FOOD DEPARTMENT

GOVERNMENT OF KHYBER PAKHTUNKHWA

PC-1

Provision of ICT Based Interventions in Food Department

ADP No.	210630
Forum	PDWP
Total Duration	24 Months
Total Cost	PKR 99 Million

Prepared by:

DIRECTORATE OF FOOD AND KHYBER PAKHTUNKHWA INFORMATION TECHNOLOGY BOARD

GOVERNMENT OF KHYBER PAKHTUNKHWA

March 2022

#	Description	Detail
1	Name of the Project	Provision of ICT Based Interventions in Food Department
2	Location	Peshawar
3	Authorities responsible for:	
	(i) Sponsoring	(i) Food Department KP
	(ii) Execution	(ii) Khyber Pakhtunkhwa Information Technology Board (KPITB)
	(iii) Operation & Maintenance	(iii) Food Department KP
	(iv) Concerned Provincial Department	(iv) Food Department KP
4	(a) Plan provision	
	(i) If the project is included in the medium term/five-year plan, specify actual allocation.	(i) N/A
	(ii) If not included in the current plan, what warrants its inclusion and how is it now proposed to be accommodated.	(ii) N/A
	(iii) If the project is proposed to be financed out of block provision, indicate: Total Block Provision: Amount already committed: Amount proposed for this project: Balance available:	(iii) N/A
	(b) Provision in Current Year ADP 2021-22	PKR 20 million.

5	Project Objectives	The specific project objectives are:
		1. To Track the supply of Wheat from Sources, all the way to shops and then to beneficiary (citizen).
		2. Inspection carried out through a role based mobile application according to the job role of food Inspectors.
		3. Near to Real time dashboard with holistic view of logistics, inventory, and Inspection regime.
		4. Annual Evidence based data for forecasting future needs.
		5. Establishment of monitoring center in the Food Directorate.
		6. Lab Information Management System for Halal Food Authority
		7. Implementation of ERP modules (HRMIS, FMIS, e-Procurement) in KPFS&HFA and HRMIS in Food Department.
6	Description, justification, and technical parameters	Food department's supply chain of wheat is a critical process comprising many key stakeholders. Each year food department approx. procure 3822 tons of wheat from various sources and distribute to multiple flour mills and grinders across Khyber Pakhtunkhwa for grinding and eventually citizens purchase it at subsidized rates. Effective controls are applied through an underlying inspection regime that mitigates the risk of losses in the supply chain. So far, this whole process is done through manual processes and therefore the holistic patterns reports are not possible to record on a near to real time basis. Digitization of the supply chain process along with the underlying inspection regime is not a trivial task and would require customized software, resource gap analysis of technical skills and ICT Infrastructure, an effective deployment and training component.

Therefore, we have divided the implementation of this project into 3 phases.

Phase 1: IT Infrastructure/ Skills Gap Analysis and Requirements gathering
Phase 2: Software Development.
Phase 3: Establishment of Resource Center at Food Department.

Phase 1: In phase 1, the consulting firm will study the current as-is processes of department and outline complete process flows of department processes. Identify the key roles involved in the processes with details regarding their ICT relevant skills for proposed solution.

At the end of this phase, consulting firm will formally submit to-be processes in line with the best practices followed by world food program supply chain management program and deliver a presentation on key differences in as-is and to-be process, key benefits, roles, and interfaces used by proposed roles. This Phase will end with signoff from Food department and KPITB on the proposed solution by the consulting firm.

Phase 2: In phase 2, consulting firm will start development process of the proposed and agreed upon solution. In this phase consulting firm will also identify key procurements and plan for skills-based training of food department employees. By the end of this phase, all employees of food department should be trained on the software developed by the consulting firm. Consulting firm will submit user acceptance report, training report, stress testing, security assessment report to Food department and KPITB will review all reports. |

Phase 3: In line with the department needs identified in SRS, a centralized monitoring room with dashboard having near to real-time feeds will be established. This center will include display screens, conference call facility and dashboards for policy makers/ senior management of food department.

Key outcomes of the Project are to improve working ability of the staff of the Department and its attached formations for providing better services and spirited output with value added methods of sector Management. This Project will enable the department to further elevate and upgrade the present wheat handling through a customized software tool & control room also through infrastructure development for better communication systems.

