

# Discuss the importance of a postgraduate degree in Enterprise IT Management

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Information Technology and Computer Science has entered every aspect of modern society. One of the main driving factors in this has been Moore's law, where information technology industry has been able to double its performance every two years for the last 50 years (Shalf, 2020). This essay will examine the importance of a postgraduate degree in Enterprise IT Management and discuss the need for IT infrastructure management through Enterprise Architecture Frameworks (EAFs), barriers to implementation of these tools and how to overcome these with a postgraduate degree in Enterprise IT Management.

While it is expected the physical limitations of Moore's law are due to be reached in the near future, the level of investment in other advances in Computer Sciences mean that there is little to no sign of IT adoption slowing down (Shalf, 2020). For an organisation to fully benefit from these advances in technology, the technology needs to be implemented in a robust manner. An Enterprise Architecture Framework (EAF) is a method that aids an organisation to design, implement and manage Information Technology in a way that aligns with business needs. (Dumitriu & Popescu, 2020; Saleem & Fakieh, 2020). If those responsible for managing the Enterprise Architecture do not have the required training and skills, then an organisation will fail to see return on investment (Robertson et al., 2018). Therefore, postgraduate studies in Enterprise IT

Management introduces students to various Enterprise Architecture Frameworks, such as TOGAF, FEFAF and RM-ODP (Dumitriu & Popescu, 2020), providing knowledge and understanding of frameworks, and helping to identify when and how to use them.

Other areas of study include Project Management and Security and Risk Management (University of Essex Online, n.d.). These skills and knowledge gained from this allow implementation of changes effectively. For complex projects, for which IT projects at an enterprise level undoubtedly are, the need for good project management is essential to ensure profitability and maximum return on investment of the project (Kaufmann & Kock, 2022).

Benefits to business of having a well implemented Enterprise Architecture Framework are numerous. Niemi & Pekkola (2020) identify 20 benefits of Enterprise Architecture, including *identifying resource dependencies*, *improved change management*, and *increased stability and agility*. Saleem & Fakieh (2020) literature review groups the benefits into three main themes: *business agility*, *creating competitive advantage*, and *increase value*.

However, evidence from a number of industries has shown that implementing Enterprise Architecture has resulted in mixed success (Robertson et al., 2018). Poor implementation of Enterprise Architecture could be due to a lack of necessary “soft” skills which are essential in industry (Self, 2016; Tripathy, 2020; Volkova et al., 2020; Zhao & Kularatne, 2020). Most Enterprise Architects have a technical background, and do not have the experience or skill set to communicate technical knowledge to a non-technical audience (Robertson et al., 2018). Therefore, benefits of Enterprise Architecture Frameworks are only realised if implemented and managed effectively.

Consequently, Robertson et al. (2018) identify four main skills for anyone managing an Enterprise Architecture, *networking skills*, *interpersonal skills*, *stakeholder management*, and *leadership skills*. To reduce the gap between IT and business, Enterprise Managers need to be able to communicate effectively with their stakeholders (CEO's etc.), understand the business direction and needs, and use their technical knowledge to not only find ways to implement the technical requirements, but to also influence the business strategy.

Postgraduate degrees may be able to help with this soft skill shortage, as following the COVID pandemic students responsible for their own learning, time management and organisational skills improved in these areas more than if teaching were classroom based (Brennan et al., 2023). Furthermore, compared to undergraduate studies, postgraduate studies in particular build and nurture the “soft” skills of critical thinking, self-directed learning, and reading around the subject (Self, 2016).

This essay has discussed the merits of Enterprise Architecture Frameworks, barriers to successful working, including poor management, poor networking, and interpersonal skills, all of which rely on robust “soft” skills set in communication. Postgraduate degrees provide the required skills, enabling newly qualified Enterprise IT Managers to ensure a business can fully realise the potential of the information technology they are investing in. In addition to gaining the traditional “hard” skills taught on a course required for managing an Enterprise Architecture environment, “soft” skills obtained through postgraduate studies, in particular, to think critically, be self-motivated to seek out additional information and make links where others have missed, and to influence key

stakeholders through effective communication are key to effective Enterprise Architecture implementation.

## References

- Brennan, A., Dempsey, M., McAvoy, J., O'Dea, M., O'Leary, S., & Prendergast, M. (2023). How COVID-19 impacted soft skills development: The views of software engineering students. *Cogent Education*, 10(1). DOI: <https://doi.org/10.1080/2331186X.2023.2171621>
- Dumitriu, D., & Popescu, M. A. M. (2020). Enterprise architecture framework design in IT management. *Procedia Manufacturing*, 46, 932–940. DOI: <https://doi.org/10.1016/j.promfg.2020.05.011>
- Kaufmann, C., & Kock, A. (2022). Does project management matter? The relationship between project management effort, complexity, and profitability. *International Journal of Project Management*, 40(6), 624–633. DOI: <https://doi.org/10.1016/j.ijproman.2022.05.007>
- Niemi, E., & Pekkola, S. (2020). The Benefits of Enterprise Architecture in Organizational Transformation. *Business and Information Systems Engineering*, 62(6), 585–597. DOI: <https://doi.org/10.1007/s12599-019-00605-3>
- Robertson, E., Peko, G., & Sundaram, D. (2018). Enterprise Architecture Maturity: A Crucial Link in Business and IT Alignment. *Pacific Asia Conference on Information Systems*, 308. DOI: <https://doi.org/https://aisel.aisnet.org/pacis2018/308>
- Saleem, F., & Fakieh, B. (2020). Enterprise architecture and organizational benefits: A Case Study. *Sustainability (Switzerland)*, 12(19). DOI: <https://doi.org/10.3390/su12198237>
- Self, R. J. (2016). Assessing Undergraduate and Postgraduate Hard and Soft Skills in Analytics and Data Science Courses. *Proceedings of the SAS Global Forum*, 1–8.
- Shalf, J. (2020). The future of computing beyond Moore ' s Law Subject Areas : *Philosophical Transactions Royal Society A*, 378(20190061), 1–14. DOI: <https://doi.org/http://dx.doi.org/10.1098/rsta.2019.0061>
- Tripathy, M. (2020). Dimensions of critical thinking in workplace management & personal development: a conceptual analysis. *Multidisciplinary Journal for Education, Social and Technological Sciences*, 7(2), 1. DOI: <https://doi.org/10.4995/muse.2020.12925>
- University of Essex Online. (n.d.). *MSc Enterprise IT Management*. Retrieved April 23, 2024, from <https://online.essex.ac.uk/courses/msc-enterprise-it-management/#coursestructure>
- Volkova, N., Zinukova, N., Vlasenko, K., & Korobeinikova, T. (2020). Soft skills, their development and mastering among post graduate students. *SHS Web of*

*Conferences*, 75, 04002. DOI: <https://doi.org/10.1051/shsconf/20207504002>

Zhao, Z., & Kularatne, I. (2020). Relationship between Generic Skills and Employability Skills: An Exploratory Study in the Context of New Zealand Postgraduate Education. *Management*, 15(4), 291–307. DOI: <https://doi.org/10.26493/1854-4231.15.291-307>