

# NP000395-CT012-3-3-CSM.docx

*by* HIRA DEVI PURI .

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**Submission date:** 10-Oct-2022 06:22PM (UTC+0800)

**Submission ID:** 1921501093

**File name:** 37568\_HIRA\_DEVI\_PURI\_.NP000395-CT012-3-3-CSM\_242533\_172161202.docx (171.53K)

**Word count:** 1785

**Character count:** 10631



## **GROUP ASSIGNMENT**

**TECHNOLOGY PARK MALAYSIA**

**CT012-3-3-CSM**

**COMPUTER SYSTEM MANAGEMENT**

**NP3F2009IT-2101IT**

**HAND OUT DATE: 18-07-2022**

**HAND IN DATE: 10-10-2022**

**WEIGHTAGE: 50%**

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### **INSTRUCTIONS TO CANDIDATES:**

- 1 Submit your assignment at the administrative counter.**
- 2 Students are advised to underpin their answers with the use of references (cited using the Harvard Name System of Referencing).**
- 3 Late submissions will be awarded zero (0) unless Extenuating Circumstances (EC) are upheld.**
- 4 Cases of plagiarism will be penalized.**
- 5 The assignment should be bound in an appropriate style (comb bound or stapled).**
- 6 Where the assignment should be submitted in both hardcopy and softcopy, the softcopy of the written assignment and source code (where appropriate) should be on a CD in an envelope / CD cover and attached to the hardcopy.**
- 7 You must obtain 50% overall to pass this module.**



## **Acknowledgment**

As a requirement for the partial fulfillment of the degree of BSc IT, the assessment has been completed successfully following the guideline and regulations of Asia Pacific University (APU) with the inspiration, support, and guidelines of many individuals whose involvement was a milestone for me to move through every step.

I would like to express my thanks and gratitude to my module leader Mr. Ramesh Suwal who has provided continuous support throughout the course of my assignment. He assisted me by providing a lot of guidelines and ideas to complete this task. I would really appreciate his effort and help which enabled me to do a lot of research and complete the assignment successfully.

Also, I would like to express my gratitude to LBEF (Lord Buddha Education Foundation) and the Management team for their profound assistance.

Last but not least, I am also thankful to my friends for their continuous support and encouragement throughout the assignment.

Hira Devi Puri  
NP000395

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# 1 Individual Assignment (NP000395)

## 1.1 Weakness

### 1.1.1 Lack of adequate and Skilled Manpower

The number of banks and other financial institutions is growing day by day in the context of Nepal. With the growing size of the economy, and to address the banking requirement of a huge number of populations, a number of branches are being established around every corner of the country. In order to operate all those branches successfully and provide effective services to the customers, skilled manpower requirement is a must. However, in the context of Nepal, the skilled manpower available is not enough to provide services to a such large section of customers. Thus, some situations are being faced by Rastriya Banijya Bank (RBB) too. While opening vacancies in newspapers or on the online platform, a large number of applicants are seen to be interested in the job, but their skills and experiences do not match the requirement of the bank, and are unfamiliar with banking environments and working procedures. So, it is one of the challenges to select skilled manpower and perform the work effectively and efficiently (Aryal, icframe.com, 2020).

#### 1.1.1.1 Recommendation

To tackle this issue of shortage of skilled manpower to provide effective and efficient service to the bank, HR managers have to adopt a creative approach to deploying talent dynamically and creating future workforces by using various techniques. Appropriate training needs to be conducted for an employee for the new job, training to get additional skills in the existing job, and assigning an employee to the new task. Certain infrastructures are to be built for upskilling and redeployment. Another option to meet the shortage of manpower is by shifting talent from surplus areas to shortage areas (Han Hu, 2021).

### 1.1.2 Weak Corporate governance

Corporate governance is a collection of rules, practices, and processes that helps in directing and controlling the whole company. Building trust and promoting financial stability are greatly influenced by good corporate governance. However, we have observed poor corporate governance in the case of Rastriya Banijya Bank (RBB). The Board of directors of the bank is responsible for formulating plans and policies and cross-checking whether the implementation of those plans and policies is being executed or not. The cases of fraud from the employees have been observed due to a lack of proper supervision and monitoring by the top-level management. Preventing Unethical works and fraud can only be achieved with the active participation of top-level management in

monitoring the overall activities of the bank (Aryal, Challenges Of Banking Sector In Nepal, 2020).

#### 1.1.2.1 Recommendations

To tackle the issue of corporate governance, various approaches can be taken. Firstly, defining the clear roles of the board of directors and their accountability for that will help in building productive relationships with the management teams. The board's role in strategic and risk management should be clearly defined. In addition, monitoring the organization's performance is another crucial parameter. Moreover, the board should be more diverse based on skill. The appointment of an effective, competent chairperson establishes the board culture and trust required for good corporate governance. Also, it is important to provide equal voices to all board members and build and maintain a strong governance infrastructure. Further, the information required should be easily available to the director for better decision-making. Encouragement of collaboration and accountability will be another factor in establishing good corporate governance. Finally, it is crucial to routinely evaluate the board's performance (Warner, 2020).

