficiaries tracked under different program components.

Over 100,000 service and food recipient records tracked.

Food distribution planning and record keeping for over 800 metric tons dispatched for different program components.
Data are managed to quantify performance for 270 food distribution sites and 1,835 service delivery sites.

Progress for outputs tracked centrally against monthly targets.

Commodity transactions and inventory tracked for 4 warehouses; including BL-specific stock positions, loss reporting, etc.
Benficiaries are given an unique ID during registration. ID helps to track participation of a beneficiary across program interventions.

<table>
<thead>
<tr>
<th>BenID</th>
<th>MCHN</th>
<th>Livelihood</th>
<th>FFW4500</th>
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</table>

Beneficiary tracking helps to measure impacts of the program intervention over the beneficiary base by looking at the historical records of the beneficiary thru the ID.
<table>
<thead>
<tr>
<th>Agency</th>
<th>Program</th>
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<tbody>
<tr>
<td>Save the Children</td>
<td>Nobo Jibon</td>
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<tr>
<td>ACDI/VOCA</td>
<td>PROSHAR</td>
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<tr>
<td>iDE</td>
<td>Agriculture &amp; Nutrition Extension Project (ANEP)</td>
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<tr>
<td>WorldFish Center</td>
<td>Feed the Future</td>
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McAID demonstrated proven capacities to facilitate efficient information management support across SC’s different programs.

McAID services are now offered at a small cost to other organizations. There are costs to cover bandwidth, server maintenance and associated staff time for consultancy and training support.
McAID is a centralized database management system. The Data center is secured with firewall and antivirus, and an independent power source to keep it live and operational for 24 hours in the event of power outage.

MIS unit maintains and monitors a scheduled backup process that runs to back up the database into the backup device.
Features of McAID

- Large and Complex program info management

- Over 500 Users
- Over 250,000 beneficiaries registered
- Over 800 NMT Food distributed per month
- Over 100,000 beneficiaries tracked per month
- Data center performs 24 hours/day
Features of McAID

- Fast Adaptable thru dynamic structure

McAID features user-friendly options that allow system administrators to modify rules and parameters, making the system fast and adaptable.
A set of rules allows faster, accurate & automatic data flow across dependent operations.

There are options to allow system administrators to easily customize such rules.
Features of McAID

- Options that reduce cost/time

Digital signature feature has reduced staff movement and total time required for publication and distribution of crucial/auditable reports.
Benefits of McAID

- Faster aggregation of raw data.
- Increased data accuracy.
- Increased accountability.
- Reduced paper trailed documentation.
- Minimum staff-time for reporting.
- Beneficiary tracking across interventions.
# Ongoing Challenges

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Recommendation</th>
</tr>
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<tbody>
<tr>
<td>Broken network connectivity within 3% of the working area.</td>
<td>Communication with service provider seeking improved performance.</td>
</tr>
<tr>
<td>High price of preferred device opposed to lower performance of the lower-priced option.</td>
<td>Ongoing search for better devices at a low price in local market; price negotiation with suppliers.</td>
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Data Communication (Options)

Context: OFFLINE/BROKEN CONNECTIVITY

Option: McAID Offline Module

- McAID.EXE + SQLCE
  - Staff with PDA
  - Program Community

- McAID.EXE + SQL Server
  - Staff Syncs PDA data to Laptop

- McAID.EXE + SQL Server
  - Staff Syncs Laptop data to CO Database

Data Center
- Firewall
- Antivirus
- Backup Server
- DB Server

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Context: ONLINE

Option: McAID Web Edition

- McAID.EXE + SQLCE
  - Staff with Smartphone
  - Program Community

- McAID.EXE + SQL Server
  - GSM Tower
  - GSM Tower
  - GSM Tower

- McAID.EXE + SQL Server
  - Staff Syncs Smartphone data to Laptop

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Workflow example: NJ MIS Unit

MIS Requirements

Manager

Dy Manager, Sr. Officer-Dev

Sr. Officer-Implementation

Communicate, Format review, Analyze, Design, Budgeting, Supervision, Prioritize

Coding, Customize, Debug, Monitoring, Scripting

Interface Testing, Training, Monitoring, Data validation, Reporting

Program Component

Program Operation
This entire system development was made possible by the generous support of the American people through the United States Agency for International Development (USAID).
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