

MID DAY MEAL  
Mobile Application Development for Programme  
Excellence

Scope Document



Government of Haryana

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## **1 Background of project**

The state of Haryana has over 15,000 government schools, ~23 lakh students and 1.2 lakh teachers. Over the past decade, the Govt. of Haryana has successfully implemented a range of initiatives to improve access and equity of public schools in the state and has its current focus on improving the learning level outcomes of the of Haryana's public schools.

To achieve the same the Department of School Education has taken many initiatives and one of the primary objective has been to ensure ready availability of authentic data while simplifying data collection processes by developing a consolidated and comprehensive School Management Information System - *Parivartan* as a single source of authentic data.

In the next phase of augmenting and supporting the digital transformation exercise, dept. wants to develop IT application to improve the on-ground implementation of Mid-Day Meal Scheme.

The Mid Day Meal scheme (MDMS) is a national scheme under which hot cooked midday meals are provided on all school days to children of class I to VIII in Government; Government Aided Schools, Special Training Centers and Madrasas and Maqtabas supported under Sarva Siksha Abhiyan of GOI.

A programme of such a large scale and magnitude requires close monitoring and evaluation at all levels. To address the gaps in the current monitoring system and to ensure near real time monitoring of MDMS the state wants to put in place a detailed mechanism for reporting of data and monitoring of the scheme across the country through an automated system and application for input and reporting across different levels.

The application further ties in to the larger state mandate of quality improvement of education by taking away the burden of manual reporting and increasing the administrative efficiency thus increasing the focus on academics

## **2 Scope of Services – Project implementation phase:**

### **2.1 Solution design/ requirements verification**

The Solution Provider shall carry out a detailed systems study to refine the Functional requirements specifications (that have been detailed in this chapter) and formulate the System and Software Requirements specifications documents incorporating the functional specifications and standards.

Solution provider to also study the existing School MIS – *Parivartan* (hereafter referred to as “School MIS”) and Academic Monitoring System (where relevant) of the Department of School Education ensure compatibility and synergy with the same. The technical support to enable functioning of various systems in unison is to be provided.

The Solution Provider shall create and maintain all project documents that shall be passed on to the State as deliverables as per the agreed project timelines. The documents created by the Solution Provider will be reviewed and approved by the GoH officials.

## 2.2 Application interface

Application to be supported on two main interfaces for the aforesaid applications, which will be used by the users for these application, i.e., Web and Mobile.

Following are the key features and functionality of these interfaces -

- Mobile Application
    - Will be targeted for android initially and later on can be targeted for iOS and Windows
    - Will allow end user to feed and update key metric data
    - Will also have limited reporting capability along with graphical dashboard
    - Will enable to send and receive notifications
  
  - Web Application
    - Will be browser based usable on laptop/desktop
    - Will allow administrator or back office personal to setup and configure some of the functionalities
    - Will enable to create and maintain master data
    - Will be used for detailed reporting and dashboard
- Both mobile and web application are to be developed to complement and enhance the School MIS-*Parivatan*
- Both interface will have the pull and push capability to read existing data and relay inputs back to School MIS and NIC

## 2.3 User Interface

Application will have 3 primary interfaces i.e.

- i. School level
- ii. District/ block level
- iii. Headquarter level

Restricted access and rights to certain third party may also be granted at admin discretion as and when required.

This section provides conceptual background and discusses the broad features of mobile and web application to be developed. The detailed functional and process requirements of each interface have been laid out in *Annexure* for better understanding which is to be further refined by the solution provider in partnership with the Department of School Education, Haryana.

### 2.3.1 Key financial and operations aspects of MDMS to be captured

#### 2.3.1.1 4 key financial heads of MDMS:

- Food grain for meals – *payment to FCI for value of grain provided*
- Transportation – *distribution of food grain to schools*

- Cooking cost – *comprises of cooking ingredients other than food grain*
- Honorarium to cook cum helpers (CCH) – *salary paid to CCHs hired by schools*

The application to be designed to be able to track the budget requirement; allocation and disbursements of all funds pertaining to MDMS

### 2.3.1.2 Key operational aspects of MDMS and elements of MDMS application

- Tracking coverage of MDMS across all government schools ( current ~15000) in Haryana
- Enrollment numbers of students across schools
- Student attendance across schools to track utilization of resources and ingredients
- Stock inventory management ( requisition; allocation; disbursement; utilization and replenishment triggers) for food grains and other cooking material
- Records and requirement triggers for infrastructure and kitchen utensils
- Admin level rights to design and update masters for food quantity ; quality and nutrition value and prescribed recipes
- Inspections across all schools (25% per quarter) to ensure effective implementation of MDMS and check on quality of food prepared ( prescribed guidelines to be adhered for development)
- Monthly lab accreditation by each school for food quality certification ( prescribed guidelines to be adhered for development)
- Dash boarding and reporting across levels to meet central and state requirements – reporting norms of Government of Haryana and Government of India to be studied and adhered to; enhancement to be sought in the same

### 2.3.2 Features in different user interfaces:

Common/ backend features:

- Application to pull the following data items from the Schools MIS
  - School wise student enrollment numbers and relevant basic student attributes if required ( e.g. gender)
  - Subject; section & roll number allocation to facilitate attendance module ( *or we can do away with student level attendance by capturing number of absent students*)
  - School IDs and profile attributes (address; contact details; bank account and address etc.)
- Application to push the following data items to Schools MIS/ NIC/AMS:
  - Student attendance reports
  - Budgetary and coverage reports as per prescribed format
- Input to the application to be enabled both via mobile and web interface

