

**BSBCRT611**

**APPLY CRITICAL THINKING FOR COMPLEX PROBLEM SOLVING**

**STUDENT VERSION**

**PROJECT PORTFOLIO**

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| Student name: | Shirley |
| Assessor: | Peng |
| Date: | 22/12/2023 |
| Business this assessment is based on: | Simulation pack |
| Documentation reviewed as preparation: | Worlducation’s Privacy Policy and Procedures  Performance Management Policy and Procedures  Documentation Policy and Procedures |
| Job role: | Head of Operations and Manufacturing |
| Stakeholders: | * Management (Plan the program, be responsible for the daily operation of the company, manage the company and formulate the strategy) * Investors (provide financial support) * Software developers(develop program and provide technical support) * Users(bring profits, find problems) * Consultant (Listen to customer needs and communicate with customers) * Supplier (Provide products to ensure that supply meets demand) |
| Numeric/Financial data: | It is expected that 2,000 tablets will be completed in April and only 500 due to the COVID-19. In 2019, Worlducation revenue increased while net profit decreased and net cashflow of negative $3 million.The internal costs incurred by the senior management total 300 per hour. Measures to consider in 2020: Establishment of new facilities (estimated cost $5 million). Outsourcing manufacturing to a third party (lost margin of $200 per).Development of new software (estimated cost: $2 million). Purchasing off the shelf tablets (lost margin of $300 per). repurposing used tablets ($100 per) |

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| A close up of a logo  Description automatically generated | Section 1: Defining the complex issue |

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| Provide business overview  *Provide an overview of the business, including:*   * *name of business* * *description of what the business does (e.g. key functions, vision)* * *your job role within the business (or the role you’re assuming if you are basing this assessment on the case study).* | Business name: Worlducation  What Worlducation do:  Worlducation is a social startup that manufactures tablet computers for primary school students. Its vision is to see a world without illiteracy. Its mission is to be the change and facilitate a world without illiteracy by changing the way children learn at school and the number of schools that have access to technology. Its products are tablets and it offers a service that uses artificial intelligence to change the way children learn in school.Business growth plan including :Establishment of new facilities (estimated cost $5 million).Outsourcing manufacturing to a third party (lost margin of $200 per).Development of new software (estimated cost: $2 million). Purchasing off the shelf tablets (lost margin of $300 per). repurposing used tablets ($100 per) and achieve profits of at least 10% per annum. Because of COVID-19, more people need to use it and the market has expanded, but as the government restricts supply and factories are temporarily closed, supply is reduced and demand exceeds supply. Worlducation headquarters are in Sydney’s CBD but they have a development team in Bulgaria, a manufacturing team in Hong Kong, and operation and marketing staff in Colombia, Egypt, Iceland, Russia and the Philippines.  Role ：Head of Operations and Manufacturing Team(Collaborate with sales and financial analysts to enhance the company's competitiveness) | |
| Outline complex issue  *Describe the complex issue associated with the business, including:*   * *a brief outline of the issue* * *who the stakeholders are and how they are associated with the issue* * *analysis and presentation of numeric and financial data illustrating the complex issue (attach to this section of the portfolio)* * *two objectives when pursuing solutions* * *three advantages of solving the issue.* * *three risks involved in pursuing solutions.* | complex issue：  Since COVID-19 and the closure of the factory due to government restrictions, of the 2000 tablets due to be shipped by April, only 500 were completed on schedule.Following the unprecedented growth in demand and disruptions to the supply chain,cashflow of negative $3 million. projected to result in significant cash flow pressure in the latter half of 2020.  List of Stakeholders:   * Management (Plan the program, be responsible for the daily operation of the company, manage the company and formulate the strategy) * Investors (provide financial support) * Software developers(develop program and provide technical support) * Users(bring profits, find problems) * Consultant (Listen to customer needs and communicate with customers) * Supplier (Provide products to ensure that supply meets demand)   The actual income differs greatly from the expected income, and there is a lot of financial pressure. The budget invested is larger than the actual net profit obtained  Objectives:  1.The first goal is to find an effective solution to the problem. This may include identifying the root cause of the problem, understanding its impact on the organization or individuals, and then developing solutions.  2.The second goal is to minimize any negative impact that the problem may have on the organization or individuals. This may include reducing the financial costs of the problem, minimizing the time required to solve the problem, and ensuring that there are no long-term consequences.  Three advantages of solving the issue   1. The company has abundant human resources 2. Good cooperation with sponsors 3. Excellent quality   Three risks involved in pursuing solutions.   1. Employee turnover 2. The raw material provider is unable to provide the raw materials 3. Unable to meet expectations | |
| Legislative and organisational requirements  *Establish the legislative and organisational requirements related to the complex issue, including:*   * a summary of the relevant legislation * *a summary of the associated organisational policies and procedures*   *Attach any relevant policies to your portfolio.* | Legislation is put in place to make sure everyone is as safe as possible and to protect all stakeholders.  Example: Privacy legislation - Occupational Health and Safety legislation  The main function of ISO is to provide a mechanism for people to agree on international standards.  Example:ISO – ISO9001:are generic and are intended to be applicable to any organization, regardless of its type or size, or the products and services it provides. ISO 9001 helps organizations demonstrate to customers that they can offer products and services of consistently good quality. It also acts as a tool to streamline their processes and make them more efficient at what they do.  Policies and procedures: Policies and Procedures are a set of rules and methods designed and communicated to structure certain processes within an organization. This term embraces the set of instructions given to employees from general guidelines to specific steps applicable to job positions.  Example: Worlducation’s Privacy Policy and Procedures  Performance Management Policy and Procedures  Documentation Policy and Procedures | |
| Calculate resources  *Calculate the resources required for the solution development process* | Funding: The development of the solution may require certain financial support, which may include employee salaries, equipment procurement, infrastructure costs, etc.  Equipment requirements: Developing solutions may require specific hardware or software. This may include servers, development workstations, testing equipment, etc. In addition, professional software such as IDEs, version control systems, etc. may also be required.  Time: The development of a solution may take some time to complete, depending on factors such as the complexity of the problem, team skills and experience, and resource availability. | |
| Prepare presentation  *Use the work done in this section to prepare a presentation of scope of your issue to present to relevant stakeholders.*  *Use any appropriate format (e.g. MS PowerPoint).*  *Attach the presentation to your portfolio.* |  | |
| *Paperclip* Attach: | Organisational policies and procedures |  |
| Legislation |  |
| Presentation |  |
| Financial analysis and presentation |  |

