



Executive Summary

February, 2023

[Final Report]

FEASIBILITY STUDY

of
Automated Mail Processing
Centre of Bangladesh Post Office
Project (1st Revised)

(Digital Transformation, Service Model Re-engineering and Enhancement of Postal Services)

Directorate of Posts
Post and Telecommunication Division
Ministry of Posts, Telecommunications and IT

ADVISORY SUPPORT BY:



Cabinet
Division



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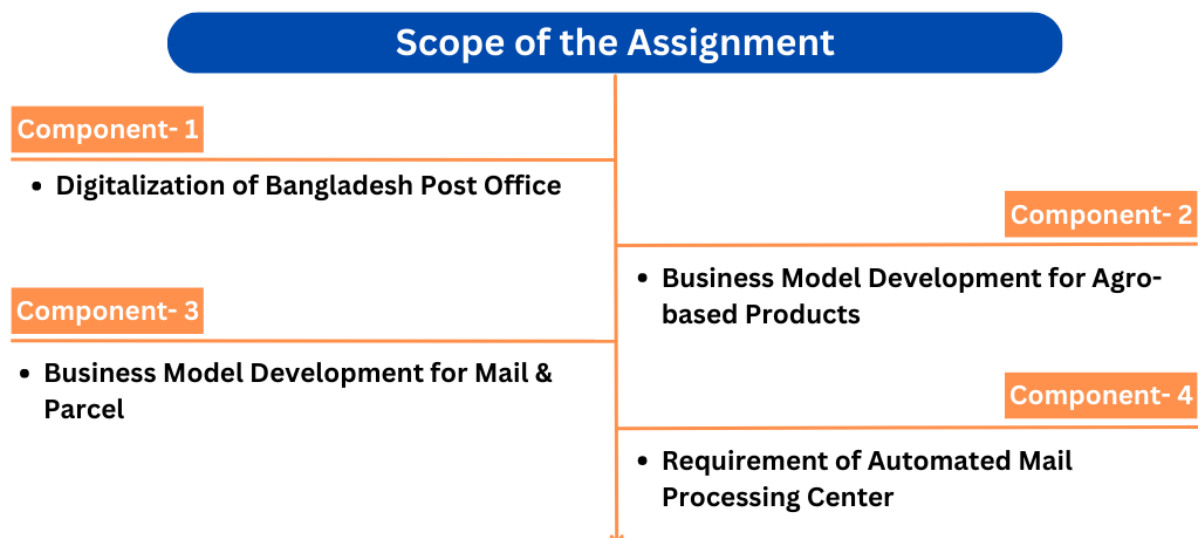
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Context of the Study

As Bangladesh is moving towards digitalization and planning to harvest the benefits of the 4th industrial revolution with the introduction of emerging technologies. Due to technological revolution and the country's economic achievement, time demands to deliver every service with the touch of technology. Accordingly, Bangladesh Post Office (BPO) is planning to initiate different projects to provide benefits to the customers digitally and efficiently. Therefore, the Bangladesh Postal Service automation is essential in providing services with ease and speed through digitalization. Besides, SDGs targets 5.b, 8.10, 9.c, 17.6 and 17.8 encourage the Post and Telecommunications Division (PTD) to take the new technology through BPO.

This study is being undertaken to carry out the requirement analysis on digital transformation, service model designing and overall enhancement of postal services. The scope of work under the study have been mapped below:



The study conducted by:

The NewVision Solutions Ltd., is a Research & Consultancy firm working in the sectors including energy, transportation, water & sanitation, agriculture & environment, and industrial and institutional and the **Tri-Vision Limited** is an innovative solutions and service provider in the field of Information and Communication Technology (ICT), Information Technology Enable Service (ITES), Technology Consultancy, Architectural Design, Development and support services.

The team of NewVision Solutions Ltd. and Tri-Vision Ltd. by using their extensive experience, technical ability, and management skills, implemented the feasibility study.



FEASIBILITY STUDY REPORT

of Automated Mail Processing Centre Project

EXECUTIVE SUMMARY

The study consists of four components.

- ✓ **Component 1:** *Digitalization of Bangladesh Post Office*
- ✓ **Component 2:** *Business Model Development for Agro-based Products*
- ✓ **Component 3:** *Business Model Development for Mail & Parcel*
- ✓ **Component 4:** *Requirement of Automated Mail Processing Center*

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EXECUTIVE SUMMARY

Bangladesh Post Office (BPO) is a government organization that provides postal and financial services to citizens across the country. BPO's ultimate goal is to offer affordable, high-quality, and internationally recognized postal services by developing institutions and modernizing technology-based solutions, while also integrating e-commerce products and services. In this regard, BPO has undertaken a feasibility study to modernize and transform its services by digitizing them, developing agro-based products and services through business modeling, expanding and diversifying mail and parcel services, and identifying the needs of an Automated Mail Processing Center (AMPC). The feasibility study aims to analyze the suitability of a Mail Processing Center (MPC) and identify opportunities for modernizing BPO's operations. The study will enable BPO to adopt innovative technologies and best practices to improve efficiency, reduce costs, and enhance the quality of services offered to its customers.

1. OBJECTIVES OF THE FEASIBILITY STUDY

- ✓ **Digitalization of Bangladesh Post Office:** To develop an action plan by identify scope of Digitalization of BPO with considering all the existing functions, services, introducing new scope, ideas and techniques for the modernization and business expansion of the organization.
- ✓ **Business Model Development for Agro-based Products:** To develop a business model for bridging the agro-based products from marginal farmers to consumers by identifying stakeholders' value proposition and designing the supply chain and other critical features and factors as required for BPO.
- ✓ **Business Model Development for Mail & Parcel:** A comprehensive business model to be developed for BPO's mail and parcel services with introducing new processes, business scope, techniques and technologies.
- ✓ **Requirement of Automated Mail Processing Center:** To determine the requirements of AMPC and suitability of MPC with emerging technologies, finding suitable and strategic locations by considering the country's infrastructure master plan. Also furnishing a ToR (Terms of Reference) to hire an international consultant for the technical design of AMPC with consultancy budget for the same.

