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| **Qualification details** |  | | |
| **Training Package code and title:** | ICT – Information and Communications Technology | | |
| **National Qualification**  **Code & Title:** | ICT40418 Certificate IV Information Technology Networking  ICT40118 Certificate IV Information Technology  ICT41015 Certificate IV Computer Systems Technology | **State code** | BEH0  BEH4  AVZ7 |

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| **Assessment Task** | AT01 – Knowledge Questions | | |
| **Location of assessment** | South Metropolitan TAFE  Murdoch Campus – Floor 1 – T Block – Room T108  Rockingham Campus – Block F – Room RHF30  Thornlie Campus – Block 8 – Room 8G31 | | |
| **National Code & Title** | ICTICT426 OAQ12 Identify and evaluate emerging technologies and practices | | |
| **Date Due** | 14/10/2022 | **Date Received** | 07/10/2022 |

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| **Student Name and ID** | Richard Pountney 30007736 |
| **Student Declaration** | I declare that the evidence submitted is my own work:  RBP  ………………………………………….. |

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| **Assessor Name** | **Assessor Name** | | | |
| **Assessment Decision** | Satisfactory | | Not Yet Satisfactory | |
| **Assessor Signature** |  | | **Date** | Click here to enter a date. |
| **Is student eligible for reassessment (Re-sit)?** | No | Yes | **Reassessment Date:** |  |

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| **ASSESSMENT FEEDBACK** | | | | |
| **Assessment Decision** | Attempt 1 | | ☐ Satisfactory | ☐ Not Yet Satisfactory |
| Attempt 2 | | ☐ Satisfactory | ☐ Not Yet Satisfactory |
| Attempt 3 | | ☐ Satisfactory | ☐ Not Yet Satisfactory |
| **Assessor Name** |  | | | |
| **Assessor Signature** |  | | **Date:** |  |
| **Feedback to student** | | | | |
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| **Feedback from student** | | | | |
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| **Student name** | |  | | |
| **Student’s signature** | |  | **Date:** |  |

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| **INFORMATION FOR ASSESSORS** |
| Students are required to answer a series of knowledge-based questions.  A marking guide has been provided |
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| **INFORMATION FOR STUDENTS** | |
| Purpose of Assessment | This assessment evaluates your knowledge of:   * Planning the implementation of new technology into a business * The impact the new technology will have on the business |
| Allowable materials | Weekly Readings, Class notes, Weekly Activities |
| Required resources | Computer with:   * Computer operating system; * Internet Access; * Word processing software; * Access to online learning system; |
| Assessment Presentation and Submission | For this knowledge assessment you must complete ALL questions.  Use of research tools in formulating answers are acceptable – but work submitted must be student’s own work.  Final documentation is to be uploaded to the appropriate area in the Blackboard course created for this class.  If you are marked as NYS (Not Yet Satisfactory) on your first attempt, you will be provided with another opportunity to re-attempt the assessment at the discretion of the lecturer. |
| Project contents | This assessment consists of 3 sections   1. Researching new technologies 2. Implementing new technology 3. Technology within the organisation |
| Knowledge being assessed | To complete the unit requirements safely and effectively, you will demonstrate knowledge related to the following:  ICTICT426 - Identify and evaluate emerging technologies and practices   * Research approaches for emerging technologies and practices in the ICT sector and their potential impact on current technologies and practices * Technology implementation planning methods * Organisational technologies and practices   Time Allocation: 3 hours, in session 4 (See DAP) |

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| **Reasonable Adjustment** |
| Please refer to the DAP for reasonable adjustment guidelines |

**ASSESSMENT INSTRUCTIONS**

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| **SCENARIO** |
| You work for a small managed service provider (MSP), “CITE-MS”. CITE-MS provides technical support to businesses in the Perth area. As part of the full-service approach that CITE-MS takes with their customers, CITE-MS is often called upon to design new systems and implement new technologies into their customer’s businesses. The questions below will be used by management to decide if you are able to move from a service desk role, into a role more aligned to designing technology solutions for their customers. |
| **STUDENT SUMMARY INSTRUCTIONS** |
| 1. Complete ALL questions in the assessment 2. Once ALL questions are answered, submit the assessment to Blackboard under AT01. |

Research approaches for emerging technologies and practices in the ICT sector and their potential impact on current technologies and practices

Q1. When researching new technologies, the various approaches have advantages and disadvantages. Discuss each of the approaches below.