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| A close up of a logo  Description automatically generated | Section 2: Systematic decision-making |

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| Generate alternative solutions for your issue  *Summarise the outcomes of your meeting with the stakeholder, including:*   * *an outline of two critical thinking techniques used to generate solution alternatives with other stakeholders (attach proof e.g. mind map to this section of your portfolio)* * *List of four to six alternative solutions.* | Logical reasoning: This is the core part of critical thinking, mainly including inductive reasoning and deductive reasoning. Inductive reasoning is the process of summarizing general conclusions from specific facts, while deductive reasoning is the process of deriving individual conclusions based on general premises.  Critical analysis: This is another important technique of critical thinking, which mainly includes analyzing and evaluating information, identifying and avoiding biases, and evaluating the rationality of arguments. In critical analysis, it is necessary to learn to distinguish facts and viewpoints, evaluate the credibility of information and the reliability of sources, identify logical errors and biases in arguments, in order to understand and evaluate things more comprehensively and objectively.  1.More training and education: Provide more training and education to help employees better understand complex issues and improve their decision-making abilities.  2.Introducing external experts: Introducing external experts or consultants who can provide deeper professional knowledge and experience to help solve complex problems.  3.Increase communication with customers: Provide online customer service to ensure that customers can ask and solve problems when they have problems. At the same time, follow up on customer satisfaction and establish the company's reputation.  4.Provide more support and resources: Provide more support and resources.  5.Conduct market research:identify strengths and weaknesses, and leverage strengths and avoid weaknesses | |
| Evaluate alternative solutions  *Evaluate each identified solution to establish their feasibility. Include:*   * *success criteria* * *constraints* * *evaluation of each alternative against the criteria and constraints* * *List of all feasible options* | *success criteria ：The work efficiency and effectiveness of employees have been improved.*  *Customer satisfaction has been improved.*  *The overall operational effectiveness of the company has improved.*  Constraints：Educational resources (such as funding, time, personnel)  The cost and cooperation conditions for hiring external experts.  Resources and costs of services  Reasonably allocate and utilize these support and resources  The company's sensitivity and ability to respond to market changes   |  |  |  |  | | --- | --- | --- | --- | |  | *Work efficiency* | *Customer satisfaction* | *Operational effectiveness* | | More training and education | Y | Y | Y | | Introducing external experts | Y | Y | Y | | Increase communication with customers | Y | Y | Y | | Provide more support and resources | Y | Y | Y | | Conduct market research | Y | Y | Y |   All feasible options:   * More training and education * Introducing external experts * Increase communication with customers * Provide more support and resources * Conduct market research | |
| Compare feasible solutions  *Use one appropriate tool/technique to compare all feasible alternatives with one another. Include:*   * *a description of the tool or technique used* * *proof of your comparison (e.g. table, financial analysis etc)* * *an assessment of bias in your decision-making (actual or perceived)* |  | |
| Choose the best solution for your complex issue  *Choose the best alternative and explain:*   * *Why did you choose it?* * *How does it meet the legislation and organisational policy requirements?* * *Are there any risks associated with your solution?* * *What are the advantages of the chosen solution?* * *Resources required* |  | |
| Prepare a brief  *Use the work done in this section to prepare a brief to share your proposed solution with key stakeholders (use “Brief outline” template if applicable).*  *Attach the organisation policies that guide brief writing to this section of the portfolio.* |  | |
| *Paperclip* Attach: | Brief |  |
| Feedback register |  |
| Organisational policies - brief |  |

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| Develop a feedback register  *Develop a feedback register to record feedback from stakeholders.*  *Attach the organisation policies that guide recording of feedback.* |  | |
| Incorporate feedback  *Use the feedback from your meeting with stakeholders to refine your project brief.*  *Attach the refined brief and completed feedback register to this section of your portfolio.* |  | | |
| Seek approval  *Use an appropriate format to seek approval to implement your proposed solution (e.g. draft an email, complete an application form ready to be lodged etc.)*  Attach proof to this section of your portfolio. |  | | |
| Self-evaluate your performance  *Perform a self-evaluation:*   * *Complete the self-evaluation checklist (add as an attachment).* * *List your strengths and weaknesses.* * *Identify areas needing improvement.*   *Attach the completed self-evaluation (Self-Evaluation checklist) to this section of your portfolio.* |  | | |
| PaperclipAttach: | Self-evaluation checklist |  | |
| Refined brief |  | |
| Completed feedback register and related organisational policies |  | |
| Proof to seek approval |  | |