Terms of Reference
Proposal & Scope of Work: Development of a Unified Digital Application for FPC Data Management and Monitoring

1 Introduction and Background

Heifer International, through Passing Gifts Private Limited (Passing Gifts) is implementing the Bihar Sustainable Livelihood Development (BSLD) project, which includes the promotion and strengthening of 18 Farmer Producer Companies (FPCs) focused on agriculture and goat rearing in Bihar. Currently, the management, data collection, and monitoring of these FPCs rely on manual, paper-based processes, and periodic reporting. This system presents challenges, including data inaccuracies, delays in decision-making, difficulty in aggregating performance data, and limited transparency for FPC members and stakeholders.

To overcome these challenges and drive digital transformation, Passing Gifts invites proposals from qualified and experienced digital service/ Software service providers to design, develop, deploy, and maintain a robust, unified digital application. This platform will serve as a central tool for project team, FPC management, board members, and other relevant stakeholder including FPC shareholder farmers, aiming to significantly improve operational efficiency, data-driven decision-making, market linkages, and overall transparency.

It is expected that developing a dedicated digital application for FPC data management and monitoring will significantly improve operational efficiency, member engagement, and overall impact of FPCs. In the long run, it is expected that with this digital tool, FPCs will be better equipped to harness data-driven insights, foster growth, and serve their members effectively.

2 Goal & Objectives

2.1 Goal

- To design, develop, and implement a secure, user-friendly, and integrated digital platform, comprising both mobile and desktop applications—that empowers 18 Farmer Producer Companies (FPCs) under the BSLD project to streamline operations, strengthen farmer engagement, improve data-driven decision-making, enable real-time monitoring and geo-tagged service tracking, and promote transparency and sustainable business growth across diverse value chains.

2.2 Objectives

- Develop a centralized digital platform to manage key FPC data including membership, share capital, inventory (goat, poultry, commodities), sales, financial records, and service delivery.
- Create a unified monitoring dashboard for PGPL/Heifer staff to track real-time performance metrics across all 18 FPCs.
- Provide role-based access and relevant features tailored to FPC board members, management, field staff, PGPL staff and individual shareholders.
- Enable each FPC to manage its operations through a dedicated digital interface with dashboards covering:
    - Membership and demographic insights
    - Commodity-wise inventory tracking
    - Goat stock monitoring and forecasting
    - Business trends, service delivery, and basic financial summaries
- Support business development functions such as order management and buyer engagement at the FPC level.
- Ensure offline functionality for field operations in low-connectivity regions.
- Establish a secure digital repository for compliance documents, financial statements, and meeting records.
- Deliver a secure, scalable, and maintainable platform within the defined timeline and budget.

2.3 Problem Statement

The current reliance on manual record-keeping and periodic reporting by FPCs results in data inconsistencies, delayed decision-making, and limited real-time visibility. Project-wide monitoring is constrained by the difficulty in consolidating information across 18 FPCs. Additionally, inefficiencies in tracking member activities, livestock assets, and service delivery hinder operational effectiveness. The absence of a digital platform also limits FPCs' ability to showcase produce, attract buyers, and manage agri-input procurement efficiently.

A unified digital application is essential to address these gaps by enabling standardized, real-time, and transparent data management for all stakeholders.

3 Proposed Solution

To address the existing challenges in FPC operations, monitoring, and data transparency, the project proposes the development and deployment of a comprehensive digital platform comprising a mobile application and web-based application and dashboard. This solution will

serve as a unified, scalable, and secure system that supports real-time data collection, monitoring, service delivery, and business management for all 18 FPCs under the BSLD project.

The platform will be role-based, enabling customized access and features for different user categories including farmers, field staff, FPC management, and PGPL support teams. It will also integrate offline functionality to ensure usability in areas with limited network connectivity.

3.1 Key Highlights of the Solution:

- **Integrated Mobile and Web Platform:** One unified system accessible via mobile app (Android-based) and desktop/web for all key users.
- **Role-Based Access:** Custom interfaces and permissions for farmers, field staff, FPC BODs/CEOs, and PGPL personnel.
- **Real-Time Monitoring Dashboard:** Central dashboard for PGPL to track key indicators, trends, and progress across all FPCs.
- **Offline Functionality:** Core field functions will work offline with data sync upon connectivity.
- **FPC-Level Autonomy:** Each FPC will have its own dashboard and modules for managing operations, inventory, sales, and services.
- **Modular & Scalable Architecture:** Designed to allow future expansion, integration with external APIs, and easy onboarding of new FPCs or modules.
- **Non PGPL Hosting**: Data Security & Hosting: Data to be encrypted and securely hosted and the server hosted should be compliant with the DPDP act 2023 with GPS-enabled tracking and access control.

