

Report On

**Assessing the Impact of Technology Integration on  
Project Management Implemented by Department of  
Social Services (DSS)**

By

MD. ARIFUZZAMAN  
21282022

An internship report submitted to the BRAC Institute of Governance and Development  
(BIGD) in partial fulfillment of the requirements for the degree of  
MASTERS IN PROCUREMENT AND SUPPLY MANAGEMENT (MPSM)

© 2024. Brac University

All rights reserved.

BRAC Institute of Governance and Development (BIGD)

BRAC University

January, 2024

## Declaration

It is hereby declared that

1. The internship report submitted is my original work while completing degree at Brac University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I have acknowledged all main sources of help.

Student's Full Name & Signature:

---

Md. Arifuzzaman

21282022

Supervisor's Full Name & Signature:

---

Md. Mosta Gausul Hoque, PMP

Senior Trainer

BIGD, BRAC University

Letter of Transmittal

Md. Mosta Gausul Hoque, PMP

Senior Trainer

BIGD, BRAC University

Subject: Assessing the Impact of Technology Integration on Project Management Implemented by Department of Social Services (DSS).

Dear Sir,

My project report is being presented with great joy. This report was created by analyzing the effects of technology integration on project management throughout the implementation phase. I gained a lot of knowledge and used my skills and knowledge to create the report. I went to great lengths to compile data for this research in order to present in-depth expertise. I believe this report satisfies the standards and offers useful organizational insight. I sincerely hope that you will find my work, efforts, informative style and thoroughly researched paper helpful.

Sincerely yours,

---

Md. Arifuzzaman

21282022

BRAC Institute of Governance and Development (BIGD)

BRAC University

Date: January, 2024.

## Non-Disclosure Agreement

This agreement is made and entered into by and between the Department of Social Services as the First Party and the undersigned student at BRAC Institute of Governance and Development, BRAC University, as the Second Party. The First Party has granted the Second Party permission to prepare a report on Technology Integration: a study in the context of implementing the project under the Department of Social Services (DSS) as a partial fulfillment of the requirements for the degree of Masters of Procurement and Supply Management. The Second Party will have the opportunity to work closely with the organization's officials and access official data and information. Based on work experience, data, and information collected, the Second Party will prepare a report. The Second Party will utilize all sorts of data and information for academic purposes and will not disclose it to any party that could be detrimental to the interests of the First Party.

Student's Full Name & Signature:

---

Md. Arifuzzaman

21282022

Organizational Supervisor's Full Name & Signature:

---

Md. Kamruzzaman

Additional Director (Planning & Development),

Department of Social Services

## Acknowledgement

At first, I would like to express my sincere thankfulness to ALLAH for granting me the ability to successfully complete this project study.

I owe my supervisor a huge debt of appreciation and I'd like to express my heartfelt gratitude to my academic supervisor Md. Mosta Gausul Hoque, PMP, Senior Trainer, BRAC Institute of Governance and Development (BIGD), BRAC University and workplace supervisor Md. Kamruzzaman, Additional Director (Planning & Development), Department of Social Services for his unwavering support, generous assistance, constructive comments and invaluable suggestions all through the work's progress.

I would really like to thank the officers and staff of BIGD, BRAC University, particularly Dr. Rajmoni Singha, Academic Coordinator, BIGD and Tanzina Mizan, Training Officer, BIGD, BRAC University, for her unwavering support throughout the study period.

I also would like to express my heartfelt gratitude to the respondents of the Department of Social Services (DSS), notably Deputy Directors, Assistant Directors and Social Services Officers, DSS offices who assisted me at various phases of the data collection and provided numerous official supports.

Finally, I'd like to thank my parents, wife and colleagues for their constant encouragement and support throughout the study.

## Executive Summary

Over the past few decades, Bangladesh's economy has grown in an astonishing manner. It's important to remember, nevertheless, that embracing new technologies will help us meet our challenges and remain competitive in the global market. In the upcoming years, maintaining and expanding economic growth will depend on continued attempts to adapt new technologies. If we concentrate on the projected budget for the past few decades, it is evident that the budget for development is rising daily. When various digital technologies were used in the project implementation process, it had a favorable effect on how quickly projects were completed. However, the expenditure from the development budget is still on the lower side. Therefore, a strong emphasis on efficient project implementation tools and qualified staff is required for project execution.