Based on the initial need assessment; to digitize the supply chain process of wheat and its underlying inspection regime following modules will need to be developed as part of the software consultancy. Requirement gathering done by consulting firm will include but not limited to following modules.

Module 1: End to End Godown Management System:
A centralized management system for all godowns owned by the food department (58) and approx. 21 private godowns used by the food department. Further modules may include but not limited to:
- Automation of godowns registers (FG-13, FG-3 etc.).
- Geo tagging of All Godown
- Automation of godowns operations
- Weight Bridge Management System integrated with core systems
- Gate Pass Management System (web/mobile app)
- Stock-in and stock out management system (Godown to floor mill etc).
- Stock layouting
- Godown Dashboard
- Intra and Inter Godown Management System
- Godown to reserve management system
- of wheat stock from godown

Module 2: Supply Chain Management System: During Transportation of Wheat, with each truck routing especially for import of wheat, the system will be able to retrieve the following information.
- This module records all the data of wheat coming from PASSCO, Punjab / local grower/Import/others intelligent record management and tracking system with the use of latest technology.
- Time based vehicle and supply tracking system i.e. truck number, driver name, CNIC, weight of wheat, number of bags, number of bardanas, station from, station to, date etc.
- Automatic generation of gate passes (inward and outward).
- GPS based/location aware authorization of supplies at designated centers.
- Time /scheduled alerts for truck drivers locations via Call center or any other automated mechanism.
- Floor Mill Management System
- Dealer Management System
- Citizen receipt Management system

Module 3: Inventory Management System: Food Department, generate daily/monthly/fortnightly & yearly reports of current stock, total receipt & total issue of Wheat in the Province in a consolidated as well as District wise computerized reports.

- Stock situation system.
- Situation analysis
- Wheat demand vs supply
- Trends on shortfalls
- Line-Chart report for stock in, stock out & remaining balance.
- Monthly Line Bar-Chart of Wheat Procurement i.e., PASSCO, Local procurement.
- Consolidated analysis report of Wheat & Flour i.e., Total Stock Issued, No. of Mills, Average per Mill stock issued, Total wheat flour from Mills to Dealers, Average per Mill & per Dealer.
- Daily Quota of Wheat set online from Directorate.
- Daily Compliance report of Wheat for all District offices.
- Stock Planning Report to show the remaining days Stock.
- Users Role Management
- Reporting dashboard

Module 4: Fleet Management System: Registration of all transport companies along with their vehicles and driver details. Information regarding the routes from source to destinations defined in terms of time should be available, along with total distance.

Module 5: Statistical Branch Management System:
Statistical branch monitors the Status of stock position. To facilitate their role customized dashboard with detail reports will be developed.

Module 6: Public facing portal.
- Content Management System
- Availability of dealers
- Important Notices
- News and Updates

Module 6.1: User Management System
- Role based system
- Role based dash boards

Module 6.2: General
- High availability ready
- Disaster Management
- Mobile/Web Compatibility
- Technology Governance
- Audit trial.

Module 7: Inspection Management System: The KP Inspection is a web & Mobile application for recording the inspection data on daily basis. The system may consist of Geo Tagging with centralized Fine book & Dashboard.
- Inspections will be recorded at district level.
- Inspection automation system
- Food commodity inspection form
- Sampling form
- Sampling result form

- Sealing form
- Discard form
- FIR form
- Fine form
- Fine type (over pricing etc.)
- Fine imposed form
- Fine collection form
- Food Type
- Data Bank of Markets, Shops
- Geo tagging of Food Premises.
- Google maps
- District Dashboard
- Divisional Dashboard
- Head Office Dashboard
- Users Role Management
- Over all reporting dashboard

A total of approx. 80 Inspection officers in KP Province.

Module 8: Compliance with Digital Laws / Audit logs (trail):
Digital records can only replace paper-based records; if they fully comply with the legal framework identified in Electronic Transaction Ordinance 2002. For a digital record to be permissible in a court of law; its originality may be ensured and for that, several controls are required to be put in place for the integrity and authenticity of a digital record. Controls for disaster management and recovery of lost records may also be put in place according to the official retention policy. Consultant will be responsible to propose and implement appropriate controls that will achieve 100% compliance with Electronic Transaction Ordinance.