4 Key Features of the solution

No.	Component	Feature
1	Farmer & Membership Management	Member registration and profiling
		Share capital tracking
		Role assignment and demographic visualization
2	Livestock & Produce Tracking	Goat stock management (entries, forecasts, pricing)
		Produce aggregation and collection progress tracking
3	Inventory and Sales Management	Commodity-wise inventory tracking
		Input procurement and sales recordkeeping
		SKU-level valuation and trends
4	Service Delivery Management	Service request logging and resolution tracking
		Field staff assignment and fulfillment monitoring
5	Market Linkages	Lead management for potential buyers
		Market demand visibility and engagement records

No.	Component	Feature
6	Alerts and Communication	Broadcast announcements and alerts to farmers and field staff
		Customizable alert settings by region, crop, or service
7	Dashboards & Reporting	Real-time dashboards for FPC and PGPL staff
		Predefined reports (membership, goat stock, business summaries, etc.)
		Geo and time filters; export to Excel/CSV
8	Monitoring & Indicators	Visual display of key indicators (sales, revenue, service progress, etc.)
		Drill-down capabilities by region, time, and SKU
		Status flags and color-coded risk alerts
9	Offline Capability & GPS Integration	Field data entry without internet
		GPS tagging for service validation and accountability
10	Access Control & Security	Role-based access (RBAC)
		Two-Factor Authentication for key roles
		End-to-end encryption (AES) and secure cloud hosting
11	Maintenance and Support	Focal point from agency for issue resolution
		Admin and field user manuals
		Routine app updates, logs, and server maintenance

Additional details, are mentioned in the General Requirements and Technical Requirements

5 Users and User Roles

The digital platform is built to support a diverse range of users within the FPC ecosystem, each with distinct yet interconnected responsibilities. The rollout of modules is planned in a phased manner, starting with core functionalities aligned to key user roles.

Field Workers (Community Leaders) act as the critical link between farmers and the FPC. They are responsible for collecting and updating field-level data—such as farmer profiles, crop conditions, and service requests—and for facilitating timely communication between farmers and the FPC. Their primary interaction with the platform will be through the mobile application, where they will handle most field-level data entry.

FPC Staff, including Board Members, CEOs, and operational teams, are tasked with overseeing daily operations, validating field data, managing inventory and sales, and making informed decisions using real-time insights. They will require access to both the mobile app for field-level inputs, approvals and the web-based dashboard for data visualization and management oversight.

PGPL Staff, particularly Project Officers, will play a supervisory role by monitoring the performance and progress of all supported FPCs. Through consolidated dashboards, they will identify operational gaps, track key indicators, and support accountability and strategic direction.

Farmers, as the primary beneficiaries, will use the platform to access services, request inputs, and engage in market linkages. Their participation is supported by field workers who assist with data collection, service delivery, and ongoing coordination, ensuring farmers remain connected to FPC offerings.

System Administrator (Key personnel from agency): Manages user accounts, configure lists (e.g., practices, crops, locations, FPCs), system settings and other administrative features of the app and dashboard.

Module / Feature	Farmer / Shareholder	Community Leader / Field Worker	FPC Staff (CEO, BOD, Ops)	PGPL Staff
Profile & Membership	View, Edit (limited)	View, edit (assigned farmers)	Full CRUD	View only
Goat Stock	Add, Edit (own)	Add, Edit (assigned farmers)	Full CRUD	View only
Produce Aggregation	Add, Edit (own)	Add, Edit (assigned farmers)	Full CRUD	View only
Inventory Management	-	–	Full CRUD	View summary
Sales Records	–	–	Full CRUD	View summary
Market Linkages	–	–	Manage leads, View inquiries	View summary
Agri-Input Ordering	Place order	Track orders (assigned farmers)	Manage & fulfill orders	View summary
Service Requests	Place request	Manage assigned requests	Full CRUD	View summary
Financial Summary	–	–	View, Drill down	View, Drill down
Announcements & Alerts	View, Respond	Respond on behalf of farmers	Create, View responses	View responses
Dashboard (Indicators)	View basic metrics	View assigned metrics	View with filters	Full analytics & filters
Compliance Documents	–	–	Upload, View	View all

- CRUD = Create, Read, Update, Delete
- Permissions are based on role-based access and relevance of the module to the user group.

6 Ownership, Hosting, and Customization Rights

PGPL shall retain exclusive rights to all data, configurations, trademarks, branding elements, administrative credentials, and other digital assets associated with the white-labelled application deployed under this engagement. If the selected agency proposes a proprietary or existing platform, provision of source code is not required; however, the agency must customize, brand, and configure the application as per PGPL's requirements, and deploy it within a sperate virtual server environment. PGPL will maintain full administrative access and control over the deployed instance. The agency is expected to implement all feature modifications and customizations specified in this ToR and ensure the system architecture is modular, allowing for future enhancements without disrupting core functionality.

In addition, the selected agency will be responsible for the ongoing maintenance, technical support, and version updates of the application for a period of two (2) years from the date of final deployment. This includes resolving bugs, ensuring compatibility with updated operating systems and devices, performing regular security updates, and supporting minor feature enhancements as required by PGPL during the maintenance period.