#### i. School level

Mobile Application	Web application
Student attendance input ( # of absent students)	Dash boarding of key pending actions and inventory details
Recipe selection	Reports on inventory
Inventory management module for food grain and	

cooking material	
Acknowledgement for funds transfer (cooking cost/ CCH salary etc.)	
Triggers and push notification capability	

ii. District/ Block level

Mobile Application	Web application
Triggers/ push notification for fund and resource allocation	<b>Reports:</b> Food grain requirement collation/ disbursement; funds disbursement; school level allocation ; cooking material fund requirement collation/ procurement and utilization reports; transportation of FG report

iii. Headquarter level

Mobile Application	Web application
SMS based/ push notifications across levels	<b>Reports:</b> Collated reports for requisition; disbursements; coverage etc.; Requirement reports to be made available with push feature to School MIS and NIC; Provision for ad hoc reports addition
	<b>Email reminders</b>
	<b>Access management</b>
	<b>Defining and editing masters</b> (Recipe; food quantity; quality; nutrition value allocation etc.)

Other Salient features of the overall common framework are –

- User Management – Authentication, Access Management
- Role wise Access
- Offline Data Management for Mobile Application
- Photo/Snapshot capturing for monitoring System
- Push Notification – Alerts, Notification
- Email Notification
- Auto-mailer for automated report generation and delivery on pre-defined schedule
- Bulk import of master data
- Integration with existing school ERP (if any)– Real Time via API
- Rich API based application for easy integration with other system

### 3 Annexure A: Detailed view of user interface and required functions

#### iv. School level

FEATURE	FUNCTIONAL MODULE/ PROCESS
Daily utilization	Student attendance entry
	Recipe selection
	*Automated stock updation
	Date wise geo tagged photo capture and storage ( upto certain days) to monitor MDM
Stock / inventory management	
Food Grains:	*Auto computation of requirement based on enrollment count
	Allocation trigger post budget allocation at HQ level
	Receipt module acknowledgement by school on receiving the allocated food grain (quantity; quality; dates etc.)
	* Auto inventory update based on "Daily Utilization"
	* Auto trigger/ reminder of inventory dipping below critical point
Other cooking ingredients	* Auto trigger on fund allocation and collection timelines message
	Funds receipt acknowledgement (amount; date etc.)
	Procurement module (items; quantity; price; dates etc.)
	*Auto updation of inventory based on "daily utilization"
MDM infrastructure	
Kitchen area	Condition; space etc.
	Ticket provision for funds requirements based on issues severity
Kitchen utensils	Inventory as per the master
	Ticket for new requirements along with reason
Cook cum helpers	*Auto calculation of required personnel
	Module capturing details of CCHs (name; Aadhar; bank account numbers etc.)
	*Auto trigger for salary amount allocation
	Salary receiving to school/ payment to CCH acknowledgement
School profile and fund allocation	*School profile details as pulled from MIS database
	*School login id password mapped to employee ID and designation
	Feature to link the bank a/c number listed on MIS with MDM or enter a new a/c number for MDM funds ( to be pushed to MIS school profile)

#### v. District/ block level

FEATURE	FUNCTIONAL MODULE/ PROCESS
Food grains (FG)	Requisition collation (Auto computation of block and district level FG requirements based on student enrollment and remaining stock at admin defined frequency)
	School level allocation ( automated)
	Disbursement and receipt report collation ( reflective of school

FEATURE	FUNCTIONAL MODULE/ PROCESS
	inputs)
Transportation	*Auto computation of planned lifting of food grain
	Input for actual lifting per run
	Invoice trigger – district/ block officer to raise invoice – collated invoice to be raised at HQ level for entire district
	Fund allocation/ receipt trigger
	Invoice settlement trigger
Cooking cost (CC)	Automated fund requisition trigger ( recipe and student enrollment count)
	Fund allocation trigger
	Fund disbursement report ( collation of school responses)
Kitchen utensils	Requirements collation report

vi. Headquarter level

FEATURE	FUNCTIONAL MODULE/ PROCESS
Reports	Requirement reports to be made available with push feature to School MIS and NIC
	Provision for ad hoc reports
SMS based/ push notifications across levels	
Email reminders	
Access management	
Defining and editing masters	(Recipe; food quantity; quality; nutrition value allocation etc.)

#### 4 Annexure B: Master for demand estimation and budget calculation

	Primary	Upper Primary
Calculation of food grain	Enrollment *100 gms.* Working Days (Wheat 30%, Rice 70%)	Enrollment *150 gms.* Working Days (Wheat 30%, Rice 70%)
Cost of Food grains	Rs.4150/- Per Metric ton for wheat and Rs. 5650/- per Metric ton for Rice	Rs.4150/- Per Metric ton for wheat and Rs. 5650/- per Metric ton for Rice



Cooking Cost	Enrollment*Rs.3.86*Working Days (Center Share 60%, State Share 40%)	Enrollment*Rs.5.78*Working Days (Center Share 60%, State Share 40%)
Honorarium to Cooks	No. of Cooks *2500Rs.* 10 months (Center Share Rs. 750 per month per Cook, State Share Rs.1900 Per Cook per month	No. of Cooks *2500Rs.* 10 months (Center Share Rs. 750 per month per Cook, State Share Rs.1900 Per Cook per month
Transportation Cost	Rs. 75/- Per Metric tone	Rs. 75/- Per Metric tone
MME	1.8% of cost of food grains + Cooking Cost+ Honorarium to Cooks + Transportation Cost	1.8% of cost of food grains + Cooking Cost+ Honorarium to Cooks + Transportation Cost