Module 9: Lab Management Information System (LIMS)
Laboratory Information Management System (LIMS) is the core backbone of laboratory operations. An ideal LIMS can drive the laboratory workflow and allow for maximum throughout the testing process. LIMS manage all the data generated during the lab testing process pertaining to client samples. This data is ultimately use in the generation of laboratory final product for its clients, the certificate of analysis.
The Khyber Pakhtunkhwa Food Safety & Halal Food Authority is going to establish state of the art food testing laboratory in Hayatabad Peshawar along with Mobile Labs. To operationalize these labs digitalization of laboratories is the most important factor in current ICT era.
Khyber Pakhtunkhwa Food Safety & Halal Food Authority Laboratory Tests and Analyze Dairy Products, Beverage Products, Meat and Poultry Products, Cereal Products, Bakery and Confectionary Products, Sea Food, Fruit and Vegetables, Pulses and Legume, Gur(jaggery) and Sugar Products. Expected number of sample received from all over the province is up to 500/Day
Key Features of LIMS: KPFS&HFA LIMS system have the following key features:
- Sample and Sample Inventory Management
- Customer / Sample Collection Team Information Management
- Lab Reagents Inventory Management
- Billing Information
- Sample Tracking
- Instrument Integration

- SMS Integration
- Result Entry
- Result Reporting
- Data Security & Integrity
- Data Analysis
- User Role Management
- Reporting dashboard

Module 10: Financial Management System
Deployment and customization of enterprise resource planner system having financial management information system module as per the requirements of relevant section of KPFS&HFA.

Module 11: Human Resource Management System
Deployment and customization of enterprise resource planner system having human resource information management module as per the requirements of relevant section of KPFS&HFA.

Module 12: eProcurement Management System
Deployment and customization of enterprise resource planner system having eProcurement Management information system module as per the requirements of relevant section of KPFS&HFA.

TORs for Consulting firm are attached as Annex V.

6.1	Justification for revision of PC-I	The Project PC-I needs revision because the time of development for the Modules is three months only. Therefore, no leading Software Development Firms participated and ultimately the RFP was re-advertised. The timelines of Software Development are extended to six months in the revised PC-I as well as time matrix for each module is incorporated. Some of the essential requirements of the Departments were not incorporated in the PC-I which have now been added in the revised PC-I. The Project PC-I was prepared in July 2021 whereas increases in prices of IT equipment & allied accessories have been incorporated after extensive market survey as per the current prices.
7	Capital cost estimates	See Annexure-I
8	Annual operating and maintenance cost after completion of the Project	After completion of PC-1 Food Department will request for the extension of scope of current project or software/hardware will be handed over to IT staff of Food Department upon the completion of project.
9	Demand and supply analysis	The automated software system will lead to better handling wheat stock & ensure transparency in wheat management. Moreover, evidence-based data result in more accurate forecast based on annual trends in wheat supply chain. In addition, just in year of 2019 a total of 11,795 fine challan were imposed worth 38 million, hence there is need for stronger and effective inspection regime over the supply chain process of wheat.
10	Financial Plan and mode of financing	100% Financing by Government of Khyber Pakhtunkhwa with the following contributions (in Million):

Fund By	2021-22	2022-23	Total
ADP	87.526	62.608	150.134
Total	**87.526**	**62.608**	**150.134**
Capital and Revenue bifurcation:			
	2021-22	2022-23	Total
Capital Cost	22.600	34.400	57.000
Revenue	64.926	28.208	93.134
Total	**87.526**	**62.608**	**150.134**

11	Project benefits	i. Demand based supply chain management system.
		ii. Improved transparency and control over the subsidized wheat supply chain
		iii. Evidence based data for policy makers.
		iv. Near to real time dashboard for department operational units
		v. Live feeds for food stock situation in the province

12	(a) Implementation schedule	Date of Start: 1st July 2021. Date of Completion: 30th June 2023 See detailed Implementation Schedule at **Annex-III.**	

(b) Result Based Monitoring (RBM) Indicators.	Phase	KPIs
	1: IT Infrastructure/ Skills Gap Analysis and Requirements gathering	• Availability ICT Infrastructure to support smooth daily operations of Proposed system. • Number of Identified skill-based trainings to be imparted. • Number of meetings conducted with stakeholders. • Signoff from Food Department and KPITB on SRS and FRS
	2: Software Development.	• Stress testing report submitted. • User Acceptance Testing Report • 50% modules delivered in first 3 months. • Complete working application in 6 months. • Compliance with National Digital Laws • Number of skill-based trainings imparted. • Number of employees gone through the training sessions. • Penetration and Stress Testing Report in 9 months • User Acceptance in first 12 months
	3: Establishment of Resource Centre at Food Department.	Resource center workstations and monitoring dashboard setup at directorate.