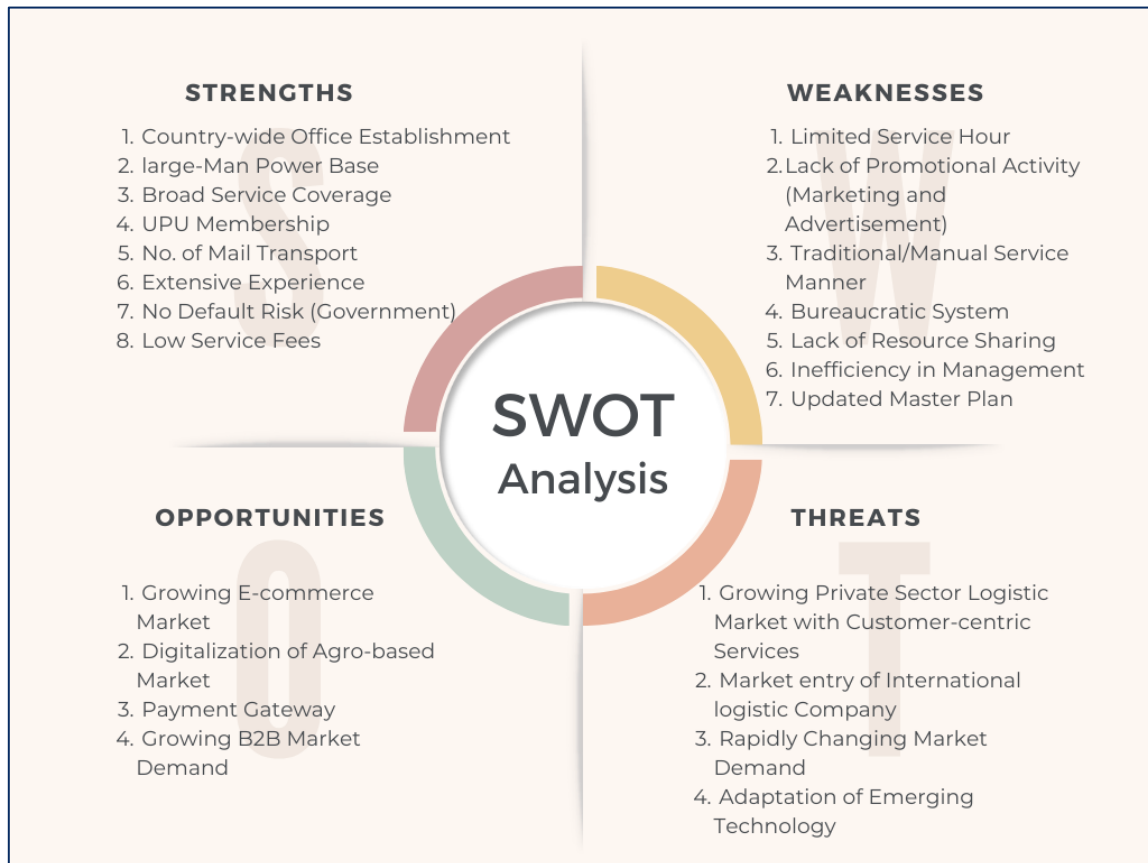
2. APPROACH AND METHODOLOGY OF THE FEASIBILITY STUDY

The methodological design of this feasibility study is the combination of quantitative and qualitative research methods. The choice of method has been taken into account with needs and capacities of the different target groups and stakeholders (citizen, agencies, companies, local partners, local and district government representatives etc.). The study team arranged workshops on all components to figure out the ins and outs of that specific component.

During this deep learning process, the consultant also analyzed the capacity development requirements of the BPO for ultimate transformation.

3. ORGANIZATIONAL ASSESSMENT

Bangladesh Post has been providing citizen-centric services since its inception.



Below are the strengths, weaknesses, opportunity and threats of the organization:

3.1 BPO STRENGTHS

- ✓ BPO being one of the oldest and largest government-owned organizations has the following major strengths:
 - Country-wide office establishment
 - Large number of manpower
 - Wide range of service coverage
 - Membership of Universal Postal Union
 - Large number of Mail Transport
 - Extensive Experience
 - Zero default risk
 - Low service fees

3.2 BPO WEAKNESSES

- ✓ With strengths, BPO also has significant weaknesses, which are as below:
 - Limited-Service Hours
 - Lack of Promotional Activity
 - Traditional and Manual Service Manner
 - Bureaucratic System
 - Lack of Resource Sharing and use of Modern Technologies
 - Inefficiency of Management
 - Absence of Master Plan

3.3 BPO OPPORTUNITY

- ✓ With the advent of urbanization, globalization and new market demand many opportunities are coming up for BPO likes:
 - Growing e-Commerce Market
 - Digitalization of Agro-Based Market in Bangladesh
 - Growing Digital Payment facilities
 - B2B Market Demand

3.4 BPO THREATS

- ✓ With excellent opportunities and potentials, there are possible threats as below:
 - Growing Private Sector Logistic Market with Customer-Centric Services
 - Market intervention of International Logistic Companies
 - Rapidly Changing Market Demand
 - Adaptation of Emerging Technology