The Ministry of Social Welfare's Department of Social Services (DSS) is a leader in using digital platforms and resources. It uses a digital platform as an implementation tool and has great success implementing its programmes, particularly Social SafetyNet. Similar to this, DSS has been trying to include digitization in every initiative it runs. They use d-nothi, ibas++, e-GP, AMS, MIS and NISE. In managing & monitoring project they rely on ibas++, PMIS, ams software & e-GP. I tried to get in touch with a few of our project directors who are currently on the charge of projects in order to produce this report. I tried to learn about DSS's ICT practises from them in order to carry out the projects. They discussed the current situation at an expert level. They all agreed that using ICT tools in project management is essential for the effective use of development budgets. The effective use of the tools that reduce effort across the whole project cycle is therefore the most crucial component of using ICT tools in project management. In summary, it can be claimed that in order to apply this ICT tools in project management suitable plans and policies, IT-capable workforce, culture and an open attitude are required.

## Table of Contents

Declaration.....	ii
Letter of Transmittal .....	iii
Non-Disclosure Agreement .....	iv
Acknowledgement .....	v
Executive Summary .....	vi
List of Acronyms .....	viii
Chapter 1: Introduction.....	1-2
Chapter 2: Background .....	3
National Budget.....	3
Budget Execution .....	3
Budget Execution Comparison .....	4
Chapter 3: Project Management Technologies .....	5
e-GP.....	5-6
Integrated Budget & Accounting System.....	7-8
PMIS & e-PMIS.....	9-10
Practices in DSS.....	10-11
Outcome of Technology Integration.....	11-12
Chapter 4: Recommendations & Conclusion.....	13-14
Conclusion.....	134
References.....	15

## List of Acronyms

DSS	Department of Social Services
SDG	Sustainable Development Goals
ICT	Information & Communication Technology
FD	Finance Division
PMIS	Project Management Information System
e-PMIS	Electronic Project Management Information System
e-GP	Electronic Government Procurement
ibas	Integrated Budget & Accounting System
IT	Information Technology
CMS	Contract Management System
e-CMS	Electronic Contract Management System
TD	Tendering System
e-TD	Electronic Tendering System
WAN	Wireless Area Network
LAN	Local Area Network



## Chapter 1: Introduction

Information and communication technology (ICT) is crucial for achieving Digital Bangladesh's vision of an accountable, open, and prosperous government serving its citizens. E-governance, or governance based on ICT, has developed into an important and valuable part of service delivery systems. However, the implementation of e-governance is not up to par and the government is not fully utilizing e-governance due to structural, organizational, and behavioral obstacles. It has been identified where the difficulty lies and how the principle struggles to receive services as a result of the conflict between the different concerns of the service providers (agent) and the principal's viewpoint. The purpose of this study is to look at how the project management system has changed recently and how it is now. Data from DSS and other ministries' documents and websites pertaining to the project implementation have been gathered in order to meet the objectives. According to the report, the government's strong policy initiatives, like as the ICT policy and the vision for a digital Bangladesh, make it possible for citizens to benefit from e-government services and for implementation to run more smoothly. It is clear that impediments to providing IT-enabled services are created by a lack of IT physical equipment, inconsistent internet connections, a trained labor scarcity, and employee technology aversion. Sometimes a barrier to receiving e-government services is people's ignorance. The study makes recommendations for how to deal with these issues and improve the ICT-induced public service delivery system, particularly in project management, including increasing internet speed, providing continuous electricity supply, training public employees, providing upgraded technology, and developing user-friendly software.

Governance based information & technology is crucial for enhancing service delivery, boosting productivity and raising standards of transparency for governmental operations. The Bangladeshi government launched e-governance in 2008, but execution of the effort fell short of expectations, and as a result, the government is not fully benefiting from e-governance because of several bottlenecks like structural, organizational and behavioral barriers.

The adoption of digital technology was given top priority in order to realize Vision 2021, also known as Digital Bangladesh. The nation further aspires to being a developed country by 2041

and a middle-income country with peace, prosperity, and dignity by 2024. The extensive and efficient use of ICT is regarded to be the driving force behind these ideals. By guaranteeing democracy, rights, accountability, transparency, establishing justice, and ensuring that government services are delivered to citizens' doorsteps, ICT ultimately aims to increase people's prosperity.

Both ICT service providers and ICT service seekers needed to have a fundamental understanding of ICT in order to provide ICT-enabled services, which are connected to the four pillars of Digital Bangladesh such as human resource development, digital government, connecting citizens, and IT industry promotion. Without these services, it would be impossible for service providers and service seekers to ensure each other's contentment while looking for services online. Thus, this study intends to focus on the improvement of project implementation due to integration of technology and also recommend about digitizing more tools of project management system in Bangladesh.