7 Staged Deployment Approach

The deployment of the application will follow a **phased approach**, allowing for progressive development, testing, and refinement based on real-world user feedback.

7.1 Phase 1:

A set of basic and high-priority modules (approximately 3–4) will be developed and shared with actual field users for testing. These initial modules will undergo user testing at the field level, with feedback collected from all key user roles. Based on this input, the UI/UX will be refined to ensure it aligns with users' familiarity and ease of use. Tailoring the interface to the users' context is expected to significantly enhance adoption and overall success of the application.

7.2 Phase 2:

Building on the insights from Phase 1, a second set of advanced modules will be developed. These modules will also be prioritized based on operational needs and will follow the same UI/UX standards established earlier to maintain consistency. They will be integrated with the Phase 1 modules, ensuring a smooth and logical flow for users across different functions of the app.

7.3 Phase 3:

This phase will include optional or 'nice-to-have' modules that may not be immediately essential but offer added value for decision-making and data-driven insights. These modules will be

considered based on available resources, time, and field demands, and may also be identified as opportunities for future development or version upgrades.

8 Environments:

Throughout all stages, the application will initially be hosted on a testing server for review and feedback. Once testing is complete and approved, it will be migrated to the production environment. The selected agency will also be responsible for publishing the mobile application on the Google Play Store, ensuring compliance with all applicable requirements and maintaining future updates as needed.

9 Timeline (Indicative)

Deliverable	Due Date
Deadline for submission of proposals	20-Oct-25
Onboarding agency – including review of approach methodology	28-Nov-25
Submission of detailed implementation plan by agency	07-Dec-25
Finalization of app modules and functional aspects.	02-Jan-26
Feedback and Approval on UI/UX	23-Jan-26
Development of core modules of APP	24-May-26
Testing of Developed modules (all user roles)	04-May-26
Deployment and Migration to production environment	25-Aug-26
Setting up Sign-in, Two Factor Auth, listing on App store	14-Sep-26
Go-Live	24-Sep-26
Bug fixes and Improvements - Final Round	04-Oct-26
User training to Role based Users (In person)	14-Nov-26
Development of Training Manual	14-Dec-26
Maintenance and Contingency	04-Dec-28

10 Submission Guidelines

All interested agencies will submit their or organization's profile with the following information:

Technical Proposal *(*not to exceed 15 pages)

a. **General information (not to exceed 2 pages):**
   - Organization overview
   - Capacity statement
   - Website

b. **Technical Approach (not to exceed 12 pages):**

- Applicants are requested to submit a detailed technical approach outlining their understanding of the project objectives and user needs. Vendors should also highlight how their solution addresses the diverse user roles, offline functionality, and multilingual requirements outlined in the Scope of Work.
- The technical proposal must clearly describe the development methodology, system architecture, and technology stack to be used. Vendors must also explain how their solution will ensure scalability, modularity. The vendor should describe how indicators will be configured and displayed for different user types, and how report generation will be automated.
- Sustainability plan along with the current support from other institutions, organizations, Long term plan or future plan for the application and platform (at an organizational level)
- Total App Downloads, Total Registered Users, Classified by User Roles, Daily Active Users (DAU) and Monthly Active Users (MAU) (use the template provided below)

c. Financial Proposal (in INR)

10.1 Itemized budget (also provide component wise breakdown Ref: 16.3 Roll-Out Strategy

The application will follow a phased roll-out approach, aligned with the three stages of development. Each phase will undergo a three-step roll-out process to ensure stability, usability, and real-world performance.

- In Step 1, the application will be tested internally by users representing various roles. Feedback on UI/UX, usability, and functionality will be collected, and the agency is expected to remain highly responsive, providing viable and mutually agreeable solutions to any issues or concerns raised during this stage.
- In Step 2, the application will be deployed to the live environment and tested under real-world conditions—evaluating aspects such as multi-user input handling, data latency, recall speed, connectivity performance, and overall responsiveness. This step is critical to validating the app's behavior in operational settings, guided by user feedback.
- In Step 3, once stability is confirmed, the application will be publicly released via the Google Play Store, and any final issues will be monitored and resolved.

This structured roll-out cycle will be repeated for each of the three development phases, supporting a smooth and successful deployment across all modules.

- Maintenance of the System)
- Narrative explanations of line items

- It is important to include information about the various line items involved for a better understanding and context for the non-technical team members.

d. Annexes

- Documents in favor of the previous similar tasks.
- Organization's/Firm's Certificate, GST registration (if applicable), MSME Certificate (if applicable)
- A summary of previous assignments undertaken within the last 3 years.

Interested agency legally eligible to implement this assignment in the country are requested to submit a proposal. Please include the name of the person in your organization who will be involved in negotiating the contract as well as your telephone and email contact information.

