* 1. **Introduction:**

In this paper we are going to make an analysis on the prevailing system of Rajshahi Hi Tech Park.

Bangladesh Hi-Tech Park Authority has been established under the 'Bangladesh Hi-Tech Park Authority Act-2010' with the objective of creating an investment-friendly environment and creating employment through the development and growth of high-tech industries in the country. Since its inception, the Bangladesh Hi-Tech Park Authority has been working for socio-economic development by establishing Hi-Tech Parks / Software Technology Parks / IT Training and Incubation Centers in different parts of the country to ensure employment of the country's huge youth and create skilled human resources. According to the administrative structure, the managing director of the Bangladesh Hi-Tech Park Authority is the chief executive officer. There is an Executive Committee chaired by the Minister / Minister of State for Information and Communication Technology and a Board of Governors (BOG) chaired by the Hon'ble Prime Minister to oversee and guide the activities of the organization. The head office of Bangladesh Hi-Tech Park Authority is located on the 10th floor of ICT Tower, Agargaon, Dhaka. Bangladesh Hi-Tech Park Authority has set up 28 (eighty) Hi-Tech Parks (HTP) / Software Technology Parks (STP) / IT Training and Incubation Centers across the country. The construction work of 4 (four) parks has already been completed and business activities are going on. Construction work on the remaining parks is underway.

Honorable Prime Minister declared to setup an IT Park in Rajshahi during her visit in Rajshahi dated 24.11.2011 to expand and promote the opportunity of the IT/ITES as well as Hi-Tech Industries. Subsequently government has allocated 30.6787 acres of land for creating conducive business environment to attract local and foreign IT/ITES companies to establish of 'Bangabandhu Sheikh Mujib Hi-Tech Park, Rajshahi.'The site is situated just behind the DC office and the District Judge Court, 13 km away from Shahmakhdum Airport and 7 km from the Rajshahi railway and bus stand.Rajshahi known as city of Education and all types of educational institute like Rajshahi University, Rajshahi Medical University, RUET, Rajshahi College, Polytechnic Institutes and some other private Universities are there.

This project has been designed considering all the amenities like infrastructures, capacity building, lab facility, R&D and start up echo system. Major component of the project is 10 Storied Multi-Purpose Building (MPB) (2 lac sft), 8 Storied Dormitory Building, Sub-Station & Generator Building, Deep Tube well, Water reservoir, Main Road, Internal Road, Boundary Wall, Gym, Play Ground, Sub-stations (33/11 KVA & 11/0.44 KVA), Generators, Fire & Security System and others. About 90% of Land Development works of the project area have been completed and the construction work of MPB is going on in full swing. Investors have the ample opportunities to get space/land to set up their industries inside the Hi-Tech Park. Approximately 14 acres of Land will be allocated to the investors of IT/ITES industries as plots inside the park. Subsequently other basic infrastructures will also be developed under this project. After completion of this project approximately 14 thousand employment opportunities will be generated.

**1.2 Objectives of Hi-Tech Park**

* Plan and Implementation of the strategies to create investment infrastructure in Bangladesh.
* Proper operation and management of the Hi-Tech Parks established by Bangladesh Hi-Tech Park Authority across the country.
* Attract FDI and ensure a world class investment environment in the Hi-Tech / software technology parks located across the country.
* Human resource development to ensure IT skilled resources to lead the Hi-tech and software technology sector.
* Encouraging development of private STP.
* Formulating rules, regulation, guidelines and various fiscal and non-fiscal incentives for investors in the hi-tech sector and hi-tech and software technology parks in the country.
* Developing innovation ecosystems and infrastructures to support start-up concepts and companies nationwide.
* To establish knowledge-based IT industry in Rajshahi
* To play a role in the national economy
* To create a business environment to attract domestic and foreign investors.
* Creating opportunities for new IT entrepreneurs
* To create employment
  1. **Vision and mission of the organization**
* Sustainable Development & Proliferation of IT/Hi-Tech Industry in Bangladesh.
* Establish international standard infrastructure;
* create congenial & sustainable business environment;
* develop IT/ITES based Industrial ecosystem and ensure all services for IT/ITES
* business & industries through One Stop Platform.
  1. **Problem Identification**
     1. **Lack of Manpower**

It was observed that the organization has limitation of its manpower. The organization has to perform a number of operations like: Arranging Software company, managing them, collaborate with them. But it was quite clear that the organization has a shortage of manpower. It depends on government organizations like: to perform their tasks. Moreover,. But it was understood that the people coming here to receive services are not satisfied with the pace of the work here. It was found after some brief observation that the main reason behind this problem was the lack of enough manpower in the organization.