## Chapter 2: Background

### **National Budget**

Budget size of Bangladesh Government has been increasing each year. In FY 2022-23, the budget size stood at BDT 678343 crore which was only BDT 250496 crore in 2014-15. The national budget size of the country is currently in 2022-23 was about 15.24% of our GDP (Source: MTMPS, Finance Division 2023-2024). The national budget of the country comprises both the Revenue Budget and Expenditure Budget. Bangladesh's ADP implementation averages 85.57% between FYs 2014-15 to 2021-22. The average implementation rate for the operating budget stood at 90.03% in the above-mentioned time. The implementation rates (actual spending) of operating and development budgets is less than expected performance in budget execution.

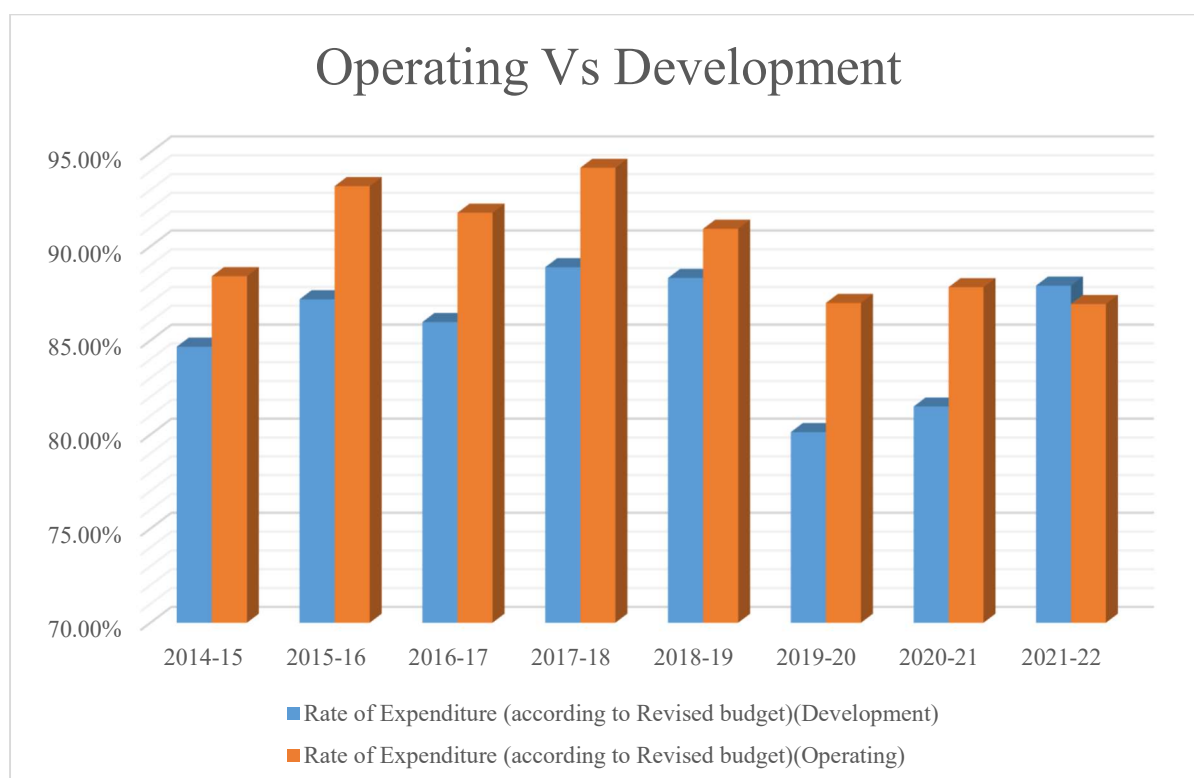
### **Budget Implementation (Execution)**

As stated earlier, the budget execution rate of operating budget varied between 86.94% to 94.18% of the revised budget between FYs 2014-15 to FYs 2021-22. This is even lower if we compare budget implementation (execution) rate with the original budget. The scenario is even worse in the case of implementation of development budget (commonly known as ADP). The average implementation rate of development budget during FYs 2014-15 to 2021-22 has been 85.57%.

The Department of Social Services (DSS) in Bangladesh operates under the Ministry of Social Welfare. It is responsible for implementing the Social SafetyNet of the govt. of Bangladesh. As it is responsible for implementing one of the sensitive functions of the government which is vital for achieving the goal of SDG. Bangladesh actively participates in the pursuit of the United Nations' Sustainable Development Goals (SDGs). DSS is also trying to adopt new Technologies specially in implementing project process, contract management process. The next chapter of my report will focus on the current practices regarding project management which are being followed by DSS.