4. DEMAND AND TECHNICAL ANALYSIS

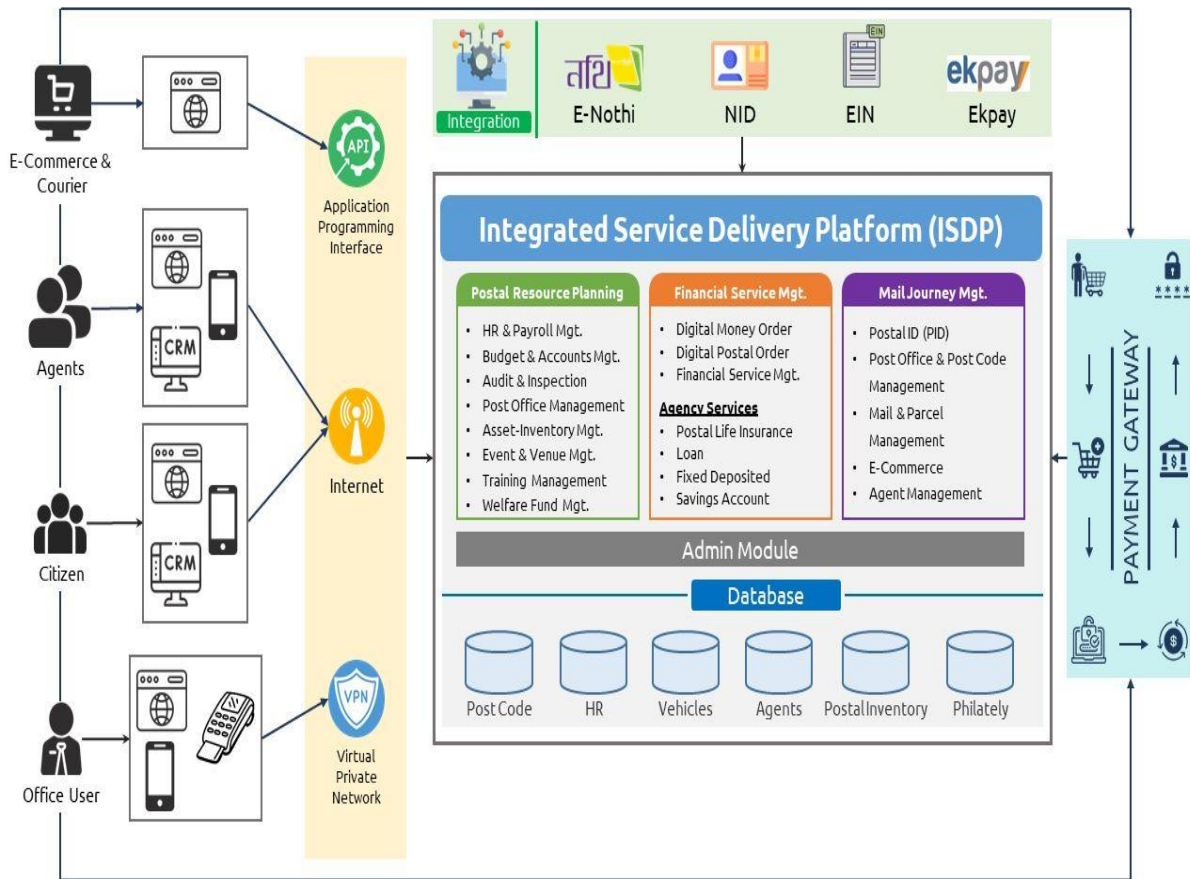
4.1 DIGITALIZATION OF BANGLADESH POST OFFICE

- ✓ **Digital Transformation of the Manual Services:** The Feasibility Study Team studied, identified and analyzed 1134 numbers of existing manual services and functions including steps, activities and actions. Considering all the manual activities, the functional scope has been designed for digital systems. The features and modules that will be needed for software development are identified in order to convert the manual processes into digital systems. The three systems are designed which include 25 modules, 55 sub-modules and 215 features.

The software systems details:

SL	SYSTEM NAME	No. of Modules	No. of Sub-Modules	No. of Features
1	Postal Resource Planning (PRP)	15	37	146
2	Financial Service Management (FSM)	6	10	48
3	Mail Journey Management (MJM)	4	8	22
	Total	25	55	216

- ✓ **Assessment of existing Software and Innovative Initiatives:** After reviewing all of the current software and postal innovations, the team identified issues and challenges, and made some suggestions on what could be done and where it could be accommodated in the Integrated Service Delivery Platform (ISDP) of BPO. The study found 20 numbers of existing software and 23 innovation ideas which are consider to design the Integrated Service Delivery Platform.
- ✓ **Assessment of Human Resource (HR), IT Equipment and Data Center Requirements:** For country-wide implementation of the ISDP, the team assessed existing operational and IT enabled human resources, IT infrastructure resources and suggest future requirements.
- ✓ **Budget requirement for implementation:** On assessing the existing resources and required software, the team has prepared software development, hardware, capacity development and certification costing.
- ✓ **Maintenance plan for sustainability of Digitalization:** To make digitalization more sustainable, the team prepared a software development methodology as well as a maintenance and up gradation plan after the initial development.
- ✓ **Design High-Level Enterprise Architecture:** The required high-level enterprise architecture has be designed likes: a. Information Architectures, b. Solutions Architecture, c. Development Architecture, d. Technological Architecture etc.
- ✓ **Recommendation on required policy reformation:** In order for proper implementation and put in practices of the concepts, few policies or acts needed to be altered. Team has suggested required policy reformation recommendation in the report.
- ✓ The below figure shows, the **Solution Architecture** of Integrated Service Delivery Platform (ISDP). The architecture describes who are the users, what service they will get and how:

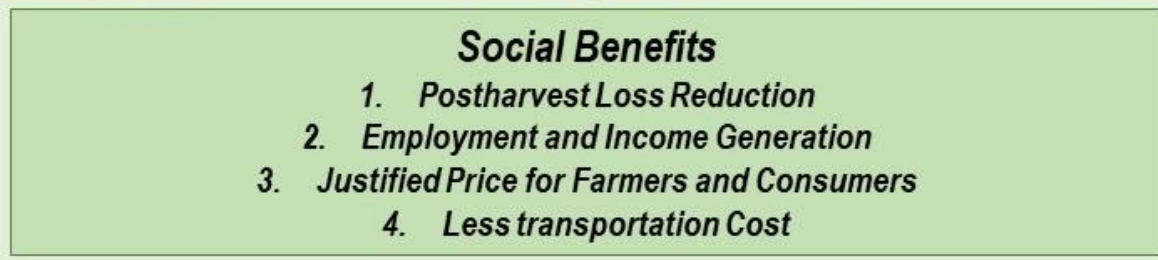
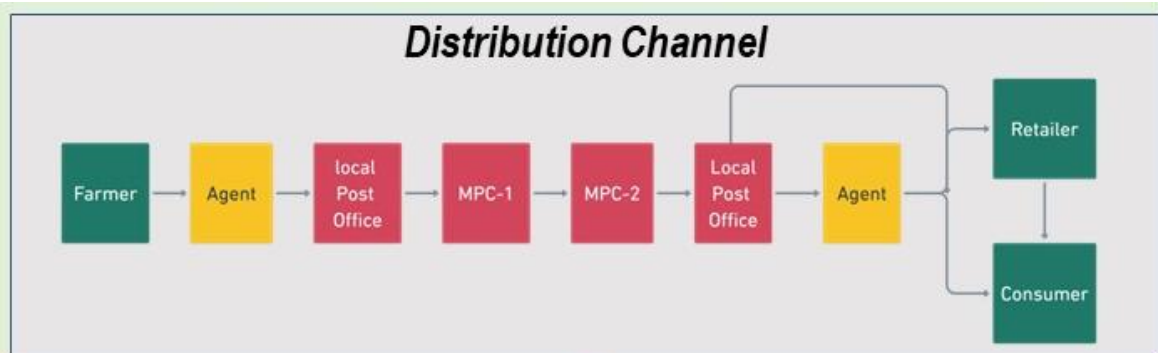


4.2 AGRO-BASED PRODUCT'S BUSINESS MODEL

In the Agricultural industry, poor transportation system, lack of storage facility, extortion and lack of Government support are major challenges. The growing e-Commerce market also facing some challenges which are Lack of Trust, Lack of sufficient transportation system, Product quality, on time delivery etc. Perishable goods are still sold in the physical markets, but as people are moving towards the e-Commerce industry, in near future people will vastly purchase these items from e-Commerce sites.

To overcome the industrial challenges and grab the new e-Commerce-based market demand, it proposes a Direct to Consumer (D2C) Business model for the Bangladesh post office. Where BPO will carry **Fish, Meat, Fruits, and vegetables** from Farmers to Consumers. This proposed business model is an agent-based e-Commerce model. The Commission based agents will be responsible to manage & support the farmers and their product marketing. In Some cases, farmers themselves could be the agent if they have proper IT knowledge to deal with customers over the e-Commerce platform. BPO will manage the whole logistics and transportation part of this business. In this model, MPC, Chiller chambers, and BPO's other infrastructures will play an important role.

