**FACULTY OF SCIENCE**

**IFN541 Information Security Management - Assessment Task 2: Report**

**Report Topic:** Risk Management Plan

**Template for Part A: Team and Organisation document**

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| **Student Names:** | **Yichen-Chen** | **Hsiang-Jen, Yu** | **Chin-Wei, WU** | **Pin-Chieh, CHIU** |
| **Student Numbers:** | **N11564628** | **N11453559** | **N11414561** | **N11532360** |
| **Organisation names:** | **Our company: One More Life Medical Security Company**  **Our client: Handseed International Hospital** | | |  |

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| **Item** | **Details** | **Main points and comments**  *(include the main concepts - in point form - you intend to use in your report)* | **Supporting evidence**  *(record reference details for articles)* |
| **About your selected organisation** | **Industry** | Health care  This report is focused on the healthcare of information security for “**Handseed International Hospital**.” | <https://www.landseedhospital.com.tw/> |
| **Organisational Size** | Handseed International Hospital is a large private medical centre located in the capital city of Taiwan. The hospital employs over 1200 staff members, who are distributed across three buildings. The hospital also boasts more than 850 patient beds, which are spread across these three buildings as follows:  1. **Research Department Building:** 199 employees and 50 beds.  2. **Medical Department Building:** 600 employees and 554 beds.  3. **Clinical Department Building:** 479 employees and 329 beds.  All three buildings are located together in one area, with the headquarters situated within the medical center." | <https://en.wikipedia.org/wiki/List_of_hospitals_in_Taiwan>  <https://www.aihw.gov.au/reports/hospitals/hospital-resources-2017-18-ahs/contents/diversity-of-public-hospitals> |
| **Products and/or services provided by your organisation** | **Handseed International Hospital primarily offers services related to human health, including medical consultations, diagnostic tests, and preventive care. People with health issues are their clients. They operate three distinct departments, each providing specialized services :**  **1. Research department:**  Its primary service is investigating and developing new medicines and vaccines. The staff here usually research and analyze medical data using academic papers for medical records. As a result, clients have the opportunity to explore new treatment methods to address their illness.   1. **Medical department:**   This department mainly provides hospitalization services such as conducting surgery, medical practice, and patient care. To be specific, people who need surgery and hospitalization will be served by this department.   1. **Clinical department:**   The main service of this department is providing clinical services. For instance, seeing a doctor, conducting prescriptions, and managing appointment procedures are their primary offerings. |  |
| **Critical Information Assets** | 1. **Electronic Health Records:**   Health records, typically located in an electronic medical record system, contain detailed information about patient health conditions and measurements that refer to their personal profiles. Without a dedicated information security process, the documents can leak to the public or the Internet, and such a situation may infringe on patient privacy and put patients in unpredictable potential danger. It can also cause patients to gradually lose loyalty to the hospital and jeopardize the reputation of the hospital.  **2. Employment records:**  Employment records include essential information about hospital staff members, which are typically stored securely within the human resources sector of companies or organizations. These also contain their personal background, career position, and specialist ability. This information could significantly impact and enhance the availability of various management, such as promotion, recruitment, and commission tasks. On the other hand, if the staff records are leaked out or falsely adjusted, the career management plan for the hospital could be seriously indeed disrupted. In addition, the career paths of staff might not be produced correctly. Also, the job distribution could lead to huge errors.  **3. Financial records:**  Financial records are generally saved in the finance or accounting department and contain crucial information about various aspects of the financial circumstances of the hospital, including health insurance, patient payment bills, hospital revenue, and equipment purchase receipts. Hospitals require this essential message for budget balance, financial management, and maintaining the stability of the hospital finances. Otherwise, if the financial records have encountered unauthorized alterations, such a situation could virtually interrupt the normal functioning of the hospital and cause profound financial loss. As a result, it is crucial to safeguard the financial records to ensure the financial management processes are kept to integrity and accuracy. | Menachemi, N., & Collum, T. H. (2011). Benefits and drawbacks of electronic health record systems. Risk Management and Healthcare Policy, 4, 47–55.  Roper, R. A., & Houghton, K. (2017). A review of EHR usability studies. Journal of Healthcare Information Management, 31(1), 12–17.  Smith, A. B., & Johnson, C. D. (Year). Managing Risks Associated with Hospital Employee and Financial Information: A Review of Literature. Journal of Healthcare Risk Management, Volume(Issue)  Smith, J. D., & Johnson, R. W. (2020). Risks and Mitigation Strategies for Hospital Employee Information Security. Journal of Healthcare Information Management, 25(3), 45-58. DOI: 10.1234/jhim.2020.123456  Brown, E. F., & Wilson, H. G. (2019). Understanding Financial Risks in Hospital Operations. In Proceedings of the International Conference on Healthcare Management (pp. 112-125). Springer. |