Submissions must be in English and typed single-spaced using Times New Roman font size 12, with a complete set of appendices/attachments as applicable. All pages must be numbered and include the SOW reference number on the cover page, and the name of the organization at the bottom of each page.

The successful consulting agency will be required to produce the following documents before entering into Independent Contractor Agreement (ICA) with PGPL:

- Certificate of Incorporation or Business Registration Certificate.
- Audited financial statements for the last 3 years.
- Directors' / Partners' personal guarantee.
- Trade reference and clientele list including their respective contacts.
- PAN
- GST (if applicable)
- MSME certificate (if applicable)
- Memorandum of Association in case of NGO

The proposal (duly signed) should comprise technical and financial proposals separately. Only the soft copy of the proposals will be accepted through email with the mentioning subject line; RFP/PGPL/FY'26/BSLD/FPC followed by the "*Bidder's Name*" to procurement-in@heifer.org latest by October 20, 2025, 5 pm. Proposals received after the submission deadline will not be considered. Agency are responsible for ensuring their proposals are submitted according to the instructions stated herein.

PGPL retains the right to terminate this RFP or modify the requirements upon notification to the agencies.

e. Checklist and Table

General Details		**Response**
	Name of the Mobile application	
	URL of the application	
	No. of downloads	

	No. of registered users	
	No. of Monthly Active Users	
	No. of Daily Active Users	
	Name of the web Platform	
	URL of the demo platform	
	User roles (list them all with CRUD permissions.)	
Feature Details	**Respond Yes/ No on the feature availability in mobile/ web platform**	**Response**
	Announcements & Alerts	
	Statements [Generating Excel files]	
	Sales and business tracking	
	Inventory Management	
	Order and Service management	
	Product aggregation	
	Membership management	
	Compliance management	
	App performance tracking	

11 Selection Criteria

The submitted proposals must clearly demonstrate alignment with the SOW outlined above with an appropriate level of detail. Proposals will be evaluated according to the following criteria:

Evaluation Criteria	Weight (%)	What is Evaluated
Technical Approach & Methodology	25%	Clarity, feasibility, and contextual relevance of the proposed approach and architecture. Training approach and technical support.
Relevant Experience and Past Work (MAU, DAU)	20%	Prior experience in developing similar platforms (agriculture, FPOs, MIS apps, etc.), particularly in rural or development contexts. Deployment experience with farmers, FPCs and other stakeholders.
Team Composition & Technical Expertise	15%	Qualifications and experience of proposed team members, including developers, UI/UX experts, and QA professionals.
Timeline & Work Plan	15%	Realism and clarity of the proposed implementation timeline and deliverables.

Financial/ Funding Model and Sustainability	10%	Current and future funding/ finance plans for ensuring sustainability of the platform and system.
Cost of Proposal	15%	Overall cost-effectiveness of the proposal in relation to proposed outputs.

The selection committee will evaluate the technical proposal based upon the criteria listed above, and the financial proposal will be assessed for its cost-effectiveness in the budget.

12 VALIDITY OF PROPOSALS

Proposals submitted shall remain open for acceptance for ten (10) days from the last date specified for receipt of the proposal. This includes, but is not limited to, pricing, terms and conditions, and service levels. If your organization is selected, all information in this document and the negotiation process are contractually binding.

13 LIMITATIONS

This call does not represent a commitment to award a contract, to pay any costs incurred in the preparation of a response to this RFP, or to procure or to contract for services or supplies. PGPL reserves the right to fund any or none of the applications submitted and reserves the right to accept or reject in its entirety and absolute discretion any proposal received.

14 INTELLECTUAL PROPERTY

Section 1. Ownership Generally. Subject to Section 2 below, any intellectual property (including but not limited to copyrights, trademarks, service marks, and patents), intellectual property rights, deliverables, manuals, works, ideas, discoveries, inventions, products, writings, photographs, videos, drawings, lists, data, strategies, materials, processes, procedures, systems, programs, devices, operations, or information developed in whole or in part by or on behalf of Contractor or its employees or agents in connection with the Services and/or Goods (collectively, the "Work Product") shall be the exclusive property of PGPL. Upon request, Contractor shall sign all documents and take all actions necessary to confirm or perfect PGPL's exclusive ownership of the Work Product.

Section 2. Prior-Owned Intellectual Property. Any intellectual property owned by a Party prior to the Effective Date ("Prior-Owned IP") shall remain that Party's sole and exclusive property. With regard to any of Contractor's Prior-Owned IP included in the Work Product, Contractor shall retain ownership, and hereby grants PGPL a permanent, non-exclusive, royalty-free, worldwide, irrevocable right and license to use, copy, reproduce, publicly display, edit, revise, perform, and distribute said intellectual property, in any format or any medium, as part of the Work Product.