Business Model for Ago-based Product:



4.3 MAIL AND PARCEL BUSINESS MODEL

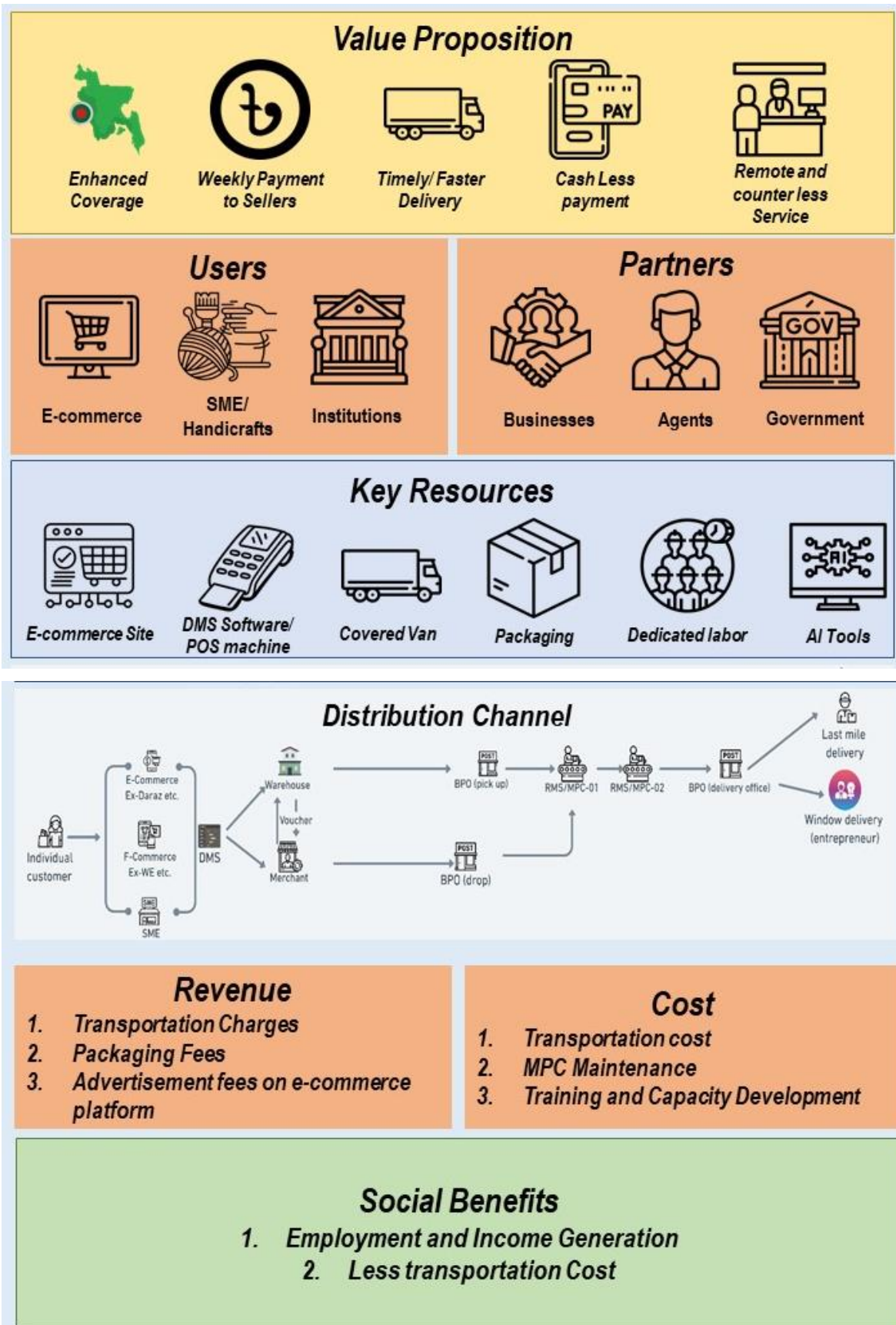
The study identified some potential markets which heavily requires transportation and logistics support in which BPO could provide support, they are e-Commerce, f-Commerce, SME Micro & Cottage Industry, Public Sector, Educational Institutes, NGO/iNGOs etc. This Business model proposed three broad categories of services or functions:

- ✓ **Products Delivery:** The Mail and Parcel delivery service of Bangladesh post office is having a downward/ volatile trend despite they have largest distribution channel. In this post pandemic era where e-Commerce/ f-Commerce business are thriving and world-wide postal services is enjoying upward trend but Bangladesh Post office could not perform at its optimum level. To attract more businesses to come to Bangladesh post office this business model suggests wide ranges of changes and reforms and introduction of modern-day services.
- ✓ **Print to Mail Service:** Another very crucial services are print to mail service. Print and mail services also known as hybrid mail lets a company print and post their everyday letters and documents without needing to be in the office or the equipment needed to print the letters. They automate the process letting you transfer outbound mail files electronically to a third-party printing and mailing specialist for production and distribution. In Bangladesh lots of companies / government entities would be happy to avail this service as it would lower their printing and mailing cost by at least 60%.
- ✓ **Fulfillment Center:** A fulfillment center is a third-party warehousing facility where orders are received processed and filled. Outsourcing fulfillment will allow the SMEs to hand off the responsibilities and costs associated with warehouse management and focus on selling.

This platform will also have portal for individual customers, they can book their products from their home, Entrepreneur will receive it from the door step, send it to the RMS and Deliver to the receivers. Once the product is delivered and payment is received, payment will be disbursed to entrepreneur and producers automatically.

As per the future forecast, the introduction of this business model will increase the product handling volume of BPO by multiple times, which is now having a downward trend.