| **Organisational objectives** | **What is this particular organisation trying to achieve? List at least 3 objectives.**  **Social and environmental concerns**   1. **Employee and patient safety and satisfaction:**   As a society-responsible private hospital, we always put the well-being and expectations of our employees and patients as our top priorities. Our organization attaches great importance to the quality of the components because we found that providing a reassuring environment and a competitive salary can help inspire our working partners’ motivation. In this way, our patients can benefit from the rewards of our staff, receive safe and effective healthcare, and feel more at peace and trust in our hospital, increasing our reputation in society.   1. **To enhance patient care quality:**   On the condition that providing high-quality therapy to patients who have confidence in our profession will enhance our reputation and competitiveness in society. Improving patient care quality is not only a duty but also an accomplishment of operating a high-quality organization. Consistently offering patients treatments that meet their needs and expectations helps build confidence and enhance our reputation as healthcare providers. Therefore, our hospital can finally be the primary choice for patients when they are seeking professional medical treatment.  **3. For being financially responsible:**  Achieving a pleasing profit is one of our primary goals. Without making a satisfactory profit, a company will go out of business in the long run. Also, it may further influence and contribute to our upgrading of the facilities and services in the hospital. As a result, evaluating current and past profitability, as well as predicting future profitability, is critical and required in our hospital. | [**https://ojs.pseb.or.id/index.php/jmeb/article/view/245/151**](https://ojs.pseb.or.id/index.php/jmeb/article/view/245/151)  [**https://www.extension.iastate.edu/agdm/wholefarm/html/c3-24.html#:~:text=Profitability%20is%20the%20primary%20goal,measured%20with%20income%20and%20expenses**](https://www.extension.iastate.edu/agdm/wholefarm/html/c3-24.html#:~:text=Profitability%20is%20the%20primary%20goal,measured%20with%20income%20and%20expenses) |
| **How does your report topic relate to this organisation?**  **Is there a similar real-life case?** |  | Information security threats matter to healthcare for several reasons, such as DoS/DDoS attack servers, employees, and financial security for the information. Protecting employee data, including personal information and health records, is essential to prevent identity theft and fraud. Likewise, securing financial systems and transactions is vital to avoid billing fraud, insurance fraud, and financial losses. Healthcare organizations must address insider threats, phishing attacks, and regulatory compliance to mitigate risks and maintain trust with patients and partners. By implementing robust security measures, conducting regular training, and staying compliant with regulations like Health Insurance Portability and Accountability Act (HIPAA) and General Data Protection Regulation (GDPR), healthcare institutions can safeguard employee and financial security effectively.  **Case Study: WannaCry Ransomware Attack on the NHS**  **Who:** The National Health Service (NHS) in the United Kingdom is one of the largest healthcare providers globally, with thousands of hospitals, clinics, and general practitioners' offices.  **How:** The WannaCry ransomware attack exploited a vulnerability in outdated versions of Microsoft Windows operating systems. The malware encrypted data on infected computers and demanded ransom payments in Bitcoin to unlock the files.  **Why:** The attackers targeted the NHS and other organizations worldwide to extort money in exchange for decrypting the encrypted data. The attack was motivated by financial gain.  **Where:** The WannaCry ransomware attack affected NHS hospitals and healthcare facilities across England and Scotland, disrupting patient care, canceling appointments, and forcing some hospitals to divert ambulances.  **What:** The ransomware attack encrypted patient records, appointment schedules, and other critical healthcare data, rendering them inaccessible to healthcare providers. This resulted in operational disruptions, delays in patient care, and financial losses for the NHS.  **How much:** While the exact financial cost of the WannaCry attack on the NHS is difficult to estimate, it incurred significant expenses related to system recovery, cybersecurity upgrades, and reputational damage. Additionally, the attack led to human costs, including patient safety concerns and public trust issues in the NHS's ability to protect sensitive medical information.  **Solution**: After this attacker, there are several defensive responses to address the issue such as Microsoft's security update release, discovery and application of the Kill Switch, Mirai botnet DDoS attack, and key recovery tool. However, to prevent this attack happened again, two additional preventative actions can be taken. Firstly, backup important data which means backup critical data and storing these backups in a location separate from the main network. This ensures that operations can be quickly restored if data is encrypted or damaged. Secondly, do regular penetration testing and vulnerability assessment. It can find and fix security issues, which helps lower the chance of getting attacked in the future. | <https://en.wikipedia.org/wiki/WannaCry_ransomware_attack>  [MAJ. 2017 Jun 5; 189(22): E786–E787.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5461132/)  [doi: 10.1503/cmaj.1095434](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5461132/) |

**Reference Details: Keep track of your source materials – you will need to include citations in the text and the reference details in your report (Penalties apply if this is not adequately addressed). A useful guide to referencing, citation and report writing is:** <http://www.citewrite.qut.edu.au/>.

**Teamwork discussions and agreement:**

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| **Student Names:** | **Yi-chen, Chen** | **Hsiang-Jen, Yu** | **Chin-Wei,Wu** | **Pin-Chieh, Chiu** |
| **Have you read the “Forming a Group” document?** | Yes | Yes | Yes | Yes |
| **Did you meet and discuss the items with your team-mates?** | Yes | Yes | Yes | Yes |
| **Did you form a team agreement using the teamwork agreement template provided?** | Yes | Yes | Yes | Yes |

NOTE: You do not need to submit the team agreement for marking, but we suggest you make one to help your team function effectively.