**1.4.2 Lack of Security**

There is no security guard any where in the project. Also there is no any surveillance camera nearby .

**1.4.3 Lack of website of training center**

There is no website for training center. Training center have running under the hi-tech park website.

**1.4.4 Registration form online for startup student**

**1.4.5 Corruption of higher authority**

**1.4.6 Lack of facility**

**1.4.6 Startup funding time always thakena**

**1.5 Conclusion**

Rajshahi Hi-Tech Park is a very well reputed organization. They have a very clear mission and vision and they are very much keen to reach their goal. As we are analyzing on the existing system of this organization, we have found some problems and the problems were identified by conducting preliminary survey. Still, we are not so sure whether these problems could be solved or not. Because there are so many considerations before proposing a candidate system. But even we will make an initial feasibility analysis on these problems. We will try to find some way out to solve the given problems. In the next chapters we will go through sequential stages trying to solve these problems.

* 1. **Introduction**

As the name implies, a feasibility study is used to determine the viability of an idea, such as ensuring a project is legally and technically feasible as well as economically justifiable. It tells us whether a project is worth the investment-in some cases, a project may not be doable. There can be many reasons for this, including requiring too many resources, which not only prevents those resources from performing other tasks but also may cost more than an organization would earn back by taking on a project that isn’t profitable or simply the required budget for the project exceeds the available budget of the organization.

We do the feasibility study answering some important questions. These questions are:

* What are the user’s demonstrable needs and how does a candidate system meet them?
* What resources are available for the candidate system? Is the problem worth solving?
* What is the likely impact of the candidate system on the organization? How well does it fit within the organization’s MIS plan?
  1. **Initial Feasibility Study**
     1. Lack of manpower
     2. Lack of Security
     3. Lack of website of training center
     4. Registration form online for startup student
     5. Corruption of higher authority
     6. Lack of facility
     7. Startup funding time always thakena
  2. **Conclusion**

The problems we have identified before we have tried to give some solutions in this chapter. We have done the initial feasibility study by which we can understand whether we can proceed with the problems or not. We have seen in this study that the problems we have found so far are not infeasible at all apparently. The problems seem worth solving. To solve these problems, the organization needs sufficient budget, time, manpower and technical support. Though still we can’t be very much sure that the problems can be solved properly. We have to analyze more deeply to understand the situation and then finally we can assure that the identified problems can be solved.

**Chapter 4**

**Feasibility Study**

**4.1 Introduction:**

Feasibility study is an exercise which involves documentation of each potential solutions to a particular system. By initial feasibility investigation an analyst determines whether the alternative is feasible or not. The analyst evaluates the candidate system and provides the selection of best system which meets the performance and cost requirement. For feasibility study, we have to consider the three factors of economical, technical and behavioral factors to meet the efficient system. Feasibility study is used for ensuring the system is feasible. An analyst finds the alternatives of problems and gets the selection by which it prevents the more cost and finds if the alternatives make any profit for an organization.

In our analysis of “Bangabandhu Sheikh Mujib Hi-Tech Park, Rajshahi”, we have collected information and identify some problems by initial feasibility investigation and from this chapter we may find the best alternatives and check the alternatives are feasible or not for developing best system.

**4.2 Feasibility analysis**

**4.2.1 Lack of Man power**

Manpower of a system is essential to operate the system smoothly. Humans are capable to solve difficult problems.

In our observed system there are shortage of manpower. In our observed system, shortage of man power which can’t make proper utilization of that system. There are lack of security guard, receptionist, trainer and others.