Business Model for Mail and Parcel:



4.4 AUTOMATED MAIL PROCESSING CENTER

- ✓ The logistics and courier market in Bangladesh is expected to grow significantly. Through the projection analysis of the next ten years, it has been found that Bangladesh Post can focus on 13 potential zones or cities where the demand for their service will increase significantly.
- ✓ In this study, Dhaka has been selected as a suitable location for AMPC, as Dhaka is considered to be the most demanding city in the coming years.
- ✓ Based on the infrastructure master plan and future scope of the country, we determine the possibilities for an Automated Mail Processing Center (AMPC) in Dhaka and prepare a TOR (Terms of Reference) for the appointment of an international consulting firm for technical design and estimate possible consultancy budget.
- ✓ This study has undertaken a comprehensive assessment of the suitability of potential sites for the establishment of an AMPC. As per the findings, it is suggested that during the design phase of the AMPC, pertinent local authorities, town planning agencies, and the Roads and Highway department of the vicinity should scrutinize the ongoing or proposed developments to determine any possible implications of the AMPC's construction

4.5 SERVICE PROCESS SIMPLIFICATION (SPS) & OTHER ANALYSIS

Service Process Simplification and other issues are analysis for effective and sustainable transformation. These are:

4.5.1 Postcode and postal address analysis:

Postal address is the address (of a person or business) to which mail and parcel articles is delivered. The Bangladesh Postal Department using postcode which has 04 digits. It is found that the first 02 digits conditionally represent the district and last 02 digits represent the Post Office where postal address did not consider. So, it is necessary to reform the Bangladesh Postcode. The study team analysis the other country postcode system and geo-code system and postal bit address of Bangladesh and finally suggest a effective and modern postal coding system which will be represent the postal address.

4.5.2 Postal ID (PID) Analysis:

Postal-ID or Postal Identification (PID) is an initiative to provide support to customers to handle mail and parcels very intelligently, seamlessly and enable them to take any service provided by the Postal Department online. It will enable the customer to get postal service without visiting the post office physically and receive support from online. The study team analysis such a PID and suggest to implement.

4.5.3 Postal Agent Analysis

The postal counter service is very limited which is 5 days a week and up to 2:00pm which is main barrier to expand the postal services. The proposed postal agent is a service point where citizens will get some of the postal services. The Postal Agent will play a vital role for process simplification and expansion of BPO services. The agent can provide service by 24/7, the services include article receive, doorstep pickup & delivery, cash-on-delivery and other support services. The agent will get commission based on services provided to the customers. On the other hand, BPO will manage, monitor and control the activities of agents and commission of agents.

4.5.4 Bangladesh Postal Bank

Bangladesh Post maintaining own manual cash-flow system, which is clearly a non-banking cash-flow. Bangladesh government policy to reduce non-banking cash flow. That's why the study team analysis the other countries Postal Banking system and suggest a Bangladesh Postal Bank.

4.5.5 Other Analysis

The study team also cover the Environmental and Climate Resilience and Disaster Risk Analysis, Cost-Benefit Analysis (Financial and Economical both), Human Resources and Administrative Support Analysis, Institutional and Legal Analysis, Risk and Sensitivity and Alternative/Options Analysis.

5. TIMELINE

5.1 DIGITALIZATION OF BANGLADESH POST OFFICE

The table shows that, the project major activities, sub-activities and the tentative start date and the end date. The project will start from July 2023 and end Jun 2028 with a maintenance contact up to Jun 2031.

SL	Project Activity	Start Date	End Date
1	Software Requirement Analysis, QA & Implementation Support	3-Jul-23	30-Jun-31
1.1	Software Requirement Analysis (SRS & SDD Preparation)	3-Jul-23	30-Jun-24
1.2	Advisory Service, Monitoring, Evaluation and Reporting	3-Jul-23	30-Jun-31
2	Phase- 1: Software Development	1-Jul-24	28-Jun-29
2.1	Software Development and Piloting	1-Jul-24	31-Mar-25

SL	Project Activity	Start Date	End Date
2.2	Software Audit, Certification & Go-Live	1-Apr-25	30-Jun-25
2.3	Software Upgradation	1-Jul-25	30-Jun-26
2.4	Software Maintenance, Support & Next Version	1-Jul-26	28-Jun-29
3	Phase- 2: Software Development	1-Jul-25	30-Jun-30
3.1	Software Development and Piloting	1-Jul-25	31-Mar-26
3.2	Software Audit, Certification & Go-Live	1-Apr-26	30-Jun-26
3.3	Software Upgradation	1-Jul-26	30-Jun-27
3.4	Software Maintenance, Support & Next Version	1-Jul-27	30-Jun-30
4	Phase- 3: Software Development	1-Jul-26	30-Jun-31
4.1	Software Development and Piloting	1-Jul-26	31-Mar-27
4.2	Software Audit, Certification & Go-Live	1-Apr-27	30-Jun-27
4.3	Software Upgradation	1-Jul-27	29-Jun-28
4.4	Software Maintenance, Support & Next Version	2-Jul-28	30-Jun-31

5.2 AGRO-BASED PRODUCT'S BUSINESS MODEL

Timeline for Agro-based Product's Business Model:

Sl.	Activity	Year-1		Year-2		Year-3		Year-4		Year-5	
		H-1	H-2	H-1	H-2	H-1	H-2	H-1	H-2	H-1	H-2
1	Tender for Vendor										
2	E-commerce Site Development										
3	Select the Business Location										
4	Appointment of Agents										
5	Infrastructure Development										
6	Logistics Procurement										
7	Delivery of Agricultural Goods										
7	Conduct Market Research to update Plan										
8	E-commerce site management										
9	Training of the existing staffs										
10	Yearly Performance Report Preparation										

5.3 MAIL AND PARCEL BUSINESS MODEL

Timeline for Mail and Parcel Business Model:

Sl.	Activity	Year-1		Year-2		Year-3		Year-4		Year-5	
		H-1	H-2	H-1	H-2	H-1	H-2	H-1	H-2	H-1	H-2
1	Tender for Vendor										
2	E-commerce Site Development										
3	Partnership with Govt., e-Com. sites and SMEs										
4	Appointment of Agents										
5	Infrastructure Development										
6	Logistics Procurement										
7	Delivery of Mail and Parcels										
7	Conduct Market Research to update Plan										
8	E-commerce site management										
9	Training of the existing staffs										
10	Yearly Performance Report Preparation										

5.4 AUTOMATED MAIL PROCESSING CENTER

Phase-1 (1st Five Year)

Task	Year-1		Year-2		Year-3		Year-4		Year-5	
	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
For 10 MPC										
Machineries specification Finalization for upgrading MPCs	■									
Procurement process and ToR preparation	■									
Tendering process	■									
Hardware procurement		■								
Hardware installation		■								
Training and Workshop					■	■	■	■	■	■
Operational management			■	■	■	■	■	■	■	■
Ensuring Pre-requisites (Proper addressing, packing, and optical character reader in Bangla)	■	■	■	■	■	■	■	■	■	■
For 1 AMPC										
Hiring International consultant firm and prepare technical design for AMPC										■

Phase-2 (Next Five Year)

Task	Year-6		Year-7		Year-8		Year-9		Year-10	
	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
For 1 AMPC										
Technical design and machineries specification finalization for AMPC	■									
Site development for AMPC	■									
Procurement process and ToR for AMPC	■									
Tendering process for AMPC	■									
Hardware procurement for AMPC		■								
Configuration and dry run for AMPC		■								
Operational management for AMPC			■	■	■	■	■	■	■	■
Training and workshop	■	■	■	■	■	■	■	■	■	■
For 20 MPC										
Installation and development of 20 MPCs with automated sorting machine	■	■	■	■	■	■	■	■	■	■