**Table: Budget Execution Chart**

Description	At a glance Budget in Fiscal Year (In Crore)							
	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
<b>Operating</b>	164032	192528	223478	241253	284904	311507	352957	366603
<b>Development</b>	86464	102561	117127	159013	179669	211683	215043	237078
<b>Original Budget</b>	<b>250496</b>	<b>295089</b>	<b>340605</b>	<b>400266</b>	<b>464573</b>	<b>523190</b>	<b>568000</b>	<b>603681</b>
<b>Operating</b>	159062	168655	201084	217807	269092	299228	330958	371552
<b>Development</b>	80595	95910	116090	153688	173449	202349	208025	221948
<b>Revised Budget</b>	<b>239657</b>	<b>264565</b>	<b>317174</b>	<b>371495</b>	<b>442541</b>	<b>501577</b>	<b>538983</b>	<b>593500</b>
<b>Operating</b>	140634	157193	184568	205123	244703	260315	290685	323015
<b>Development</b>	68240	83622	99814	136618	153193	162146	169516	195128
<b>Total Actual Expenditure</b>	<b>208874</b>	<b>240815</b>	<b>284382</b>	<b>341741</b>	<b>397896</b>	<b>422461</b>	<b>460201</b>	<b>518143</b>
<b>Rate of Expenditure (according to budget)</b>	83.38%	81.61%	83.49%	85.38%	85.65%	80.75%	81.02%	85.83%
<b>Rate of Expenditure (according to budget) (Operating)</b>	85.74%	81.65%	82.59%	85.02%	85.89%	83.57%	82.36%	88.11%
<b>Rate of Expenditure (according to budget) (Development)</b>	78.92%	81.53%	85.22%	85.92%	85.26%	76.60%	78.83%	82.31%
<b>Rate of Expenditure (according to Revised budget)</b>	87.16%	91.02%	89.66%	91.99%	89.91%	84.23%	85.38%	87.30%
<b>Rate of Expenditure (according to Revised budget) (Operating)</b>	88.41%	93.20%	91.79%	94.18%	90.94%	87.00%	87.83%	86.94%
<b>Rate of Expenditure (according to Revised budget) (Development)</b>	84.67%	87.19%	85.98%	88.89%	88.32%	80.13%	81.49%	87.92%



**Fig: Budget Expenditure Comparison in Fiscal Year**

## Chapter 3: Project Implementation Technologies

Introduction of digital tools in project management has significantly enhanced the implementation efficiency of project in Bangladesh. It has also increased the collaboration among various ministries/departments/agencies. The ability of various government departments to implement projects has significantly improved thanks to the digitization of key project tools named ibas++, e-GP, ams PMIS & e-PMIS and also use of Goggle drive, Shared documents, Gant chart etc.

### Electronic Procurement

The Central Procurement Technical Unit, Implementation Monitoring and Evaluation Division of the Ministry of Planning was responsible for the design, creation, ownership, current operation and maintenance of the e-GP Portal of the Government of the People's Republic of Bangladesh. The electronic government procurement system offers an online platform for carrying out all procurement activities for governmental organisations, including procuring agencies and procuring entities. Using a unique, secure web-based dashboard, PAs and PEs can perform tasks related to procurement on the e-GP system, a centralised website. It is located in CPTU's e-GP Data Centre. The PAs and PEs can access the web portal via the internet. The Public Procurement Reform (PPR) Programme's comprehensive e-GP system was implemented and the World Bank is urging all government agencies to make use of it. They may also ensure the efficiency, responsibility and transparency of Bangladesh's public procurement process with the aid of this online platform.

Two measures have been taken to implement the e-GP System:

### Electronic Tendering

Covering all eTendering-related activities, such as centralised user registration, Annual Procurement Plan (APP) preparation, bid and tender document preparation, invitation of Tenders, sale of Tender Documents (eTD), holding online pre-bid meetings, bid and tender security collection, online bid and tender submission, bid opening and evaluation, negotiations (if applicable) and contract awards.

## Electronic Contract Management System

The preparation and submission of work plans, milestone definition, tracking and monitoring progress, report generation, quality control, bill generation, vendor rating, and completion certificate generation are all covered by the e-Contract Management System (e-CMS). It is now being applied to all government agencies involved in public procurement.