In initial feasibility study, we have suggested to have more manpower. If the number of trainers, startup project manager, employees are increased then the system will be more feasible. Among of all alternatives the increasing of man power is much more effective than others. If the system is running then the increasing the number of manpower is effective. If there is not enough employee and some employees are not well trained then the system may be crashed. So, we need the manpower trained than freshers. But as a trained person, there may be more cost to manage that manpower. So, by increasing there are some merits and demerits also.

So, considering this, we have made a weighted candidate evaluation matrix to show the effects if the number of increased manpower.

In this matrix, we have considered efficiency, alternatives and speed of processing in performance section and we have considered salary and training in cost section. We have given 5 for efficiency, 3 for alternatives, 4 for speed of processing, 4 for salary in cost section and 3 for training of manpower of Bangabandhu Sheikh Mujib Hi-Tech Park, Rajshahi as weighting factor respectively. We also rated the criteria and then we multiplied the rating and weighting factor to give them scores.

Table 4.1 shows the weighted candidate evaluation matrix.

Table 4.1:

|  |  |  |  |
| --- | --- | --- | --- |
| Evaluation Criteria | Weighting Factor | Present Manpower  Rating Score | By increasing Manpower  Rating Score |
| **Performance**  Efficiency  Alternatives  Speed of processing  **Cost**  Salary  Training | 5  3  4    4  3 | 4 20  2 6  3 12    1 4  3 15 | 5 25  3 9  4 16    3 12  4 12 |
| Total Score |  | 57 | 74 |

After checking the weighted candidate evaluation matrix, we have found by increasing manpower is more feasible.

**4.2.2 Lack of Security**

We know security is a one of the important parts of a system. Security factors helps to protect the equipment of a system. Security system helps us to monitor the activity that takes places at the system and if those security factors fail, then the progress can’t be achieved.

In our observed system, there are few security issues are found. This problem can hinder the development. There is no CC camera to cover the whole area. There are only two guards protecting the gates which is less secure.

In initial feasibility study, we have suggested more cc camera and more guards for securing the whole area of Bangabandhu Sheikh Mujib Hi-Tech Park, Rajshahi. By this, authority can check which is happening all through the area. By setting up CC camera, it can bring fairness, security of the work place.

We have made a weighted candidate evaluation matrix to show the effect of setting up CC camera and more guards.

In this matrix we have considered performance as security and efficiency and in cost section we have considered short term effect, long term effect and maintenance. We have given the weighting factor for security is 2, for efficiency is 5, for short term effect is 3, for long term effect we have given 4 and for maintenance we have given the weighting factor as 2. For increasing the security guard, the rating is 3,2,4,1 and 5 is for security, efficiency, short term effect, long term effect and maintenance and for increasing cc camera we have given the rating 5,3,2,4 and 2 for security, efficiency, short term effect, long term effect and maintenance. We have multiplied ratings and weighting factor to calculate scores.

Table 4.2 shows the weighted candidate evaluation matrix of increasing security guards and increasing CC camera.

Table 4.2:

|  |  |  |  |
| --- | --- | --- | --- |
| Evaluation Criteria | Weighting Factor | By increasing Security Guards  Rating Score | By increasing CC camera  Rating Score |
| **Performance**  Security  Efficiency    **Cost**  Short term effect  Long term effect  Maintenance | 5  5      3  4  2 | 3 15  2 10  4 12  1 4  5 10 | 5 25  3 15  2 6  4 16  2 4 |
| Total Score |  | 51 | 66 |

After checking the weighted candidate evaluation matrix, we have found by increasing security guards and by increasing CC camera is feasible.

**4.2.3 Lack of Online Registration form for startup participants**

Registration form for the startup project is essential to have the idea of individuals and those who have participated in the meeting for collecting ideas and giving funds ceremony.

In our observed system there are no digitalized online registration form for the participants of idea showcasing. There is manual registration only. So, we have suggested online registration form for the startup participants.