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| **Research option** | **Advantages** | **Disadvantages** |
| Finding either an online course or a classroom-based course that teaches the new technology. | Could learn how to use the new technology. | Could be a long course. Costs to learn. |
| Looking at the vendor website for technology options. May include case studies by the vendor on other companies that have implemented the technology. | Will give some extra details about the technology & how it works with other tech | Could be time-consuming. Can be a lot of information to process & read through. |

Q2. When implementing a new technology into a business, there will be both positive and negative impacts on the business and business practices. Discuss each of them below.

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| **Business or business practice** | **Positive impact** | **Negative impact or issue** |
| TAFE currently uses PowerPoint to give lectures. Someone has suggested we use VR instead. What would be the positive and negative impacts on how we deliver lectures? | It can be more interactable. | VR is Expensive. May not be able to be recorded especially with certain VR systems. |
| A managed service company is looking at adding an AI system as a first point of contact for customers calling with problems. How could this impact how the company deals with customers? | Don’t need as much staff.  Can be more cost-efficient. | Some interactions may not be thought of so the AI may not know how to handle the situation. People may not like interacting with an AI. |

Q3. When implementing a new technology into a business, the impact on existing technology would need to be examined. For the following businesses, discuss how changing to the new technology would impact the existing technology, as well as issues that would need to be considered.

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| **Business technology change** | **Impact on existing systems** | **Potential issues to be considered** |
| A small business has 1 AD server and 10 client PCs. The AD server is just used to process logins. They are considering moving the AD system to the cloud. | Makes more space because the AD system isn’t taking up space. | If there is no Internet connection, then the PCs won’t be able to login. |
| A taxi company is looking at using self-driving cars in the future instead of people. They want to be a “first adopter” once the technology is available. | Don’t need to pay drivers. | Safety of pedestrians. How to fuel the taxi. |

Technology implementation planning methods

When planning for new technology, we needed to look at the current systems, and where we wanted to be. We used two types of tools – a “gap analysis” and a “SWOT analysis”. Briefly describe each of these in your own words.

Q4. Gap analysis

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| Gap analysis is used to compare actual performance with desired performance. |

Q5. SWOT analysis

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| SWOT analysis can help you get insight into any risks that may occur with using new technology.  It helps you identify the Strengths, Weaknesses, Threats & Opportunities associated with the event of using new technology. |

Q6. When implementing the new technology, you may start the process with “prototyping”. Briefly describe what prototyping is.

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| Prototyping is a baseline of testing & implementation of a process or program. |

Organisational technologies and practices

Q7. Security for devices is an important consideration. What practices would an organisation need to have in place to make sure each of the following technologies is secure? What are the security issues if they don’t? Remember that the technology still must be able to fulfill its intended purpose.

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| **Organisational technology** | **Potential security issue/s** | **Practice to be implemented to secure the technology** |
| A small business implements Internet-connected security cameras allowing the owner to monitor the business after hours on his phone or PC. | People who have access to the internet that the cameras are connected to could have access to the cameras. | Have a password/passcode to access the cameras so only people that know the password/passcode can use them. |
| A small company has decided to implement a “work from home” option for staff one day a week. Staff will be able to connect to the work computers over a VPN and have access to the same software they do at work. | The work computer has to be always on to be able to connect to it so others could use it if they want. Others may be able to connect to your computer. | The Staff should be able to use the programs on their own computer & have a repository to store their work on so they can continue from where they were up to after committing & pushing their work to their repository. |