The "Government Procurement (e-GP) Guidelines" produced in compliance with Section 67 of the PPA-2006 and Rule 128 of the PPR-2008 and published are to be followed by all parties while using the e-GP system. The diagram shows the mechanism in brief as it follows:

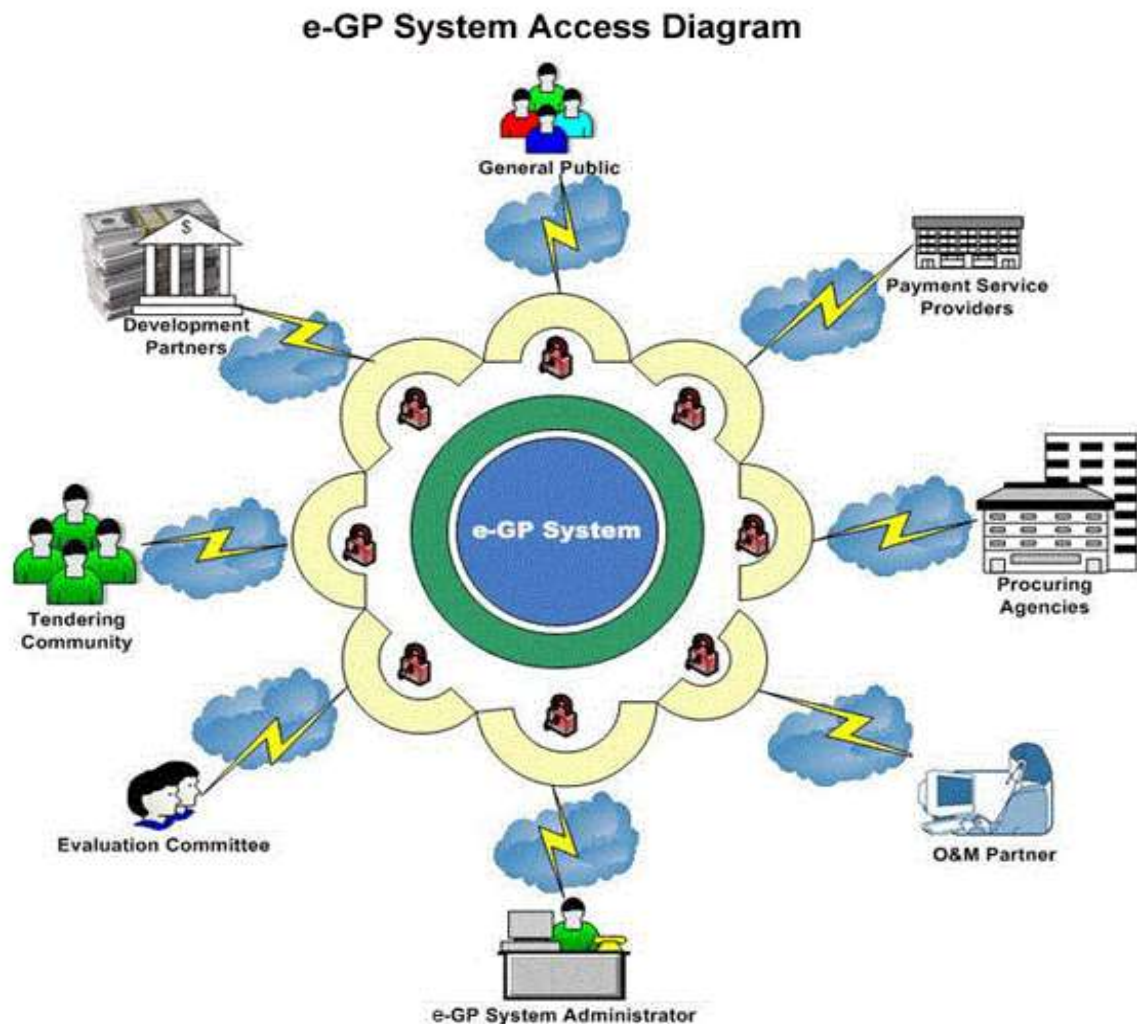


Fig: e-GP system



Fig: Manual Tenders vs e-GP Tender

## Integrated Budget and Accounting System

The Bangladeshi government's integrated financial management information system is known as ibas++ (Integrated Budget and Accounting System). An Internet-based, centrally controlled Oracle programme enables the creation of budgets, their distribution to field offices, fund releases, reappropriations, online submission of pay and other bills, processing of payments via EFT, cheque and payment order, accounting of all government receipts and payments, automated bank reconciliation, etc. After it has been fully implemented, the system will present a complete view of the government's financial holdings and liabilities at a specific time. ibas++ is composed of the four basic components listed below:

- Budget Preparation
- Budget Execution
- General Ledger
- Accounting

## Key improvements from ibas

- ibas++ is a centralized, Internet-based system, whereas iBAS is a distributed system operating with the WAN of the Finance Division;
- ibas is a transaction-capturing system without a General Ledger, it lacks crucial accounting and budgetary controls. As opposed to this, ibas++ is a General Ledger-based system with accounting and budgetary control provisions;
- Unlike ibas++, ibas does not contain provisions for budget distribution, fund release, and re-appropriation.

