

PIP proposal – CHN department: Roll out of IFA logistics tracking application in 51 districts

Subject: Proposed Inclusion of provision towards IFA logistics tracking application training of District, Block officials including Focal point CHC/PHC level in PIP 2020-21 (Estimated implication for 51 Districts: 32.92 lakhs)

State has initiated an assured IFA Last Mile supply intervention comprised of streamlining forecasting, procurement, minimum inventory management and last mile delivery of IFA by leveraging the excess unutilized capacity of the vaccines infrastructure - vaccine vans for delivery from district stores to cold chain points CHC/PHCs, and DDPs (AVDs) for delivery from cold chain points CHC/PHCs to AWCs and schools in Villages in of 24 districts of Madhya Pradesh. State intend to scale it up to 51 districts in next year. For the next financial year (2020-21), it is planned to incorporate budgetary provisions and implementation of the same for 51 districts.

Keeping in view of the successful implementation, real time monitoring of this innovative model is being contemplated so that performance of Drug Delivery Persons (DDP) can be monitored along with IFA supply chain and proxy consumption tracking. For the above state monitoring mechanism, state is in process of developing a mobile and web application with the help of CHAI (Clinton Health Access Initiative). Post development, activities like hosting of application on govt server and training of trainers at state level and of end users at district level are planned in next financial year.

Budgetary implications:

S. No.	Description	Cost	Cost type
1	State/Divisional TOT	₹ 51,6800.00	One time
2	Training at District Level	₹ 2,555,400.00	One time
3	Security Audit of Web and App based IFA logistics tracking application	₹ 160,000.00	One time
4	Web Hosting Charges	₹ 20,000.00	One time
5	Annual maintenance Charges	₹ 40,000.00	Recurring (every year)
Total		₹ 3,292,200.00	

Training Load:

S. No.	District	No of person req during training From DPMU (CMHO +DIO +DPM +M&E +DCM +Dist. Storekeeper +1DEO)	No of person req during training from BPMU (1BMO +1BCM +1 BPM)	No of person req during training from Focal Point CHCs/PHCs (Storekeeper +DEO + 2 DDPs)	Total training Participants	Total No of Batches (Approx. 40 persons per batch)
1	Betul	7	30	72	109	3
2	Bhopal	7	6	44	57	2
3	Chhatarpur	7	24	104	135	4
4	Damoh	7	21	56	84	2
5	Harda	7	9	24	40	1
6	H'bad	7	21	40	68	2
7	Panna	7	15	60	82	2
8	Raisen	7	21	76	104	3
9	Rajgarh	7	18	64	89	2
10	Sagar	7	33	104	144	4
11	Sehore	7	15	80	102	3
12	Tikamgarh	7	18	64	89	2
13	Vidisha	7	21	56	84	2
14	Dindori	7	21	36	64	2
15	Satna	7	24	108	139	4
16	Shahdol	7	15	40	62	2
17	Singrouli	7	9	40	56	2
18	Barwani	7	21	144	172	5
19	Sidhi	7	15	56	78	2
20	Jhabua	7	18	88	113	3
21	Alirajpur	7	21	76	104	3
22	Mandla	7	27	88	122	3
23	Ashoknagar	7	12	48	67	2
24	Sheopur	7	9	28	44	1
25	Agar Malwa	7	12	24	43	1
26	Anuppur	7	12	56	75	2
27	Balaghat	7	30	100	137	4
28	Bhind	7	18	60	85	2
29	Burhanpur	7	6	56	69	2
30	Chhindwada	7	33	168	208	5
31	Datia	7	9	48	64	2
32	Dewas	7	18	92	117	3

33	Dhar	7	42	184	233	6
34	Guna	7	15	64	86	2
35	Gwalior	7	12	80	99	3
36	Indore	7	15	120	142	4
37	Jabalpur	7	21	96	124	3
38	Katni	7	18	56	81	2
39	Khandwa	7	21	80	108	3
40	Khargone	7	27	144	178	5
41	Mandsaur	7	15	108	130	3
42	Morena	7	21	56	84	2
43	Narsinghpur	7	18	76	101	3
44	Neemuch	7	9	60	76	2
45	Ratlam	7	18	92	117	3
46	Rewa	7	27	92	126	3
47	Seoni	7	24	112	143	4
48	Shajapur	7	12	56	75	2
49	Shivpuri	7	24	80	111	3
50	Ujjain	7	21	124	152	4
51	Umaria	7	9	56	72	2
Total		357	951	3936	5244	141

