***Appendix 4:*** *Advantages and Disadvantages of Each Solution*

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| Advantages | Disadvantages |
| COTS Solution | |
| 1) The proven existing solution developed using industry best practices. 2) Efficient portability and easy to incorporate with any system or environment.  3) As the vendor spends many hours on research and development, the solution will result in fewer bugs and a better functional solution. 4) Short implementation time relative to other options.  5) Effective maintenance will be provided as the solution vendor incorporates various customer and user feedback and responses. 6) Fix cost enables the company to plan its financial requirements.  7) The vendor offers efficient support and expert training.  Cloud Specific Advantages:  1) Better user experience and can be accessed "anywhere" and "anytime." 2) Increase scalability and performance due to the cloud's elasticity 3) Minimal capital expenditures 4) Multi-tenancy helps to distribute the cost | 1) The software vendor owns the solution code.  2) Limited customisation and the vendor determines solution functionality.  3) For technical support, the company needs to depend on the vendor.  4) Critical reliance on network performance. 5) Additional cloud security vulnerabilities |
| Open-source Solution | |
| 1) Lower upfront costs as there is no software licensing fee.  2) It is flexible and allows SMEs to frame them to meet specific business requirements. 3) Communities of users and developers freely support it. 4) Minimise an organisation's reliance on a single vendor and protect from vendor lock-in. | 1) Increased Business Risk due to certain vendors' longevity and immaturity 2) Free community-based support can be slower and less efficient 3) More downtime and increased failure rates due to inadequate research and development 4) Companies with unskilled end-users may need to dedicate more time and resources to training or creating more user-friendly interfaces, as open-source solutions are typically created by and for software programmers. |
| Custom In-house Developed Solution | |
| 1) As the solution is developed for the SME's specific requirements, it fits the business and differentiates from their competitors. 2) The SME controls the solution functionality and supporting infrastructures such as servers, databases, and necessary network devices.  3) The SME owns the final solution, source code and the expertise gained as developing it. 4) The relationship between internal teams such as Development and Business helps for effective communication and project delivery. | 1) It can be costly to develop, maintain and improve the solution to meet business needs. 2) It requires project management skills and experiences to perform requirements gathering, analysing, designing, programming, implementing, testing and user training.  3) It requires significantly more IT personnel, project managers, and software developers. 4) Relative to COTS, it is more time-consuming to develop an in-house solution. 5) It may suffer from a lack of portability, as the solution may be firmly built into the SME's requirements. |