## Features of iBAS++

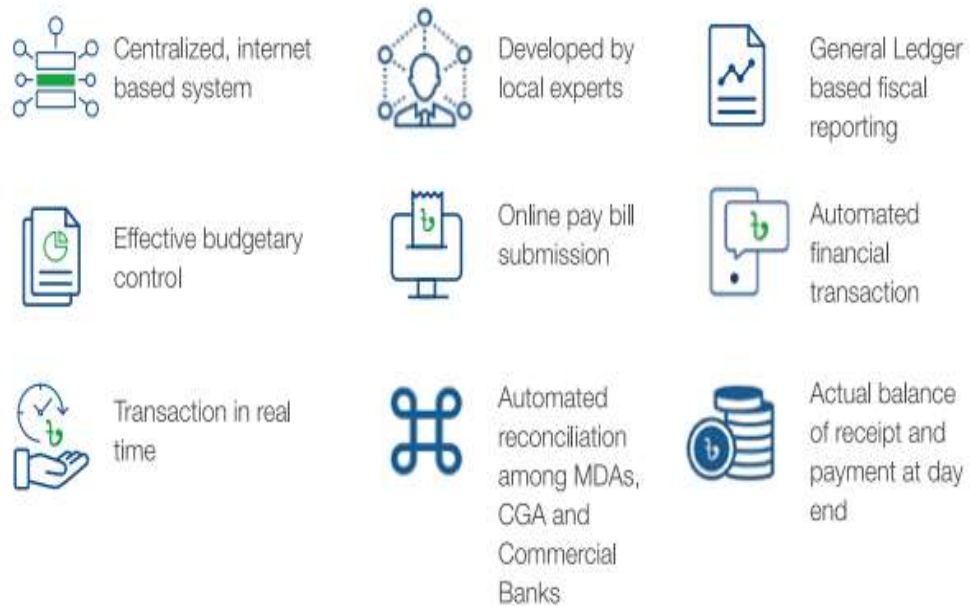


Fig: Features of ibas++



# Functions of iBAS++



Fig: Functions of ibas++

## iBAS++ Coverage

-  **1,293**  
Pay Points
-  **27,267**  
Offices
-  **2,94,406**  
Users
-  **3,21,87,476**  
Beneficiaries