6. MANPOWER REQUIREMENT

6.1 DIGITALIZATION OF BANGLADESH POST OFFICE

Total manpower requirement for Component-1: Digitalization of Bangladesh Post:

Sl.	Items	DG Office	5 Regional Office	Network Operation Center	Total
1	System Analyst (Grade-5)	1			1
2	Maintenance Engineer (Grade-6)			6	6
3	Assistant Maintenance Engineer (Grade-9)	1	5		6
4	IT support staff (Grade-13)	5	25		30
	Total:	6	30	6	42

6.2 AGRO-BASED PRODUCT'S BUSINESS MODEL

Human Resource Retained after the Project Implementation

Sl.	Team member	Office	Total number
1	Drivers	MPC/Chiller chamber wise	74

6.3 MAIL AND PARCEL BUSINESS MODEL

Human Resource Retained after the Project Implementation

Sl.	Team member	Office	Total number
1	Drivers	District wise	128

6.4 AUTOMATED MAIL PROCESSING CENTER

In Phase-1, the following Human Resources (Revenue) will be required to implement 5 (five) MPC project.

Sl.	Name of positions	Office	Number
1	Assistant Mechanical Engineer (9th grade)	MPC	10
2	Sub-Assistant Engineer (Mechanical) (10th grade)	MPC	20
3	Assistant Electrical Engineer (9th grade)	MPC	10
4	Sub-Assistant engineer (Electrical) (10th grade)	MPC	20
	Total		60

7. BUDGET FOR PROPOSED PROJECT

Cost Estimation for the proposed project (1st Five years)

Sl.	Project Component	Estimated cost (taka in crore)
1	Digitalization (project design as 5 years duration single project in three phases, but it can be possible to divide three separate projects. The integration of the three phases may difficult incase of separate three projects)	258.82
2	Business model for Agro-based Product	312.12
3	Business model for Mail & Parcel	245.25
4	Establishment of AMPC (Phase-1 for 5 years)	711.89
	Total:	1,528.08

Cost Estimation for the component-4 Phase-II project (Next Five years)

Sl.	Project Component	Estimated cost (taka in crore)
1	Establishment an AMPC and 20 MPC (Phase-2 for Next 5 years)	673.85
	Total:	673.85

7.1 DIGITALIZATION OF BANGLADESH POST OFFICE

Estimated Budget for Digitization (in lakh taka)

Sl.	Items	Unit	Per Unit Cost	Total Unit	Total Amount
1	Data Center Cost (Project period 3 years and after project 3 years)	Month	2.99	72	215.28
2	Internet Bandwidth Cost (Project period 3 years and after project 3 years)	Month	14.42	72	1038.24
3	IT Manpower Cost	Year	131.54	5	657.70
4	IT Infrastructure Cost		8230.9	1	8230.90
5	Software Development Cost		3438.85	1	3438.85
6	Software Maintenance Cost		1547.48	1	1547.48
7	HR Capacity Development Cost		8112.51	1	8112.51
8	NID verification cost (50000 hit)	Year	5.00	5	25.00
9	Bulk SMS cost (2 lakhs sms)	Year	0.90	5	4.50
10	Call Center Operation Cost	Year	48.00	3	144.00
11	Workshop cost	Number	10.00	10	100.00
12	ISO Certification Cost		16.28	1	16.28
13	Project Implementation Unit Cost		2351.45	1	2351.45
	G. Total Cost:				25882.19

7.2 AGRO-BASED PRODUCT'S BUSINESS MODEL

Estimated budget Agro Based Business Model (In lakh taka):

Sl.	Particulars	Unit	Unit Per Cost	Total unit	Total amount
1	Driver for freezer van	Man Mo	0.20	4440	888.00
2	Training and Capacity Building	Year	55.95	3	167.85
3	Large Freezer Van for Highway (5 Ton)	Per unit	150.00	37	5550.00
4	Feeder Freezer Van for local Transport	Per unit	70.00	37	2590.00
5	Promotional and Marketing Cost	Year	100.00	5	500.00
6	Fuel Cost	Per liter	0.0011	5550000	6049.50
7	E-post Center Management Cost	Year	10.00	5	50.00
8	Packaging Cost (Crate, wooden Box, Pa	Year	2515.87	5	12579.37
9	PIU	Year			2837.47
	Total Project Cost				31212.19

7.3 MAIL AND PARCEL BUSINESS MODEL

Estimated Budget for Mail and Parcel Business mode (In lakh taka):

Sl.	Particulars	Unit	Unit Cost	Unit2	Total amount
1	Training and Capacity building and Recruitment	Year	69.48	5	347.40
2	Equipment	No.	1147.00	1	1147.00
3	Vehicles (5 Ton)	Per pc	110.00	64	7040.00
4	Vehicles (1 Ton)	Per pc	50.00	64	3200.00
5	Vehicle Maintenance Cost	Per pc	16.00	128	2048.00
6	Fuel Cost	per litter	0.0011	2E+06	2092.80
7	Packaging Cost	Year	1124.10	5	5620.51
8	Insurance Cost	Year	60.00	5	300.00
9	Promotional and Marketing	Year	100.00	5	500.00
10	PIU	Year	2229.57	1	2229.57
					24525.28

7.4 AUTOMATED MAIL PROCESSING CENTER

Estimated Budget for Automated Mail Processing Center (Phase-1: 1st Five Years) (In lakh taka):

Cost Head	Year-wise Cost					Total Amount (Tk)
	Year-1	Year-2	Year-3	Year-4	Year-5	
1. Establishment of 10 MPC with Sorting Machine						
1.1. Machineries Cost	3750.00	0.00	0.00	0.00	0.00	3750.00
1.2. Training Cost	0.00	0.00	26.19	26.19	26.19	78.57
1.3. Manpower (Technical) Cost	0.00	0.00	191.20	191.20	191.20	573.60
1.4. Project Implementation Unit Cost	88.04	88.04	88.04	88.04	88.04	440.22
2. Infrastructure development of Post offices	13180.37	13180.37	13180.37	13180.37	13180.37	65901.84
3. Consultancy Cost for AMPC Detail Design	0.00	0.00	0.00	0.00	445.00	445.00
Total	17018.41	13268.41	13485.80	13485.80	13930.80	71189.22

Estimated Budget for Automated Mail Processing Center (Phase-2: Next Five Years) (In lakh taka):

