**Problem Statement for Proposed Capstone Research Project**

* This form is to be completed by students who are preparing to carry out a capstone research project. Completing a research problem statement is the first step in planning to conduct a research project.
* The form should be completed using **Calibri font, size 12 with 1.5 spacing.**
* The completed form must be submitted as a **PDF** via the appropriate submission portal on your moodle page.

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| **Applicant Details** | |
| Student Name |  |
| Student Number |  |
| Submission Date |  |
| Module Code |  |
| MBA Stream / MSc Program |  |
| Research Methods Lecturer |  |
| **Project Overview** | |
| 1. What is the *preliminary* title for your dissertation research project (10-15 words) | |
| **Early indicators of the challenges faced by Irish Government agencies in adopting the ‘Cloud First’ approach** | |
| 1. What *will be* the aims and objectives of your capstone research project? (200 words max) | |
| **Aim:** To understand the challenges and barriers faced by agencies within the Irish Government with respect to the adoption of cloud-based systems.  **Objectives:** To survey senior IT staff across all agencies within the government in order to measure the success of cloud system adoption and capture the critical barriers experienced in adopting cloud systems. | |
| 1. State the research question(s) that your project *will attempt* to answer. | |
| * + - 1. How successful have Irish agencies been in implementing the cloud first approach?       2. What barriers have Irish agencies experienced while trying implement the cloud first approach? | |
| 1. Outline the rationale for proposing to conduct this research project and explain the academic foundations for the project (750 words max) | |
| Recent years have seen a move towards the adoption of cloud computing by governments across the globe (e.g. Duchatel et al., 2019). Joining this movement, the Irish Government recently issued a cloud computing advice note informing all government agencies to adopt a cloud-first approach (Department of Public Expenditure & Reform, 2019). The note highlights the adoption of cloud computing as underpinning several critical strategies, including Climate Action Plan 2019, Our Public Service 2020 and The Public Service Data Strategy 2019-2023. While the adoption of cloud computing is associated with many clear benefits (Katsonis and Botros, 2015), the successful implementation of cloud-based services and systems is not a guarantee. For instance, despite adopting a cloud-first approach in 2013 (Cabinet Office, 2013a;b), the UK government recently reported that up to 40% of agencies ruling out cloud adoption for IT services on the grounds of certain barriers (UkCloud, 2020). For the Irish government, this highlights the need to progressively evaluate the adoption of cloud services within its agencies and document barriers that might hinder the success of a cloud first approach. This research, which has already been endorsed by Irish government, will provide early indicators about the successes and challenges that government agencies may be facing as they move towards a cloud-based service model.  Could computing, as defined by the US National Institute of Standard and Technology (2011) is “a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.” The move towards this model represents a major departure for government agencies have traditionally relied on localised IT (Jones et al., 2019). From government perspective, cloud offers many advantages including increased productivity and efficiency in service provision and greater empowerment of citizens to access government services (Katsonis and Botros, 2015). For instance, in the UK, the establishment of the G-Cloud platform to streamline procurement of cloud services resulted in an estimated £3.56 billion between 2013 and 2015 (House of Commons, Science and Technology Committee, 2019).  Although cloud technology, once implemented successfully, can bring enormous benefits, organisations must not overlook the difficulties associated with organisational change. The Technology-Organisation-Environment Framework (TOE; Baker, 2011; Flesicher and Tornatzky, 1990) provides a useful lens through which to view the issue of largescale change brought on by technological innovation. The TOE framework states that the factors influencing the adoption of innovative technology exist at three levels:   1. The technological level: This relates to the characteristics of existing and new technology. 2. The organisational level: The relates to organisational size and structure, resources and general management 3. The environmental level: This relates to the nature of the industry an organisation operates within and external dependencies.   This framework can be applied to the existing literature on barriers to implementing cloud systems in government agencies. At the technological level, barriers include lack of skills and knowledge, data security concerns and lack of infrastructure to support cloud systems (Ali, Soar & Shresta, 2018; Sallehudin, 2020; UKCloud, 2020). At the organisational level, agencies report issues arising from budget constraints and support from higher management (Ali, Soar & Shresta, 2018; Sallehudin, 2020; UKCloud, 2020). At the environmental level, dependability of service providers has also been reported as a critical issue (Ali et al., 2018).  As of yet, there have been no reports on the barriers to adopting cloud technology in Irish Government Agencies. This research will seek to provide early insights into the barriers face during the first year of implementation. These insights will help to inform the road ahead for government in supporting its agencies to adopt the Cloud First approach. Ultimately this will help to propel government agencies towards the successful implementation of cloud based services so that those agencies can delivery services more effectively. Moreover, the research will also add to a growing body of empirical and theoretical literature relating to the implementation of cloud technology. | |
| **References** | |
| Provide your list of references below. Include references only if you cite them in the text above. Please use Harvard formatting (see DBS library referencing guide – link on moodle). Remember to evaluate each source for credibility and use only those that meet the strict criteria for credibility. | |
| Ali, O., Soar, J. & Shrestha, A. (2018) *‘Perceived potential for value creation from cloud*  *computing: a study of the Australian regional government sector’*, Behaviour & Information  Technology, 37(12), pp. 1157–1176. doi:10.1080/0144929X.2018.1488991.  Al Mudawi, N, Beloff, N, & White, M (2020) ‘Cloud computing in government organizations: towards a new comprehensive model’. 2019 IEEE Smart World Congress, Leicester, UK, 19-23 August 2019. Published in: The 5th IEEE Smart World Congress. Institute of Electrical and Electronics Engineers ISBN 978172814035  Baker, J. (2012) ‘*The technology–organization–environment framework’*. Information systems theory, pp.231-245.  Cabinet Office, (2013a) *‘Government adopts “Cloud First” policy for public sector IT’*. Available at: <https://www.gov.uk/government/news/government-adopts-cloud-first-policy-for-public-sector-it>  Cabinet Office, (2013b) *‘Government Digital Strategy: December 2013’*. Available at: <https://www.gov.uk/government/publications/government-digital-strategy/government-digital-strategy>  Department of Public Expenditure & Reform (2019) ‘Cloud Computing Advice Note’, Available at [gov.ie - Cloud Computing Advice Note October 2019 (www.gov.ie)](https://www.gov.ie/en/publication/078d54-cloud-computing-advice-note-october-2019/)  Duchatel, K., et al. (2019). The European Commission goes ‘cloud first’: A roadmap towards trusted cloud adoption to seize the opportunities of digital transformation for EU institutions and agencies. *Cyber Security, 3*(3), 220-232  Tornatzky, L. & Fleischer, M. (1990) *‘The process of technology innovation’.*Lexington, MA: Lexington Books, 165.  Jones, S. et al. (2019) ‘Risks and rewards of cloud computing in the UK public sector: A reflection on three Organisational case studies’, *Information Systems Frontiers, 21*(2), pp. 359–382.  Katsonis, M. & Botros, A. (2015) ‘Digital Government: A Primer and Professional Perspectives’, *Australian Journal of Public Administration, 74(*1), pp. 42–52.  Sallehudin, H. et al. (2020) ‘Performance and Key Factors of Cloud Computing Implementation in the Public Sector’*, International Journal of Business & Society, 21*(1), pp. 134–152  UK Cloud (2020) *‘The State of Cloud Adoption’.* Available at: <https://ukcloud.com/hub/the-state-of-cloud-adoption-report> | |
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