Development of a Framework for the Implementation of Sustainable Enterprise Resource Planning

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Abstract

Sustainable Enterprise Resource Planning (S-ERP) is an enterprise system that designed to integrate sustainability activities between corporate sustainable business functions. This system enables practitioners to effectively practice sustainability in an organisation. Systemanalyse und Programmierung (SAP), Oracle, and Microsoft have designed the S-ERP system for various types of industry. However, a number of organisations still have a problem of implementing the S-ERP system as it is a multifaceted system that needs managerial and technical skills to implement. Therefore, they need a master plan that provides a comprehensive guidance for practitioners to implement this system. According to a literature, there is no available master plan that assists the organisations to implement the S-ERP system. This issue will obstruct the implementation process. Therefore, this issue motivates the researchers to develop an S-ERP master plan that encompasses three parts: roadmap, framework, and guidelines. A study focused on the development of an S-ERP roadmap has been performed in the earlier work entitled “A master plan for the implementation of sustainable enterprise resource planning systems (part II): development of a roadmap” (Chofreh et al., 2016b). In addition, the S-ERP roadmap has been evaluated in the work entitled “A master plan for the implementation of sustainable enterprise resource planning systems (part III): evaluation of a roadmap” (Chofreh et al., 2016c). Subsequently, this study aimed to summarise the development process of the S-ERP framework. This framework would give a comprehensive perspective to implement the S-ERP system. A conceptual research method is used to develop this framework by reviewing two related areas on sustainability and Enterprise Resource Planning (ERP) system implementation and exposing the knowledge gap. The literature revealed that there are diverse dimensions considered in the sustainability and ERP implementation frameworks. These dimensions are generally considered two main paradigms including sustainability...
paradigm and decisional paradigm. The sustainability paradigm consists of three sustainability dimensions including environment, social, and economic. The decisional paradigm consists of three decision-making levels in an organisation including strategic, tactical, and operational. The S-ERP framework is developed by integrating these two paradigms and unites them into one holistic structure. The breakdown of each component and level of the paradigms is identified according to the relevant literature. Concisely, this framework would be a potential guidance for practitioners to distinguish various perspectives that need to be considered for the S-ERP system implementation. The framework hopefully can assist the practitioners to mitigate the problems during the S-ERP system implementation.