Development of Web and mobile App based application system for tracking of IFA supply under Anemia Mukht Bharat program in Madhya Pradesh, India

Detailed Objective and Scope of Work

Objective:

The State of Madhya Pradesh is implementing Anemia Mukht Bharat program as an umbrella approach for preventing Anemia by prophylactic supplementation across various age group. Given the vast geographical expanse and socio-cultural diversity of the State, supply of IFA commodities to approximately 2,20,289 Primary, Middle, High, Higher Secondary schools and Anganwadi centers remains a challenge. The key parameters for programmatic success of the AMB program are as follows: -

- 1. Time based indent raising and re-ordering**
- 2. Institution wise stock assessment and refilling.**
- 3. Beneficiary tracking and ensuring compliance of recommended dose schedule.**
- 4. Identification of defaulting or low performing institutions.**
- 5. Mapping of anemia hotspots pockets.**
- 6. Data accuracy checks and data cleansing through in-built alert system.**
- 7. Adverse events tracking.**
- 8. Dashboard indicators for state and district level for integrated policy decisions.**
- 9. Real time monitoring of a very large data cohort.**
- 10. Population of data from available sources of ICDS and Education to reduce data entry workload.**
- 11. Linkage of data with Unique code for child and name-based tracking.**
- 12. Sharing of data with ICDS and Education for evidence based strategic planning.**

In view of above, provisions for development of a tracking tool is being contemplated so that performance of Drug Delivery Persons (DDP) may be monitored along with IFA consumption tracking. The tool shall need entry by the DDPs with real time reporting of available stock at source, actual quarterly stocks delivered at the school/AWCs, no. of registered children and no. of children who received 3-4 tablets of IFA pink/blue in schools/AWCs and 6-8 doses of IFA syrup at AWCs during the quarter. A component of geo-tracking also to be incorporated so that the tool is able to monitor actual delivery at site along with proxy reflection of consumption of IFA by registered children.

Scope of work:

WJCF is seeking an experienced, committed and qualified Software/application development company to design and build, a robust and yet flexible, scalable, responsive and user-friendly IT system to track last mile delivery of IFA supply. The system will be capable of generating extensive and intelligent analytics and reports to inform progress towards goals, improve operational efficiency and enable evidence-based planning. At the high level, we require support in development of a web and app based application so that IFA consumption and

logistic supply monitoring systems can be further strengthened. Further details of the project proposal are as follows.

Stakeholders

Apart from **CHAI** the key stake holders are State, District, Block level officials of **NHM-MP** as well as Drug delivery personnel (DDP) involve in last mile delivery process.

Functions and Features

- Role Based User and Group Access Control
- Archiving records on regular intervals (e.g. monthly/yearly)
- **Backup Policy:** with backup and restore options
- **Browser and Android** based application
- **Dash Board's** tailored to the needs of different users including **Graphical and Tabular** reporting formats for **Monitoring** Progress & remaining tasks.
- **GIS** configuration for Village and School/GAK/AWC.
- Online **User Manual** (Text in English and Hindi)
- Online data entry provision as well as **Offline** (for **no and low** internet connectivity areas)
- Upload and update provisions for Micro-plan & other program related data
- Generation of sustainable application
- **Search** feature for health facilities
- **Scalability:** Increase capacity of number of concurrent users and module.
- Data Portability and transference

Data entry

The application should allow data entry through the following two modes:

- Direct data entry onto the **Online** Application.
- Data entry from offline module and upload it later through which locations with poor/no internet connectivity can enter the details.