Section 3. Work Made for Hire. To the extent copyright laws apply to the Work Product, the Parties agree that (a) PGPL specially ordered or commissioned the Work Product, (b) the Work Product is a "work made for hire" under India copyright laws, and (c) PGPL shall be deemed the author thereof and shall own all right, title, and interest therein. To the extent such rights, in whole or in part, do not vest in PGPL as a "work made for hire", Contractor hereby irrevocably grants, assigns, and transfers to PGPL, exclusively and in perpetuity, all of Contractor's rights of any kind or nature, now known or hereafter devised, in, to, and in connection with the Work Product, and PGPL shall solely and exclusively own any and all rights therein, and in the elements thereof, including but not limited to any and all allied, ancillary, subsidiary, incidental, and adaptation rights. Contractor hereby waives all rights known as "moral rights", and any similar rights, which Contractor may have in connection with the Work Product. The description of Services and/or Goods provided in this Agreement shall in no way limit the way PGPL may use the Work Product.

15 APPLICABLE REGULATIONS

Agency must be legally registered to operate within India and comply with local applicable legislation, including but not limited to labor law, financial requirements, taxes, etc.

Proposals should be submitted in the aforementioned format only.

Send to: procurement-in@heifer.org
Deadline of Submission: October 20, 2025, 05:00 PM IST

Send your proposal as per the format prescribed. The subject of email shall be the RFP Number i.e., RFP/PGPL/ FY'26/BSLD/FPC followed by the "*Bidder's Name*".

Note - Telephonic and Face to Face enquiries will not be solicited and may lead to disqualification.

Annexure 1 – Requirements for the solution

16 General Requirements

16.1 Scope of application

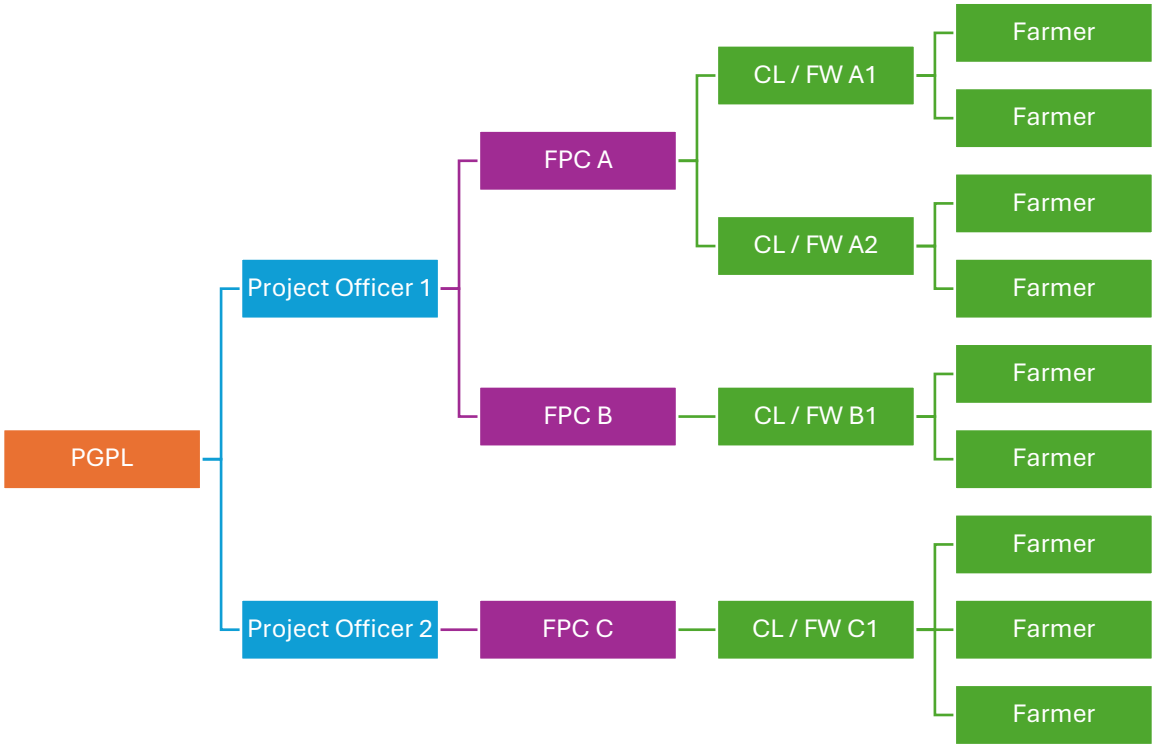
The proposed application will serve as a comprehensive digital platform integrating key components such as farmer management, FPC operational oversight, communication, role-based responsibilities, and data-driven decision-making. Its core objective is to enhance the efficiency, transparency, and business viability of Farmer Producer Companies (FPCs) under the project.

