**9.1: Analyse the risks related to implementing a new computer system in an organisation. (M1 – Task 7)**

**Part 1: Security considerations and the dangers inherent in extensive reliance on computing for every aspect of life:**

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| **Risk** | **Description and possible issues caused by this risk** | **Recent Example – Describe a recent situation where this risk or issue has caused a problem** |
| The attractiveness of systems to criminals or terrorists, e.g. data theft or destruction,  fraud, denial of service, blackmail | Criminals could decide to steal important data or ransom it. | WannaCry NHS ransomware attack |
| difficulty of maintaining compatibility with existing internal systems | New or older software might not be supported by your new operating system | Upgrading to windows 10 |
| difficulty of maintaining compatibility with external systems | New or older software might not be supported by your new browser | Create a web app that can run on browsers |
| increasing complexity of IT systems controlling mission critical applications,  e.g. transportation systems, energy generation and distribution, military systems | More complicated systems require training to be used by staff | Boeing 787 max |
| difficulties associated with ensuring complex systems are reliable, fully tested and fail ‘safe’ | Complex systems are harder to test | NHS test and trace software |

**Part 2: Changing in working practices**

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| **Change in working practice** | **Description of this change in practice on people and organisations – including one positive and negative aspect of this development** | **A description of how this change is affecting Bury College with examples and reasons.** |
| Remote working | This is when you work from home over the internet on your connected device.  A positive aspect of this is the flexibility of your timetable as you can work at different times of the day.  A negative aspect of this is reliance on the internet as if you lose your internet connection you can't do your work. |  |
| Office practices e.g. bring your own device  (BYOD) | This is when you bring in your own device to work from.  A positive aspect of this is the ability to continue your work from anywhere with the increased portability from work, home or on the go.  A negative aspect of this is the possibility for security breaches from foreign devices putting viruses on the organisations network. |  |
| Upskilling of workforce to make use of  more complex systems | This is  A positive aspect of this is  A negative aspect of this is |  |
| Reduction in low skilled jobs due to  automation | This is  A positive aspect of this is  A negative aspect of this is |  |
| Working styles, focus on desk-based jobs move away from traditional manufacturing jobs | This is  A positive aspect of this is  A negative aspect of this is |  |

**Part 3: Increasing reliance on IT and the need to protect against failure, disaster recovery planning, consequences of failure**

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| **Main IT system failure type:** | **Description and a method of avoiding each failure:** |
| Hardware | Damage to hardware from wear and tear. Can be avoided by regularly performing maintenance. |
| Software | Damage to software from malware or hackers. Have antivirus and firewall to prevent this. |
| Natural disaster | Damage to hardware or loss of data from natural disasters like earthquakes or tsunamis. Can be avoided by keeping the computer terminal in a safe area. |

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| **Alternative site type:** | **Description of site type:** |
| Cold | an empty computer room in a building that is geographically remote from the business's main computer site. Should disaster strike, the company will need to purchase and set up server computers at the cold site and install, from backups. |
| Warm | suitable hardware is installed and ready to run the company systems. To get the system running all that is needed is for the latest backups to be restored on the system |
| Hot | A complete duplicate of the companies systems that is usually synchronised. |

**Description of Information Overload:**

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| Having too much data on a server requires a lot of storage space and can cause cpu’s to be stressed and overload and crash. |

**Part 4: Information overload and the difficulty and expense of processing large quantities of data, danger of and consequences of data duplication.**