Should have ability to **reverse/modify** batch transactions before final submit

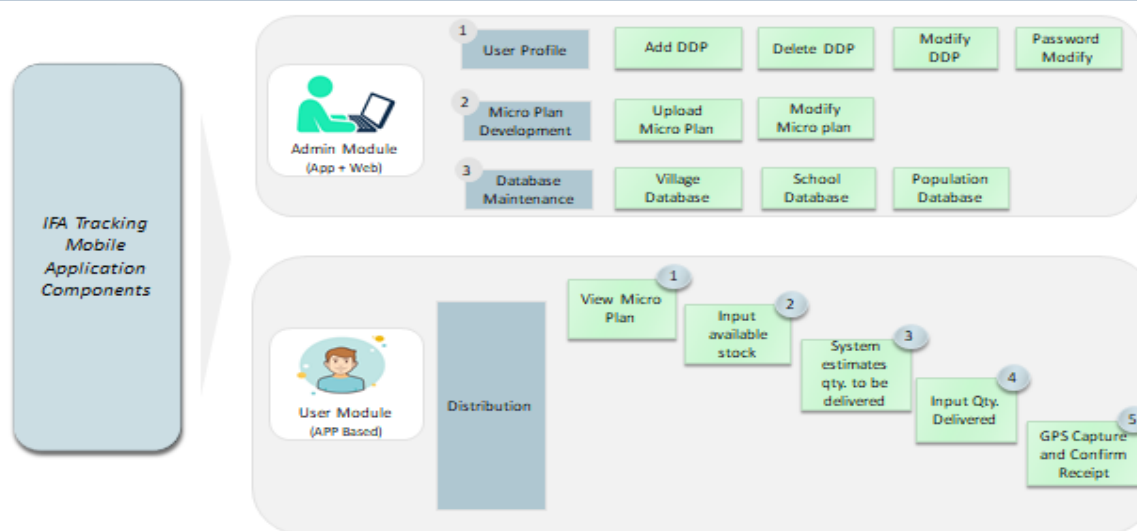
Must be available to run in multiple **environments** (test/backup)

User rights

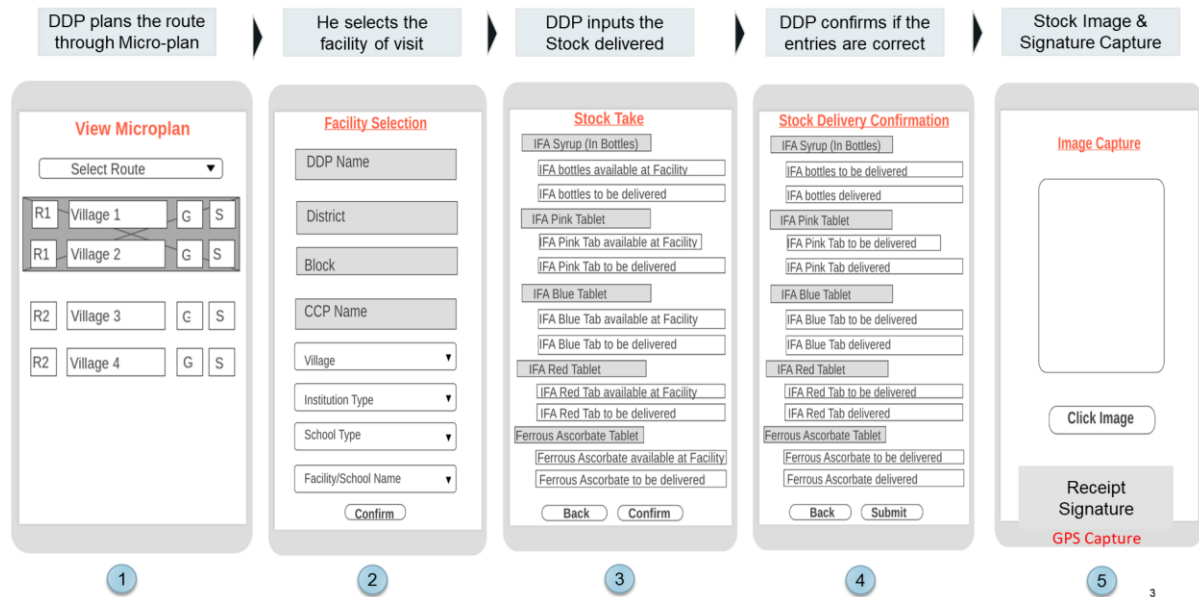
State Level Users	
User	Rights
Government of MP <ul style="list-style-type: none">• State Officials• District Officials• Block Officials	<ul style="list-style-type: none">• Review Dashboard, Summary Reports.• Create/Change the user IDs and password for requested users.• Releases of project data & information.• Update (Edit/Delete) the information module (Village, Population, GAK/AWC & School) and