## iBAS++ Stakeholder

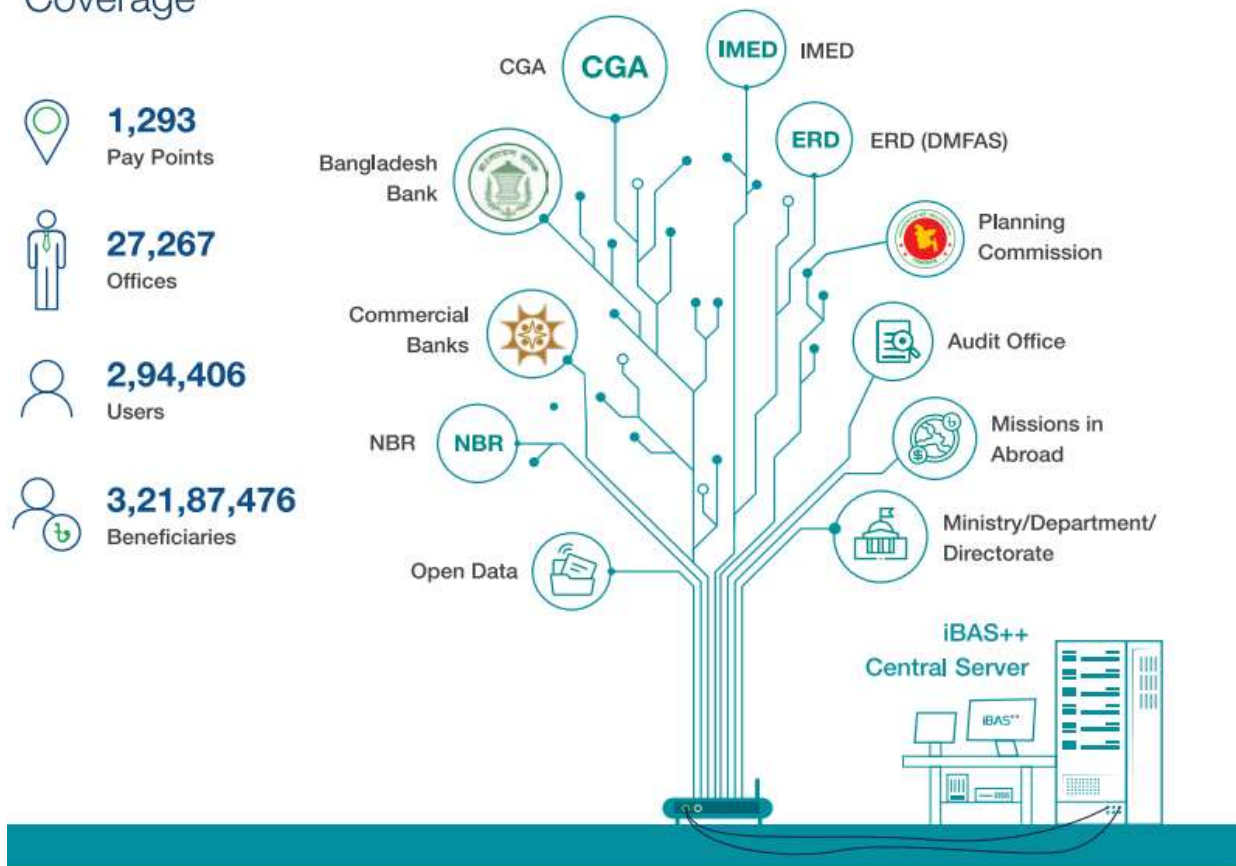


Fig: ibas++ stakeholder's tree

## **PMIS & e-PMIS**

PMISs support project management goals during planning, execution, and closure. During the planning process, project managers use PMIS for budget framework, including cost estimation. The project management information system is also used to develop a specific timeframe and a baseline description of the scope.

PMIS makes it easier to manage several jobs at once. The timeline, resource allocation, and progress of each project are readily visible to project managers. Stakeholders can keep tabs on everything, regardless of whether a project is finished, ongoing, or just in the planning stages.

The objectives of e-PMIS are to ensure transparency and accountability in projects under the Annual Development Programme (ADP). Presently there are 1627 projects in the current revised ADP. The e-PMIS will also help increasing working efficiency, reduce waste, minimize collusive practices, correlate multiple data points and manage financial and physical progress in project implementation.

The present workforce is not enough to monitor so many projects physically. The e-PMIS will help to do it online. It will also ensure accurate and real-time information about project status. Project data and photos can be given to the e-PMIS by mobile phone. It has already been connected to e-GP system, national ID database, IBAS++, PPS and AMS.

## **Practices in DSS**

In the fiscal year 2022-23 DSS has implemented 29 projects. According to the data of the PD's almost all the project office of Department of Social Services performs all financial tasks, including budget entry, approval and authorization through ibas++. They also ensure the use of PMIS as a management tools of the project. They all input their project's data in the PMIS which is a tool for monitoring the project. This is a robust system and run by IMED. Recently IMED has improved the system PMIS as ePMIS which is a tool of smart govertment for smart Bangladesh. They also use AMS as a budgetary tools. All PDs adhere to the PPR 2008 procurement guidelines when buying products, works and services. They (DSS) recently began using an electronic procurement method called e-GP. By automating the tendering process, the

use of technology in e-GP has made it simpler to follow PPR 2008. e-GP system improves the project's procurement procedure, which leads to a decrease in time and an improvement in efficiency.

## **Outcome of Technology Integration**

The execution of project duties has been facilitated by these project management tools. Additionally, they have improved employee performance and made collaboration more enjoyable overall-

### **Cooperation Improvement**

Collaborative technology will ultimately boost team productivity as the team collaborates and when members aren't present at the same time. Teams sometimes feel more comfortable working together digitally than in person because technology makes it easier to communicate thoughts and ideas.

### **Asynchronous Communication**

Previously, team members who were nearby could be thought of as reachable. Technology has, however, recently changed this tendency. Team members are not need to be based out of the same location or company for all projects. Other places in the world allow for their co-location. With the help of the project management platform, team members and clients may communicate instantly, hastening decision-making and project execution. People stop using a dedicated system to work while they are waiting for a response when communication is delayed. The amount of time spent may be lessened by the frequent loss of communications in voicemail or email inboxes.