## 1.2 Security Threats

### 1.2.1 Cyber Security

Cyber Security is the crucial component required in the banking sector that protects the data from theft and damage. The various types of data such as personally identifiable information (PII), protected health information (PHI), personal information, intellectual property, data, and governmental and industry information systems (Aryal M. , 2022).

The banking system of Nepal has become the victim of cyber security repeatedly. Millions of rupees have been withdrawn using fake ATM cards. The withdrawal was carried out by infiltrating the virus in the visa network system and blocking the bank's access to its information system. So, the deposit amount of the customer is found to be at risk. The customer of Rastriya Banijya Bank (RBB) is provided with various features such as mobile banking apps and QR codes for the transfer of money and all these systems are purchased from various countries. The bank has been using Connect IPS, Phone Pay, and other payment service providers for providing mobile banking services through their websites. But due to low cyber security and lack of skilled staff, cyber-

attacks are occurring repeatedly though regulatory bodies do not agree regarding the weak cyber law (Dahal, 2021).

#### **1.2.1.1 Recommendation**

To overcome any kind of cyber security threats, it is important to build secure systems and an evaluation of the cloud's security current state with standards and best practices needs to be carried out. In order to avoid any type of vulnerabilities, the system should be kept up to date and side-loading applications should be avoided to minimize the probability of zero-click attacks. The massive data loss and downtime during the cyber-attack can be minimized by formulating a well-structured disaster recovery plan. The threat can be detected and protected automatically by using vulnerability management tools. Installation of an automated backup system having options for secured encryption and privileged access management (PAM) needs to be done. Also, the use of multi-factor authentication will help in preventing cyber-attacks (Aryal M. , 2022).

#### **1.2.2 Insider Threat**

The highly sensitive information of the organization is attacked by malicious insiders causing huge losses to the organization and this type of threat is known as an insider threat. Malicious attackers usually choose the legal path to attack so it is quite difficult to detect and prevent inside attacks. Insiders can be employees, contractors, or business partners capable enough to launch complicated attacks. The loss caused by this threat surpasses all kinds of attacks on the bank. As the bank has valuable assets, this threat can cause a significant impact on the financial health of the bank. The banks have highly sensitive information and are heavily dependent on information technologies so the insider threat poses a greater risk for the bank. Moreover, the insider might use the vulnerabilities exposed by the use of cloud-based technologies to harm the system of the bank (Yaseen, 2016).

#### **1.2.2.1 Recommendations**

This security threat should be handled very carefully by the company. The insider threat can be prevented by adopting good access control. Further, they should get access to limited data which is called the least privilege principle. Also, it is important to assign separate duties to two different employees which otherwise if performed by the same person could be capable of performing fraudulent activity and harm the system alone. Insider attacks can also be prevented by adopting good monitoring systems and authentic techniques. The restriction should be applied to employees in downloading or printing emails. Other various tools can be used to deter the insider attackers

such as content filtering, data classification, inbound and outbound proxies, tools for detecting anomalies in user patterns, and user activity monitoring (Yaseen, 2016).

### 1.3 Supply chain enabler

Information technology has played a crucial role in managing the supply chain and by linking information technology to supply with demand, companies have been able to achieve competitive advantages. Adaptation of IT in the supply chain successfully can provide value addition and can create a sustainable value chain. So, the firms should consider on capitalizing the benefit offered by information technology. Information technology can become a strategic tool in supply chain management and can successfully become the supply chain enabler. IT can be used in formulating overall business strategy, managing processes rather than functions, developing cross-functional teams, strategic alliance with suppliers and distributors, etc., and creating the right kind of organizational architecture, which help IT become a strategic competitive advantage tool. (Singh, 2021) Technology such as Radio Frequency Identification (RFID) and Artificial Intelligence (AI) can aid the banking industry.

#### 1.3.1 Radio Frequency Identification (RFID)

Banks can use RFID technology in improving operational efficiency and data security. It can be used in conducting an assessment of the inventory and provides security of customer data. Banks can attach RFID chips to the customer's card to provide speedier and more personalized service to wealthy customers. By scanning RFID, the teller can identify the name of the customer and all the details of the accounts ready and can greet by name. RFID can be used to track courier bags that are used to transfer documents from branches to centers. Also, it can track the laptops of the employees to ensure that it does not go into the wrong hands. Further, RFID chips embedded in the bank cards will enable to proceed payment without swapping or entering chips, just need to place in front of the RFID reader (APPLICATIONS OF RFID IN BANKS).

#### 1.3.2 Artificial Intelligence (AI)

Banking applications and services have been introduced with AI technology that made it possible for banks to be more customer-centric and technologically relevant. AI can be used in making better decisions based on the information available that cannot be understood by humans and also can increase productivity thereby reducing costs. The efficiency, service, productivity, and reduction in costs can be achieved with the use of AI. Banks are transforming themselves from people-centric to customer-centric, focusing on new customers and providing better service to



them 24 hours a day, the only possible way of doing it is through AI. It can also be used in making profitable loan and credit decisions and tracking the trends of the market. It has been a crucial part of the bank supply chain by assisting in data collection and analysis of millions of transactions that occur every day (Singh S. , 2022).

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