The application will consist of two interconnected parts:

1. Mobile Application – Primarily used field staff, FPC staff. Field staff will use the app for data collection, service tracking, and updating farmer profiles or farm activities. The mobile app will function in both online and offline modes to ensure usability in remote and low-connectivity areas. Farmers are secondary users, they can monitor their personal and farm-related information, access services provided by the FPC, and explore business opportunities

2. Desktop/Web Interface – Designed for FPC management, including Board Members, CEOs, and operational staff. It will provide access to farmer data, demographic summaries, business performance indicators, and allow for validation and approval of field updates. This interface will support strategic decision-making, compliance tracking, and overall operational management.

At the supervisory level, PGPL Project Officers will have access to data and dashboards across the FPCs they support. Their interface will enable monitoring of key indicators, comparative performance analysis, and provide oversight for governance and capacity-building efforts across all participating FPCs.



- CL = Community Leader
- FPC = Farmer Producer Company
- FW = Field Worker / Field staff

16.1.1 User Experience:

The software should be highly user-friendly, ensuring ease of use and adoption by all relevant stakeholders, including PGPL staff, FPC personnel (Board of Directors, CEOs, Business Development Officers), Community Facilitators, Data Entry Operators, and the MELS team. Its design should accommodate varying levels of digital literacy and ensure smooth navigation across devices.

The application must support core functions such as farmer registration, profiling, and record management, while also enabling work planning, decision support, and facilitating routine operations related to business transactions, commodity aggregation, marketing, and indicator-based reporting.

All data collected through the platform should be transparent and accessible to stakeholders based on their defined roles and access levels. While promoting evidence-based decision-making and accountability, the system must also incorporate strict safeguards to protect personally identifiable information (PII) and ensure compliance with data privacy standards.

16.1.2 Application with Reminders and Alerts:

Application should be Android-based and should support all latest versions of Android, in all mobiles/tablet devices (with varying screen sizes). Reminders and alerts on all components like risk alerts, market information, product demand (specifically related to goat) etc. should be sent to the registered farmers specific to region, active crop and active livestock. Similarly alters to the field workers of respective regions and BODs.

16.1.3 Real Time Monitoring (RTM):

The application shall be used for real-time monitoring both with figures and graphs for every indicator. All High Risks would be marked in red and instant messages (system alerts) would be sent to the BODs, FPC Staff and PGPL's program officers.

16.1.4 Data Protection:

The application must strictly adhere to applicable data protection laws and best practices, ensuring the privacy, security, and lawful handling of personal data collected from farmers, staff, and stakeholders. In alignment with the principles of the General Data Protection Regulation (GDPR) and India's Digital Personal Data Protection (DPDP) Act, 2023, the system must enforce safeguards such as:

- Purpose limitation – Data shall be collected only for specific, legitimate functions within the FPC operations and project scope.
- Data minimization – Only essential data must be collected and stored.
- Access control – Role-based access must be implemented to prevent unauthorized access to sensitive data.
- Informed consent – Where applicable, users should be made aware of the purpose of data collection and their rights regarding access, correction, and withdrawal.
- Right to erasure and correction – The system should enable correction of errors or deletion of data upon authorized requests.
- Audit trails and activity logs – The system must maintain logs of data access and edits, especially for users with elevated privileges.

To ensure compliance with India's data localization requirements under the DPDP Act, all application data—including backups and archives—must be stored and hosted on servers located within India. The selected agency must use secure, encrypted infrastructure and provide detailed documentation on server architecture, security protocols, and data encryption (both at rest and in transit). PGPL reserves the right to audit the data hosting setup to ensure compliance with these requirements.

16.1.5 Data migration:

The proposed application should provide a mechanism to transfer current data in digital readable formats (xlsx, csv) to the new application without any hindrances.

The agency should ensure that there should be no need for the collection of fresh data regarding this. It should also have the possibility of bulk upload and (re)allocation of work areas among the team members.

Vernacular Language Support/Local Language: Ensure the app supports various local languages (popular languages throughout india) in addition to English, to facilitate ease of use for users who are not fluent in English.

For advocacy and monitoring at divisional, district and state level English will be used and for the field staff data collections, local language will be used.

16.1.6 Edit Options:

The agency should ensure that edit options are provided in the application, and the accessibility of edit options is dependent on the component, and level of user in the organogram. (for instance if farmers have input some wrong information in their profile, or service request, their assigned field staff can edit it, similarly, if FPO's registration details are wrongly entered, only the PGPL's Project officer can correct it).

16.1.7 GPS tracking

The application must be capable of collecting GPS coordinates at the time of every data entry, particularly by Farmers and Community Leaders. While there is no immediate requirement to display this data on a map, the location information will be stored securely for future use. As GPS-based features are planned in upcoming phases, it is essential that the GPS data be accessible to FPC staff, allowing them to manually verify the origin of data entries if needed. The agency should ensure that the system architecture allows easy integration of future mapping modules without disrupting the existing database. GPS-tagged data must be included in standard reports and made exportable in Excel format.