	<p>formats.</p> <ul style="list-style-type: none"> Review the Data entry Status reports.
<p>CHAI</p> <ul style="list-style-type: none"> Supply chain Team Nutrition Team 	<ul style="list-style-type: none"> Review Dashboard, Summary Reports. Releases of project data & information. Review all Reports respective to State and Data entry status of DDP's
Village level Users	
DDP	<ul style="list-style-type: none"> Day wise micro-plan Review targets, coverage, achievements and remaining villages reports of respective micro-plan Enter the project related IFA supply data

Mobile Application Components



Wireframe - App Data Collection Components



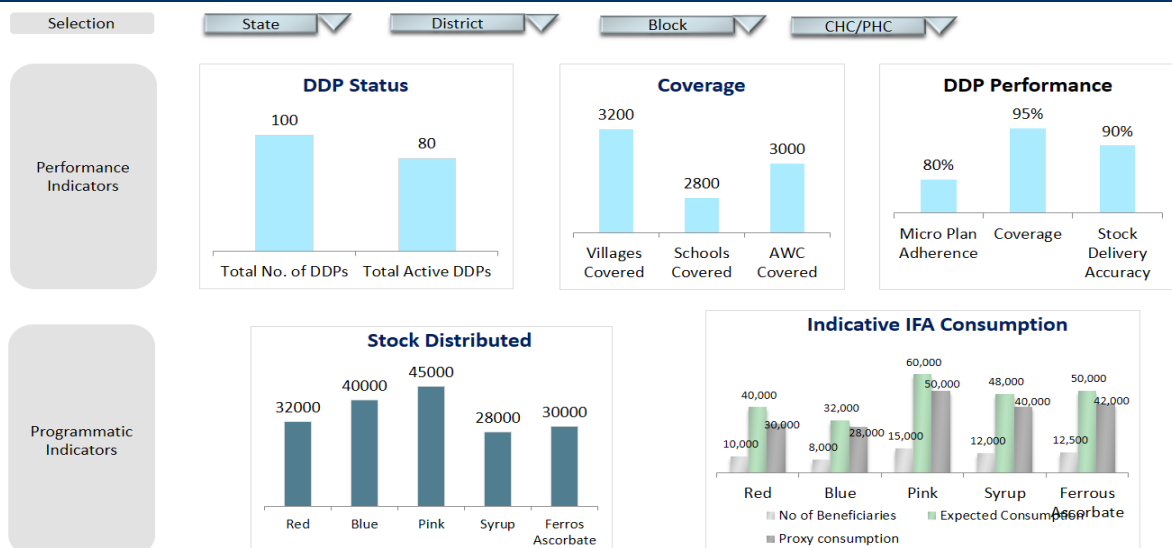
Report Generation

Reports generation related to the following attachments:

1. Web based Dashboard reports-

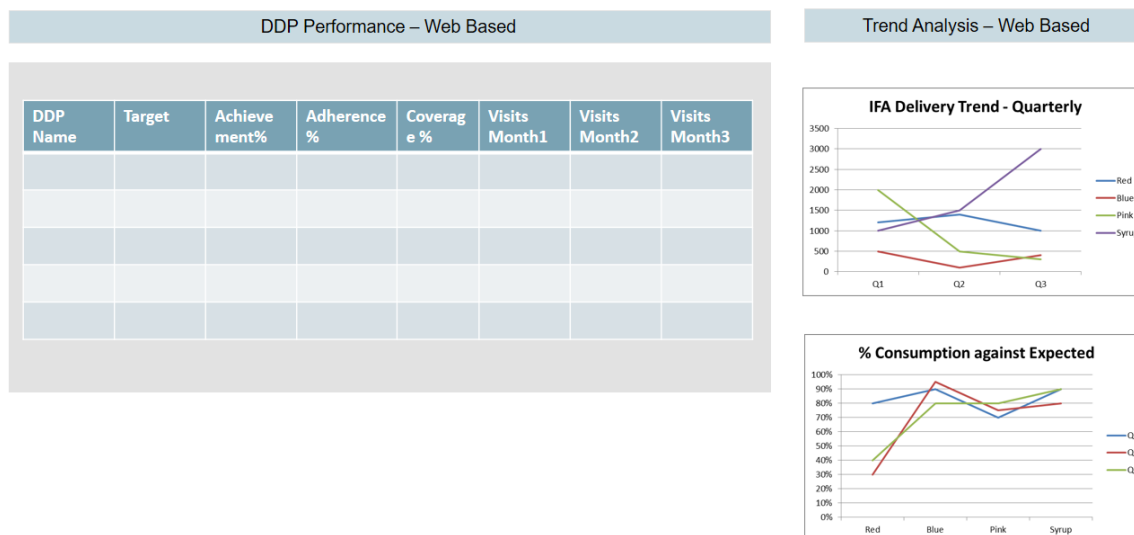
- DDP status – Active DDPs out of total DDPs
- DDP performance – Coverage, Micro-plan adherence, accuracy.
- Village, School, AWC/GAK coverage in a supply cycle.
- IFA stock distribution through DDP.
- Proxy consumption against actuals/ideal consumption of IFA commodities based on the no. of population.

Wireframe – Dashboard Components



- Quarterly Trend analysis of IFA delivery at facility levels including villages/School/GAK/AWC.
- %age Consumption of IFA commodities against expected consumption based on the No. of beneficiary data.

Wireframe – Dashboard Components



2. App based DDP Performance-

- Individual DDP can access their own targets, coverage, accuracy, micro-plan adherence etc. draft format is attached below.

Wireframe – Dashboard Components

DDP Performance – APP Based

Quarterly Targets

Total Visits Done 1 2 3

AWC / GAK / School Targets

AWC / GAK / School Coverage

Achievement %

Visits Left

Micro Plan Adherence

Stock Delivery Accuracy

The diagram above illustrates the modules that have to be developed under this project. The key role of the Software Development Vendor is listed below:

1. Understanding the detailed scope of work and identifying information gaps, if any, in translating user requirements to system design.
2. Refining UI/UX for Project in cognizance with the minimal digital awareness level of end users. Reiterating UI design based on user feedback collected by the WJCF team until final approval from NHM.
3. Developing a modular database schema for interlinking data which is already collected across various systems and data that is planned to be collected in future as part of this project.
4. Load testing the system for ensuring 2000-3000 k concurrent users of the system.
5. Creating two-way communication channels with selected external systems through APIs.
6. Using Agile methodology for development of various modules of the system and integrating iterative changes suggested by end users.
7. Automating code testing, workflows, infrastructure and other such features in order to ensure faster development and testing through a DevOps oriented team structure.
8. Ensuring real-time application performance management and code optimization.
9. Building a modular analytical layer for enabling the CHAI/NHM team to create granular dashboards.
10. Creating mobile, android application for identified roles capable of data entry in resource constraint environment.
11. Documenting technical design and code development process and preparing a handover and maintenance document for the helpdesk/system-support team.
12. Creating user manuals for each user type in the system.
13. Maintaining the system till master trainers are trained in using the system and helpdesk team is trained in maintaining the system.
14. Deploying the code on WJCF servers on a regular basis and iterating code and UI changes based on user feedback gathered periodically and during UAT.
15. Providing 18-months warranty and post-delivery support. Rectify level 4 issues raised by end users limited to performance issues in existing functionality. Warranty and post-delivery service support would include only those features identified and agreed to in the Memorandum of Understanding (MoU).

Stakeholder communication:

- WJCF collects requirements from NHM, collaborates with end-users for requirement gathering and product feedback, and liaises with external partners along with NHM.
- Vendor receives all requirements as well as product feedback directly from WJCF. Only in exceptional circumstances will the vendor have to communicate directly with either NHM or any of the end-users.