We have made a weighted candidate evaluation matrix to show the effect of manual and online based registration form. In here we have considered the manual and online based registration and compare between manual and online based registration. We have considered performance and cost criteria for those. We have considered security, independency and reliability in performance criteria and in cost criteria we have considered short term effect, long term effect and maintenance. We have given weighting factor of security is 3, independency is 5 and reliability is 4, short term effect is 3, long term effect is 4 and maintenance is 2.

Table 4.3 shows the weighted candidate evaluation matrix of manual registration and online registration.

Table 4.3:

|  |  |  |  |
| --- | --- | --- | --- |
| Evaluation Criteria | Weighting Factor | Manual Registration Rating Score | Online Registration  Rating Score |
| **Performance**  Security  Independency  Reliability    **Cost**  Short term effect  Long term effect  Maintenance | 3  5  4      3  4  2 | 3 9  2 10  1 4    3 9  1 4  4 8 | 5 15  4 20  2 8      2 6  3 12  3 6 |
| Total score |  | 44 | 67 |

**4.2.4 Lack of Facility**

In our observed system, there are lack of useful things like chair table, student desk etc. In there we have found only few quantities of those things. There is lack of facilities of our observed system. There are lot of students to get admitted into IT training center but there are not enough facilities for the students. There are few numbers of water purifier. Those can hinder the total progress of the system.

So, we have made a weighted candidate evaluation matrix. In here we have considered the present facilities and increasing quantities of facilities and compare between the present facilities and increasing quantities of facilities. We have given the weighting factor for security is 2, for efficiency is 5, for short term effect is 3, for long term effect we have given 4 and for maintenance we have given the weighting factor as 2. For increasing the security guard, the rating is 3,2,4,1 and 5 is for security, efficiency, short term effect, long term effect and maintenance and for increasing cc camera we have given the rating 5,3,2,4 and 2 for security, efficiency, short term effect, long term effect and maintenance. We have multiplied ratings and weighting factor to calculate scores.

Table 4.4 shows the weighted candidate evaluation matrix of present vs increased facilities.

Table 4.4:

|  |  |  |  |
| --- | --- | --- | --- |
| Evaluation Criteria | Weighting Factor | By Present Facility  Rating Score | By increasing Facilities  Rating Score |
| **Performance**  Security  Efficiency    **Cost**  Short term effect  Long term effect  Maintenance | 5  5      3  4  2 | 3 15  2 10  4 12  1 4  5 10 | 5 25  3 15  2 6  4 16  2 4 |
| Total Score |  | 51 | 66 |

After checking the weighted candidate evaluation matrix, we have found by increasing security guards and by increasing CC camera is feasible.

**4.2.5 Unavailability of Startup Fundings at Any Time:**

Sometimes, organization needs fundings to develop their company and there can be student among them. As a student, funding is necessary to develop a startup company, Bangladesh Authority tries to gives the funding to the startup company who needs fundings to develop the system.

In our system there are problems that the fundings are available for the particular time and it requires time which may hinder the gross development. A student or an organization had to wait for the fundings, for this those organization couldn’t able to develop their system in their required time. If they can do, they can be benefited.

But this solution isn’t feasible. For the chances of corruption and misuse of these money can lead to unbalanced system. If this take more time, there can be proper utilize of the government money in proper time. Sometimes, there can be no use of the money if there are no startup organization. There can also have misguided person who tries to take those money for wrong purpose. That’s why it isn’t feasible to have the startup fundings all the time.

**4.3 Conclusion:**

Feasibility studies can identify the logistical, financial, and behavioral of a proposed project by evaluating a system. A feasibility study is an assessment that determines the goal of a proposed project being successful or not. The study analyzes the project's relevant factors, such as technical, economical and legal considerations and other factors to find out the project is worth an investment or not. So, for a new developed system feasibility study is necessary to find out the actual facts.

**4.4 Data Flow Diagram:**

Data flow diagram (DFD) is mainly represented by the storage and the information transfer with the use of some symbols. Mainly four types of symbols are used to determine the DFD, those are like rectangles, circles, arrows, and short-text labels, that describe a system or process data flow direction, data inputs, data outputs, data storage points, and its various sub-processes.