Introduction:

A feasibility analysis is used to assess an idea's viability, such as confirming that a project is both technically and legally possible and economically justifiable. The feasibility study is a management-oriented activity. It reveals if a project is worthwhile or not; in some situations, a project may not be doable. It defines the goals and subgoals of the proposed system and finds out whether it is possible to meet these goals. It assesses the viability of different alternatives while taking resource limitations into consideration. A high-quality feasibility study can assist an organization to avoid issues and lessen the possibility of poor project design.

There are different types of studies to check feasibility, such as -

i) Technical Feasibility: Technical feasibility is the process of determining whether the procedure is achievable and possible for the company. The technological feasibility assessment should primarily complement an organization's financial data. It assists in project troubleshooting before work is started. This evaluation focuses on the technical resources available to the organization. Assessing technical feasibility can also highlight specific risks of the project that should be considered. It details what the company intends to deliver as a product or service to customers.

ii) Operational Feasibility: Operational feasibility is the process of determining whether the proposed system can fit into the existing operation and whether it can provide the right information to the user at the right time. It refers to the measurement of problem-solving with the aid of a new proposed system, and it calls for the imparting of intended operational outcomes during design and development.Operational feasibility reviews the willingness of the organization to support the proposed system. In order to determine this feasibility, it is important to understand the management’s commitment to the proposed project. This feasibility is dependent on human resources and involves imagining whether the software will work after development and whether it will be operative after installation.

iii) Economic Feasibility: Economic feasibility is the process of determining whether finances are available for implementing the proposed system and whether spent money can be recovered

within a short payback period. To assess economic feasibility, management has to analyze the costs and benefits associated with the proposed project. It is the most frequently used method for evaluating the effectiveness of a new system. It helps organizations assess the viability, cost, and benefits associated with projects before financial resources are allocated. If the benefits outweigh the costs, then the decision is made to design and implement the system.

Shortcomings in the system of Dutch Bangla Bank Ltd.:

There are certain lackings in the system of Dutch Bangla Bank Ltd. Noapara Branch concerning security:

There are not enough security guards at the entrance of the bank, additionally no door frame metal detector exists. It's very common that random people occasionally walk into the bank and wander about. Besides, it's quite dangerous if there isn't a metal detector as anyone may easily enter a bank while armed and launch an attack.

Secondly, there are some issues with the cheque while withdrawing money. A customer must provide his signature and be physically present in order to withdraw money. It may happen that he might not be able to be there at that precise moment, but he still needs the cash. Even when his relatives or friends can provide the client's signature, the bank rejects it if the signatures don't appear to be identical.

Another problem is related to the Remittance system. A beneficiary must submit an account and pin number when receiving money. Nonetheless, it is possible for a stranger to obtain that pin if the receiver is not careful enough. Consequently, using a pin makes it extremely dangerous for someone to take the money who is not supposed to.

Account verification of a client is done manually by an officer. The officer input the client's name and account number when they arrive and then validate it by checking the client's account and it takes a lot of time to do so. If there were an AI system, it would save time since the AI would quickly and accurately validate the customer using their biometrics. Additionally, as the customer's biometrics would be used for verification, it'd provide a safe technique to identify the right client.

Another issue is that the bank doesn't have enough cash counting machines. Since the cashier

physically/manually counts the money, it's possible that he might overlook certain notes and it's time consuming,so it is not a secure method of counting the money.

By analyzing the system of Dutch Bangla Bank Ltd,Noapara Branch,we have found out these shortcomings. And to overcome these shortcomings we have proposed two solutions.The solutions are stated below:

i. Solution A: Manual Banking system with improved security.

ii. Solution B: An improved, completely automated, AI Based System.

Solution A:

Manual Banking system with improved security:

In this solution, we've proposed recruiting new employees to ensure a more secure banking system.

Technical Feasibility: This solution is technically feasible because of -

i) Here, no need for hardware and software.

ii) No extra technology needed for manual verification.

Operational Feasibility: This solution is operationally feasible because of -

i) Provide reliable service to the customers.

ii) Efficient human support to satisfy different queries of customers.

iii) It is beneficial to rural people.

Economic Feasibility: This solution is economically feasible because of -

i) Investment :

Cost of workshop = 2,00,000 TK

Accommodation cost = 5,00,000 TK

Others = 1,50,000 TK

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Total = 8,50,000 TK

ii) Cost per year:

Salary = 1,50,000 TK

Others = 30,000 TK

Total = 1,80,000 TK

iii) Payback period:

Total savings = 4,00,000 TK (per year)

Recurring cost = 1,80,000 (per year)

Net benefit = Total savings - Recurring cost

= 4,00,000 - 1,80,000

= 2,20,000 TK (Per year)

Payback period = Investment / Net benefit

= 8,50,000 / 2,,20,000

= 3.86 years ~ 3 years 10 months

Solution B:

An improved, completely automated, AI Based System:

In this solution,we've proposed an AI based security system to identify malicious behaviors by cross-comparing the behaviors of users across an environment.

Technical Feasibility: This solution is technically feasible because of -

i) Security Metal Detector Door available in Bangladesh.

ii) Applications can be obtained from any software companies as required.

iii) Fingerprint scanner and Face reader available in the market.

iv) Cash counting machines are also available in the market.

Operational Feasibility: This solution is operationally feasible because of -

i) Customers can access information in a more secure way.

ii) Provide hassle free experience to customers and employees.

Economic Feasibility: This solution is economically feasible because of -

i) Investment:

Hardware Cost =11, 80,000 TK

Software Cost = 5, 00,000 TK

Training Cost = 3, 50,000 TK

Others = 2, 00,000 TK

Total Investment = 22, 30,000 TK

ii) Cost per year:

Software Maintenance Cost =1, 50,000 TK

Salary of Security Expert = 11, 40,000 TK

Total Cost = 12, 90,000 TK

iii) Payback period:

Investment = 22, 30,000 TK

Total Cost = 12, 90,000 TK

Total expected income = 20, 00,000 TK (per year)

Net benefit = Total income - Total Cost = 20, 00,000 – 12, 90,000 = 7, 10,000 TK

Payback period = Investment / Net benefit

= 22, 30,000 / 7, 10,000 = 3.14 years ~ 3 years 2 months.

Finding Optimal Solution:

Proposals	Technical Feasibility	Operational Feasibility	Economical Feasibility
A	Feasible	Feasible	Feasible
B	Feasible	Feasible	Feasible

From the table, we see that solution A has a longer payback period than solution B. It is not feasible. Solution B is optimal. So, Solution B is accepted.

Conclusion:

In this study, we have suggested two ways to overcome the shortcomings. We suggested a manual banking system with improved security as one option, and an automated AI-based system as an alternative. To determine the payback period for that investment, we made assumptions about the investment, the cost per year, and the savings. From the result, we found out that the payback period of solution B is less and it also satisfies three feasibilities. So, in this report, we tried to overcome the shortcomings by proposing some solutions, so this may turn into a benefit for the Dutch Bangla bank system.