13	Management structure and manpower	See Annex-II

14	Additional projects/decisions required to maximize socio-economic benefits from the proposed project to optimize the investment being undertaken on the projects.	**Project Review Board (PRB):** The overall supervision and implementation of the Project will be the responsibility of the PRB which will have the following composition: Project manager will share quarterly report with the Food Department.

1. Secretary or Add. Secretary Food Department   Chairman
2. Director Food Department   Member
3. Project Manager
          Member/Secretary
4. DD (F&I) of Food Directorate   Member
5. AD IT of Food Directorate   Member
6. Representative of Halal Food Authority   Member
Coopted Members:
1): Software Engineer of the Project concerned   Member
3): Representative of Account Branch, Food Directorate   Member
Roles and Responsibilities of the PRB:
• The Steering Committee shall provide policy level support to the Project Management team.
• Facilitate inter-departmental coordination and support for the project.
• Recommending key planning and policy guidelines for the project.
• Oversee the performance of the project through meetings, appraising

updates, and reports.
- Assist in resolving any issues faced by the project during its concept, implementation, and onward development phase.

Quorum: Presence of three (3) members shall form quorum of the PRB.

Frequency of Meetings: The committee shall meet on Quarterly basis or at a frequency to be decided by the PRB as per requirement.

Software developed will be owned by its respective department after the completion of project. Therefore, it is vital that IT staff of respective departments are involved in the overall implementation of application. Following is distribution of positions with respect to relevant departments roles. Following is list of position with Additional Charge/Deputation

Sr.	Position	Entity	Nomination
1.	Project Director	Food Department	Director Food
2.	Project Manager	KPITB	To be nominated by respective department's competent authority
3.	Implementation Manager	Food Department	To be nominated by respective department's competent authority
4.	Database Developer	KPFS&HFA	To be nominated by respective department's competent authority
5.	Mobile Application Developer	KPFS&HFA	On Deputation
6.	Project Coordinator	Food Department	To be nominated by respective department's competent authority
7.	Program Officer	Food Department	To be nominated by respective department's competent authority
8.	Procurement Officer	KPITB	To be nominated by respective department's competent authority
9.	Admin Officer	KPITB	To be nominated by respective department's competent authority
10.	Project Accountant	KPITB	To be nominated by respective department's competent authority
11.	02 Jr. Web Developer	KPITB & Food Department	On Deputation
12.	Jr. Data Analyst	Food Department	On Deputation
13.	Project Assistant	KPITB	To be appointed/ nominated by respective department's competent authority
14.	Project Associates (Interns)	KPITB	To be appointed/ nominated by respective department's competent authority
15.	Office Boy	KPITB	To be appointed/ nominated by respective department's competent authority
16.	Sweeper	KPITB	To be appointed/ nominated by respective department's competent authority

Certified that the project proposal has been prepared based on instructions provided by the Planning Commission for the preparation of PC-I for Social Sector projects.
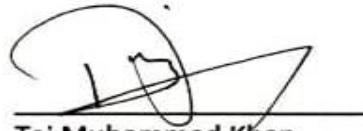
Prepared by:

Ghandal Khan
Ghandal Khan
Project Manager ICT
KPITB

Fareed Ahmed
Database Administrator
KPFS&HFA

Fahad Ali Shah
Assistant Director (IT)
Food Department

Taj Muhammad Khan
Planning Officer
Food Department

Checked by:

Kashif Iqbal Jilani
Director Food
Food Directorate Peshawar

Recommended by:

Secretary to Government of Khyber Pakhtunkhwa
Food Department

15	Certified that the project proposal has been prepared based on Instructions provided by the Planning Commission for the preparation of PC-I for Social Sector projects.	**Prepared by:**
		_____ Ghandal Khan Project Manager ICT KPITB
		_____ Fareed Ahmed Database Administrator KPFS&HFA
		_____ Fahad Ali Shah Assistant Director (IT) Food Department
		_____ Taj Muhammad Khan Planning Officer Food Department
		Checked by:
		_____ Kashif Iqbal Jilani Director Food Food Directorate Peshawar
		Recommended by:
		_____ Secretary to Government of Khyber Pakhtunkhwa Food Department