Cost Head	Year-wise Cost (TK)					Total Amount (TK)
	Year-6	Year-7	Year-8	Year-9	Year-10	
1.Establishment of 20 MPC with Sorting Machine						
1.1. Civil construction and Machineries cost	1125.00	14076.07	14076.07	14076.07	5630.43	48983.63
1.2. Training Cost	31.43	31.43	31.43	31.43	31.43	157.14
1.3. Manpower (Technical) Cost	382.40	382.40	382.40	382.40	382.40	1912.00
1.4. Project Implementation Unit Cost	1021.06	1021.06	1021.06	1021.06	1021.06	5105.28

Cost Head	Year-wise Cost (TK)					Total Amount (TK)
	Year-6	Year-7	Year-8	Year-9	Year-10	
2.Establishment of AMPC						
2.1. Civil construction and Machineries cost	10000	0	0	0	0	10000.00
2.2. Training Cost	3.1428	3.1428	3.1428	3.1428	3.1428	15.71
2.3. Manpower (Technical) Cost	38.24	38.24	38.24	38.24	38.24	191.20
2.4. Project Implementation Unit Cost	204.14	204.14	204.14	204.14	204.14	1020.69
Total	12601.27	15552.34	15552.34	15552.34	7106.69	67385.66

8. OUTCOME

8.1 OUTCOME OF DIGITALIZATION

- ✓ After successful transformation Bangladesh Post Office will be an efficient model office to operate HR, Budget, Account, Store, Inventory, Asset, Payroll, Training, Venue Management, and ICT support system management;
- ✓ Bangladesh Post Office Mail and Parcel service will be most flexible and comfortable for the customer to drop, pay, track, and receive the mail article;
- ✓ The transformation of Financial Services of BPO customer will happily get service from BPO and more organization will be encouraged to provide agency service to BPO and BPO revenue will be increased.
- ✓ The expected improvement can be stated as, a. Capacity Utilization Rate will be increased as 80%-85%, b. Connecting E-Commerce Companies increases, c. Revenue Sharing will be increases by 40%, d. Market Share in Parcel Delivery will increase by 25%-30%, e. Customer repeat rate will be 25%-30% by next 5 years period.

8.2 OUTCOME OF AGRO-BASED PRODUCT

- ✓ By introducing this business model, BPO will contribute to the agriculture sector which includes Fish, Meat, Fruits and Vegetable.
- ✓ This Business model will help to reduce postharvest loss in the agriculture sector
- ✓ This will also reduce the transportation cost and cost of products by eliminating middle man.
- ✓ This Business model will increase employment and also help to generate more income.
- ✓ This will help Farmers and Consumers to get a justified price of the agricultural goods.

- ✓ This business model will help BPO to properly utilize its new and existing infrastructures and it will open a new branch of services as well as revenue for Bangladesh post office.

8.3 OUTCOME OF MAIL AND PARCEL

- ✓ This business model will increase and create new business avenue for Bangladesh post office
- ✓ This will help Bangladesh Post office to increase their parcel and mail volume capacity by multiple times, which is currently having a decreasing trend
- ✓ This Business model will increase employment and also help to generate more income.
- ✓ This will also reduce the transportation cost of mail and parcel delivery
- ✓ This business model will help BPO to properly utilize its new and existing infrastructures and it will open a new branch of services as well as revenue for Bangladesh post office

8.4 OUTCOME OF AUTOMATIC MAIL PROCESSING CENTER

- ✓ **Increased efficiency:** An efficient parcel automation system will facilitate to cope-up with the growing market and increase efficiency immensely in processing the voluminous number of packages.
- ✓ **Increased Security:** Automated processes help increase any organization's security. Because mail is automatically routed and tracked through a system, it's easier to identify and prevent any malicious activity.
- ✓ **Increase transactions in the e-Commerce industry:** The increasing popularity of the e-Commerce industry can be facilitated effectively by the automation of mail processing.

9. RECOMMENDATION

9.1 MANUAL TO DIGITAL TRANSFORMATION

After analysis of all the manual services of BPO, the feasibility study team suggested to develop and implement an Integrated Service Delivery Platform (ISDP) which has 3 software systems including 25 modules. The ISDP will cover all possible automation of BPO.

9.2 POSTAL ID

Postal ID module is strongly recommended for the ISDP. This module will be reduced the time of a customer to drop a mail or parcel and also post-office counter can provide faster service. Number of services will be increased. A Postal ID is an online base customer account, where

customer can enter, save their mail address, recipient addresses, pay postage online, print address in envelop or in a paper with tracking number where postage payment status and postal ID will be included. Customer can track any postal article through postal ID account.

Postal ID also useful for postal financial services. Customer can apply online for any financial service and get approval, pay online, keep track online, see status of any services and more. In another word post office will get a big postal address database which can be useful promotional purposes and others.

That's why it is highly recommended to introduce Postal ID service.

9.3 POSTCODE REGENERATION

As study team discuss earlier in the analysis part that postcode should represent the last mile of an address. But the present postcode system represents a post office, even though there are only 1360 postcode but number of post office almost 10,000. It is clearly found that present postcode did not represent a postal address. That's why study team analysis the GEO-code which is well organized and represent the geographical location of an area which is basically an address or postal address.

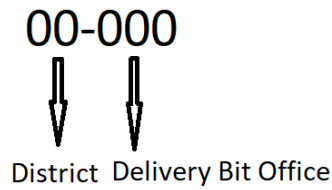
The technical feasibility study team strongly suggest that, post code should regenerate according to GEO-code which is define up to village level and postcode format can be:

- Level 1: 0000 - 4 digit up to district and upazila level
- Level 2: 0000-000 - up to Union level
- Level3: 0000-000-000 - up to Village level

where first two digit represents district, second two digit represent upazila/City Corporation/Municipal Corporation, third three digit represents union/ward and forth three digits represents village. The study team discussed detail in the technical analysis part.

Proposed alternat new postcode system

Alternatively, Bangladesh Post can use 00-000 five digits postcode where first two digit will represent a district and next three digit will represent a bit delivery office code.



Currently, Bangladesh Post does not have any delivery Bit office code against Bit office name.

9.4 BANGLADESH POSTAL BANK

Directorate of Post does not have any bank or banking channel to provide any banking service. To provide the postal services (Mail, Parcel, Financial Service) BPO has to maintain own treasury system to control cash flow. Which is clearly a non-banking cash flow. Bangladesh government policy is to reduce non-banking cash flow. That's why government introduce different financial services like mobile financial service.

Bangladesh Postal Bank Limited: Worldwide there are several Postal Bank operated successfully. With the knowledge of other postal bank worldwide, Bangladesh Post Office can apply for a Postal Bank for their existing services and also can introduce some new banking services. Directorate of Posts may require to apply for a government own company, after that the company can apply for a Postal Bank.