16.1.8 MIS and Reports:

The agency should implement an automated system on the web interface to generate timely and accurate MIS reports. These reports, based on operational data and performance indicators, will support regular progress tracking by supervisory staff. Report frequencies will include daily, weekly, monthly, quarterly, half-yearly, and annual formats.

16.2 Training Field and Supervisory Staff/User Training and Support:

Provide comprehensive training (In person) and support to the field team (virtual) to ensure they can use the app effectively and securely.

- The agency shall train the field and supervisory staff (FPC staff, PGPL Staff) on the usage, functionality of the append shall clear all the doubts of the field staff regarding this. This training will be in person and a representative from the development organization shall have to facilitate the training. The BSLD will organize the training
- The agency shall allocate a focal person so that all the malfunctions of the application or the corrections shall be addressed by him/her in consultation with the PGPL team.
- The agency shall develop a basic training module / training deck, that provides understanding of functionality, operation and navigation of various modules and features of the app
- The agency shall issue a user manual for the software developed, which covers all essential information for understanding, and operate the application smoothly.
- Further details on the support model and response time will be defined prior to signing an agreement between the agency and PGPL.
- Similarly, details on training and documentation requirements will be defined prior to signing an agreement between the agency and PGPL.

16.3 Roll-Out Strategy

The application will follow a phased roll-out approach, aligned with the three stages of development. Each phase will undergo a three-step roll-out process to ensure stability, usability, and real-world performance.

- In Step 1, the application will be tested internally by users representing various roles. Feedback on UI/UX, usability, and functionality will be collected, and the agency is expected to remain highly responsive, providing viable and mutually agreeable solutions to any issues or concerns raised during this stage.
- In Step 2, the application will be deployed to the live environment and tested under real-world conditions—evaluating aspects such as multi-user input handling, data latency, recall speed, connectivity performance, and overall responsiveness. This step is critical to validating the app's behavior in operational settings, guided by user feedback.
- In Step 3, once stability is confirmed, the application will be publicly released via the Google Play Store, and any final issues will be monitored and resolved.

This structured roll-out cycle will be repeated for each of the three development phases, supporting a smooth and successful deployment across all modules.

16.4 Maintenance of the System

The selected agency will be responsible for monitoring the application's performance and ensuring the system remains fully functional, secure, and optimized throughout the post-deployment period. The maintenance duration will be 24 months from the official Go-Live date. During this period, the agency is expected to:

- Regularly monitor system functionality and server performance, including load times, uptime, and responsiveness.
- Conduct preventive maintenance to address security vulnerabilities, performance issues, and bugs.
- Implement patches, minor feature enhancements, and system updates as required.
- Maintain full oversight of the server infrastructure (if hosted by the agency), and inform PGPL in advance of any planned maintenance, downtimes, or server-related updates, including their scope and schedule.
- Provide responsive technical support to resolve user-reported issues, ensure continuity of service, and adapt to minor change requests.
- Maintain detailed logs of updates, issues resolved, and system uptime, shared with PGPL at defined intervals.

The financial proposal must clearly outline the cost of maintenance and related services under the following components:

- **Component 1: Development, Testing, Training, and Deployment** Includes cost for software design, development, internal and field testing, user training (resource person only), and final deployment.
- **Component 2: Hosting and Platform** Operations Covers cloud/server infrastructure, storage, bandwidth, server administration, and data security measures. *If PGPL opts to host the solution, this component should reflect only the support and configuration costs*.
- **Component 3: Monitoring and Support** Includes ongoing technical support, performance monitoring, bug fixes, updates, and communication with the PGPL team during the 24-month maintenance window.

The agency is expected to commit adequate human and technical resources to this maintenance period, ensuring the platform continues to meet operational and performance expectations.

16.5 Indicator tracking

The app should be able to store and track the following data for each indicator:

- The name of the indicator
- The current value of the indicator

- The target value of the indicator (applicable in a few scenarios)
- The date and time the indicator was last updated
- The app should be able to generate reports that show the historical data for each indicator.
- The app should be able to export the data (as per a specific template) into a CSV file.
- The app should be accessible to users on both desktop and mobile devices.
- The app should be able to send notifications to users when there are changes to their specific data like order updates, shareholding updates, aggregate updates, goat sale updates etc..

Here are some additional technical requirements that may be necessary, depending on the specific needs of the project:

17 Technical Requirements

17.1 Mandatory Requirements

- **Compact and Efficient Design:** Optimize the app's design and code to ensure it runs smoothly on low-powered and low-performing devices
- **Role-Based Access Control (RBAC):** Implement RBAC to control user access based on their roles and responsibilities. Field team members should only have access to relevant data and functionalities according to their roles.
- **Vernacular Language Support**: Employ Google's Transliteration API and Translation API to enable vernacular language support in the app, allowing users to interact in their native languages.
- **Programming Language**: ease of use, readability, and extensive library support is ideal for rapid development and data processing
- **Offline Capability**: The app must function without a continuous internet connection since remote villages may have limited access to high-speed internet. Users should be able to input data, access information, and perform essential tasks without an internet connection.
- **Offline Data Validation:** Incorporate offline data validation mechanisms to ensure data quality even when there is no internet connection.
- **Data Sync and Backup**: Design the app to sync data securely when an internet connection is available, and regularly back up data to prevent loss in case of device damage or failure.
- **Data Validation and Error Handling**: Implement robust data validation to ensure accurate input and proper error handling to guide users in case of any discrepancies.