### **Management of Data**

It is possible to analyze and evaluate data obtained throughout the course of a project to assist prospective improvements to your process. A number of tools are available for obtaining and analyzing project data, and some of them even make recommendations on how to improve an already-existing project based on metrics. Even though analyzing data might be difficult and

leave you unclear of what to do next, many data management solutions are easy to use and provide data in ways that are clear.

### **Budget Disburses**

Using Excel spreadsheets to track business expenses has long been a time saver. However, many companies still use Excel spreadsheets to keep track of their costs and revenue. However, recently released ibas++ & ams software has simplified budgeting concerns, such as challenging calculations for various budgets, that Excel did not address.

### **"Internet of Things"**

Google claims that mobile search has now completely surpassed desktop search. In the years that followed, connectivity has been enhanced by the development of intelligent devices, next-generation wireless networks, and an increase in the number of remote workers worldwide. Project management software has so far been heavily influenced by IoT; a group of physical items linked by a shared wireless network. As the nature of work changes, so must the project management methodology.

## Chapter 4: Recommendations & Conclusion

Bangladesh has consistently seen socioeconomic growth over the past three decades and has recently emerged as one of the world's top growing economies. Our ongoing development has helped us pass the UN's standards for moving from a least developed country to a developing economy. As we transition to an upper middle-income nation by 2031 and a developed economy by 2041, our graduation to a lower middle-income country means that we must prepare for increasing levels of mechanization, industrialization and technology adoption in the days to come.

There is no other way to enhance the capacity to undertake projects to sustain the growth of the country because the amount of the development budget has increased at a significant rate over the last decades & so. To hasten project execution, the usage of digital tools should be enhanced. It is also seen that the addition of ibas++, e-GP, AMS & PMIS in project management has improved the percentage expenditure gradually. In addition to economic growth & efficient project execution, digitizing the whole project implementation sector would advance efforts to create a smart government, one of the requirements for transforming Bangladesh into a smart nation.

### Recommendations

- As the efficiency of project implementation increasing with the help of technology and also expedite budget expenditure; it is necessary to add new innovative technology in project implementation. DSS should research about integrating new technologies for better implementation of project.
- Project management can be significantly impacted by incorporating technology that encourages collaboration, communication and community engagement and tools for automation to speed up project's repetitive chores.
- Despite not being at the top, the project's cost-effectiveness has a significant impact on the adoption of technology. It is essential to have skilled technology users in order to fully benefit from technology. It is necessary to accept the mentality of modifying the

work process in order to use technology. DSS needs to take the lead in developing skilled workforce that is based on technology.

- It is necessary to take the necessary precautions to secure the implemented technologies from hacking and cyberattacks.
- Automation Software System that are used in the project implementation must be optimized.
- Innovative approach in project implementation is necessary for achieving goals of Smart Government to become Smart Bangladesh by 2041.

## **Conclusion**

In summary, this study has highlighted the essential significance of digital tools in implementing projects managed by the Department of Social Services (DSS). The investigation has vividly showcased how these practices play a crucial role in influencing the direction of efficient execution of project management. The research robustly emphasizes the broad benefits derived from incorporating technologies into DSS-managed projects. Looking ahead, it's crucial to realize that integrating ICT practices into DSS project implementation is not a choice but a necessity. Research findings strongly support the continuous addition of technology in advancement of policies prioritizing sustainable project execution. By embracing these insights, the Department of Social Services can integrate ICT in transforming the idea of project management and covert it to an effective development budget execution.

## References

1. (PDF) Implementation Challenges of ICT in the Public Sector in Upazila Region of Bangladesh: An Empirical Study (researchgate.net)
2. Development Budget in Bangladesh: Spatial Analysis of Regional Dynamics by Mammunnah Jobaid and Adil Mohammed Khan
3. <https://mof.portal.gov.bd/site/page/28ba57f5-59ff-4426-970a-bf014242179e/>
4. Bangladesh-Economic-Review-2023
5. <https://mof.portal.gov.bd/site/page/bf32942f-9090-49b7-b4e3-7eb0e3f5c7b2>
6. <https://mof.portal.gov.bd/site/view/budget>
7. <https://ictd.gov.bd/>
8. The Best Technologies for Project Management by Sean Desmond, MPM, PMP; Project & Program manager
9. Smart Bangladesh, ICT Master Plan 2041(draft)
10. National ICT Policy 2018
11. <https://dss.gov.bd/>
12. <https://cptu.gov.bd/>