9.5 POSTAL AGENT

Currently, the booking and delivery of mail and parcel time are limited, thus customers are discouraged from using postal services. The Postal Agent services will be helpful for process simplification and expansion of BPO services. Agents will play a vital role, starting from:

- ✓ **Services by 24/7:** The agent can provide service by 24/7 if customer available.
- ✓ **Services include:** Article receive, doorstep pickup & delivery, cash-on-delivery and other support services can be expanded.
- ✓ **Farmer Management:** It will help to manage the farmers to provide their products to Bangladesh Post Office's e-Commerce platform, packaging to reduce any loss during transportation, drop the agro-parcel to its designated BPO office and enlist farmer's agro-products in the e-Commerce platform.
- ✓ **Customer requirement fulfillment:** By matching the customer unique requirements, Agent will source the best products from the enlisted farmers.
- ✓ **Quality control:** Agent will be solely responsible for the quality of the products. He/she have to have a quality control standard, as approved by BPO.

The agent will get commission based on services provided to the customers. On the other hand, BPO will manage, monitor and control the activities of agents and commission of agents. Introducing the agent service can become a game-changer factor for Bangladesh Post Office.

9.6 OPPORTUNITIES FOR EXTRA-DEPARTMENTAL EMPLOYEES

- ✓ Currently more than 23 thousand Extra-Departmental (ED) employees are serving 4 hours a day and 80 hours a month and earn average 4-5 thousand per month which is not sufficient to survive with a family. Bangladesh Post spending around 130 crore taka per annum to pay the ED employees allowances only for delivering the mail and parcel for 4 hours a day and 5 days a week. With this modality of service customer's are not happy and they are using the alternative way.
- ✓ Newly proposed Postal-agents has opportunity to work 24 hours a day and 7 days a week even holly days. Postal-agents can deliver and pickup any number of mail and parcel and can earn average tk. 20,000 through commission which will be 5-6 times more than ED employes present earning. Bangladesh Post can increase their service as much as market demands through the Postal-agents model.
- ✓ ED employees are highly encouraging to work as Postal-agent to increase their monthly income where ED employees can utilize their experience and expertise, and involve family members in the new business engagement;
- ✓ The ED employees have been working in the different levels of the offices of Bangladesh Post and due to changing the current market and customer demand, they have lost relevance due to not changing and developing their working model. At this stage, the transformation of working modes and adapting this large number of employees to the new process will not be easy. Hence, a thorough study will be required to meet the stated modality of transformation of these employees and make the model sustainable. Bangladesh Post needs ED employees service model transformation to Postal-agents plan for migration of ED employees as Postal Agents and piloting before scaleup. In this process, Bangladesh Post can reduce overhead cost, utilize experience manpower, minimize manpower lay-off and provide better service to the citizen;

9.7 RECOMMENDATION FOR AGRO-BASED PRODUCTS

- ✓ **Introducing an e-Commerce Site:** Introducing an e-Commerce site is essential for the BPO. BPO will manage and control the delivery & payment system. It will be a match-making site where demand-side and supply-side actors meet and do the trading. Bangladesh post office control the delivery and Payment system.
- ✓ **Introducing Reefer/Freezer Vans for Meat and Fish:** To carry Fish and Meat, (which are highly perishable items) from one place to another reefer van/ freezer van is very

essential. Without freezer van it is difficult to maintain this business model. Introducing the reefer van will be a game-changer for the agriculture sector and the Bangladesh Post Office.

- ✓ **Focusing on Remote Areas:** The supply chain and logistics facilities in the agriculture sector of Bangladesh is not very structured and advanced. As a result, agro-products from remote rural areas like Chors and hill tracks are not reaching the central markets. On the other hand, excellent varieties and quality of goods are being cultivated in rural areas, and new-generation farmers are coming up with new technologies there. With the help of Bangladesh Post, they can possibly change the current situation of the industry and their respective areas.
- ✓ **Introducing Insurance against accidental and un-delivered/ unsold/ damaged goods:** BPO must introduce insurance and payment guarantee facilities to attract more supply-side and demand-side actors. In case of any adverse situation where customers are affected, BPO must compensate them. To shift this burden from BPOs revenue, they must insure their fleets and process from third-party insurance companies.
- ✓ **Introducing Access to Finance Facility:** To attract supply-side actors like agents and farmers, financial packages like working capital loans must be introduced. The BPO has to on-board good and prestigious MFIs of Bangladesh for this access to finance facility.

9.8 RECOMMENDATION FOR MAIL AND PARCEL

- ✓ **Upgradation of DMS Software:** The DMS Software is essential for the proposed mail and parcel business model. Making the software more user-friendly and available to the customer is essential. A mobile and web-based application of the DMS software is required so that any customer can book any parcel anywhere in the country. All the customers (e-Commerce, f-Commerce, and SMEs) can book their products using the software. This will reduce the burden on the booking counters and make the process quicker.
- ✓ **Pickup and Drop Service:** Currently, customers choose convenience over money. Thus, mail and parcel doorstep pickup and Drop Service is very crucial. Appointed agents could facilitate this service.
- ✓ **Introducing Print-to-Mail Service:** Worldwide, print-to-mail service is widespread and reduces a significant amount of costs for the customer. Thus, customers would love to adopt this service BPO needs to introduce this service to scale-up its revenue.
- ✓ **Introducing the Fulfillment Center:** The concept of a fulfillment center is unique. It helps small and marginal businesses to scale-up. This concept of the Bangladesh Post Office not only maintains the delivery process of the vendors but also help in their legal issues like TAX, VAT, Invoicing, Inventory Management, etc. BPO can introduce a fulfillment center to scale-up its services.

9.9 RECOMMENDATION FOR AMPC

After the assessment, the feasibility study team suggested a development road map that will help the decision maker to make further decisions. The roadmap has been categorized into three major milestones based on priorities:

- ✓ 1st five years, the study proposes to comply with the prerequisite for establishing an AMPC and equipped 5 MPCs with automated sorting machine where the infrastructure is ready in the most suitable areas. When the Bangladesh Post office reaches the first milestone, they can improve their service quality with the existing resources and capacity. This will help them gain the trust of their consumers. Additionally, BPOs can expand their opportunities into the E-commerce service market.
- ✓ Next 5 years when the demand increases, the Bangladesh Post Office can focus on developing an AMPC in Dhaka. Because Dhaka's mail and parcel service demand will be five times greater than other major cities in the country in the upcoming 10 years. Also, they can upgrade the existing MPCs in very high and moderate suitable areas with automated letter and parcel sorting machines.
- ✓ Afterward, in the future, BPOs will have the opportunity to focus on the broader aspects to ensure a robust and well-managed delivery service for every citizen by ensuring updated Post Offices at District, Upazilla and Union level.