- **Two-Factor Authentication (2FA)**: Implement 2FA for added security, requiring users (Specially CEO and users with FPO level data edit access) to enter a temporary one-time password (TOTP).
- **Compliance and Security Measures**: Employ industry-standard data security practices, such as SSL/TLS for secure communication, server hardening, and regular security audits.
- **Data Encryption**: All data stored in the app, including photographs, personal information, and other sensitive data, must be encrypted both in transit and at rest. This ensures that even if the device is compromised, the data remains secure.
  Note: Implement strong encryption techniques like AES (Advanced Encryption Standard) to secure data both during transit and at rest.
- **User Activity Logs:** Maintain detailed logs of user activities within the app to track actions performed by individual users and ensure accountability. This is mandatory for users with FPC level data edit access. The level of log detail will be discussed before signing an agreement to balance value, readability and hosting space costs.

17.2 Optional requirements:

- **Version Control:** From the developers end, please maintain for version control, enabling collaborative development, code management, and easy rollbacks.
- **GPS Tracking:** Utilize the device's built-in GPS capabilities to capture the location of data entries accurately
- **Device Performance Optimization:** Utilize performance optimization techniques like wherever applicable to ensure smooth performance on low-powered devices.

18 Performance Indicators

The application will track a comprehensive set of performance indicators covering key operational, financial, and service delivery aspects of the FPCs. These indicators will be prominently displayed on the web-based dashboard to provide real-time insights for PGPL and FPC staff. Selected indicators will also be accessible via the mobile application, tailored to the user's role and permissions. This will support data-driven decision-making at all levels—from individual field staff to central program oversight. The current list of indicators may be expanded or refined during development based on the evolving needs and functionalities of the platform.

Component / Feature	Indicator	Display Unit	Disaggregated By	Drill-Down Level
Announcements & Alerts	No. of announcements broadcasted	Number	Region, Time, Type	Region Level, Week Level
	No. of alerts broadcasted	Number	Region, Time, Type	Region Level, Week Level
	Response rate on (specific) announcements	%	Region, Time, Type	Region Level, Week Level
Financial Statements	Revenue generated	INR	Region, SKU, Time	Region Level, Month Level
	Current inventory value	INR	SKU, Time	Month Level
	Profit/ Loss	%	SKU, Time	Month Level
	Expenses incurred	INR	Expense Type, Time	Expense Type, Month Level
Sales	Value of sales	INR	SKU, Type, Region, Time	Month Level, Region Level
	Count of SKUs in stock	Number	Region, Time	Region Level
	Business expenses	INR	Sale, Type, Time	Expense Type, Month Level
Market Linkage	No. of interested buyers	Number	SKU, Region, Type, Status	Region Level, Month Level
Agri Input	Value of input sales	INR	SKU, Type, Region, Time	Region Level, Month Level
	On demand products	Number	SKU, Region	Region Level
	Current inventory value	INR	SKU, Time	Month Level

Component / Feature	Indicator	Display Unit	Disaggregated By	Drill-Down Level
Service Orders	Value of services delivered	INR	Service, Status, Region	Region Level
	Service avail progress	%	Region, Crop, Livestock	Region Level
	Status of services	Number	Service, Type, Status, Region	Region Level
Goat Stock	Number of Goat Entrepreneurs	Number	Region, Time	Region Level, Month Level
	Goat stock	Number	Breed, Region, Time	Region Level, Month Level
	Goat price (market value)	INR	Breed, Region, Time	Region Level, Month Level
	Value of Goat sales	INR	Breed, Region, Time	Region Level, Month Level
Produce Aggregation	No. of Farmers ready for collection	Number	Region, SKU, Time	Region Level, Month Level
	Aggregation progress	%	SKU, Region, Time	Region Level, Month Level
Inventory Management	Value of products in inventory	INR	SKU, Time	Month Level
	Stock of products	Number	SKU, Time	Month Level
Membership Management	No. of farmers	Number	Sex, Region, Status, Land Holding, Active Crop, Active Livestock	Region Level
	No. of shareholders	Number	Sex, Region, Status	Region Level
	Trend of shareholding amount	Number	Region, Time	Month Level
Compliance	Status of compliance activities	Number	Status, Activity Category, Time	Month Level
	Licence and Registration	Number	Status, Paperwork Category	
App performance tracking	Number of Active Users	Number	Sex, Region, Status, Role	Month Level
	Features access / utilization rate	%	Region, Role	Month Level