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Special Issue Editorial: Enterprise Systems Frontiers

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1 Introduction

Historically, the advent of enterprise systems in the late 1990s marked a new era of information systems that increased the value of real-time information, a process-orientated approach, and information transparency (Klaus, Rosemann, & Gable, 2000). Moreover, enterprise systems established a pathway for organizations to innovate by providing a holistic view of them (Sedera, Lokuge, Grover, Sarker, & Sarker, 2016) and a single integrated system for their common core business activities (Seddon, Calvert, & Yang, 2010). Researchers have presented much evidence for the technological, operational, and knowledge capabilities that enterprise systems that enable organizations to increase efficiencies and innovations provide (Tan, Tan, Wang, & Sedera, 2017, Srivardhana & Pawlowski, 2007, Sedera et al., 2016). Over the past 20 years, organizations have made substantial investments into implementing, maintaining, and upgrading such enterprise systems. Considering the benefits of the enterprise systems, organizations have considered them as their operational backbone (Ross, Beath, & Sebastian, 2017). On the contrary, researchers also highlight the disadvantages and weaknesses of enterprise systems (Eden, Sedera, & Tan, 2014) such as ongoing implementation delays, costly upgrades (Keil & Tiwana, 2006), their knowledge-draining nature (Sedera & Gable, 2010), lengthy learning curves (Ignatiadis & Nandhakumar, 2007), rigidity (Elbanna, 2006), and their overall resource intensity (Karimi, Somers, & Bhattacharjee, 2007). Such characteristics have precluded many less-resourceful organizations from engaging with enterprise systems (Sammon & Adam, 2010). Even resourceful counterparts have found it difficult to justify the continuous investments into systems that purportedly simply “kept the lights on”.

We first selected the papers in this special issue from the pre-International Conference on Information System (ICIS) workshop on enterprise systems management that the Enterprise Systems Special Interest Group (SIG-ES) organized in December, 2016. The revised submissions underwent the standard review process at the *Journal of Information Technology Theory and Application (JITTA)*. The review process—from submission to completion—took over 13 months and yielded seven publications. These publications represent thoughtful insights and provide valuable guidance to advance research on enterprise systems.

2 Lessons Learnt

The recent introduction of technologies such as social media, mobile, analytics, cloud computing, and the Internet of things have provided a new frontier for enterprise systems. Such technologies compliment enterprise systems by introducing characteristics such as ease of use, flexibility, and low resource intensity.

The first paper, “The Role of Enterprise Systems in Fostering Innovation in Contemporary Firms” by Sachithra Lokuge and Darshana Sedera, highlights that organizations must shift their focus to digital technologies such as social, mobile, analytics, and cloud computing to seek opportunities to innovate in an increasingly contentious contemporary technology landscape. This study provides guidance on how organizations could innovate using their digital technologies while enterprise systems act as a platform that enables innovation. Furthermore, establishing strong network structures is tantamount to innovative practice and the overall success of enterprise systems (Sasidharan, Santhanam, Brass, & Sambamurthy, 2012).

The second paper, “Incentive Policies for Facilitating Knowledge Sharing in an Enterprise Social Network” by Shankar Sundaresan and Zuopeng Zhang, examines the structure of knowledge sharing in an enterprise social networks through an analytical model and reveals the design and efficacy of various incentive policies to facilitate knowledge sharing. This work provides valuable insights for practitioners to design incentive policies for promoting knowledge sharing in enterprise social networks.

The third paper, “Should We Stay, or Should We Go? Analyzing Continuance of Cloud Enterprise Systems” by Sebastian Walther, Darshana Sedera, Nils Urbach, Torsten Eymann, Boris Otto, and Saonee Sarker, presents a conceptual model of service continuance in the context of firms that adopt enterprise cloud computing. The paper draws attention to socio-organizational and technology-related factors to provide guidance on organizational-level system continuance and its connection to successful adoption. This possible amalgamation of the new technologies with enterprise systems creates a new technology portfolio and promises myriad opportunities for organizations to innovate, seek new efficiencies, and even develop new business models.

The fourth paper, “How do They Differ? Analyzing the Motivations of Posters and Lurkers for Participation in Enterprise Social Networks” by Lisa Giermindl, Franz Strich, and Marina Fiedler, highlights the potential

of enterprise social networks for enterprise-wide collaboration, knowledge sharing, and interaction and reveals the challenges in encouraging participation in these collaborative networks. By investigating a rich data set of 4,892 respondents in a large knowledge-intensive multinational company, the study provides guidance on different user behaviors and guidance to enhance user participation in these networks.

This special issue on the frontiers of enterprise systems is also timely because we are just beginning to see the traditional role of enterprise systems change across organizations around the world, the effects of amalgamations between enterprise systems and new technologies, and how organizational changes emerge through such technological integrations.

The fifth paper, "Identifying Challenges in Business Rules Management Implementations regarding the Elicitation, Design and Specification Capabilities at Dutch Governmental Institutions" by Koen Smit, Martijn Zoet, and Johan Versendaal, explains that to be able to manage decisions and underlying business rules, often organization's most important assets, Business Rules Management should be applied. The article warns of challenges regarding the implementation of the elicitation, design, and specification of business rules and the need to build associated capabilities.

The sixth paper, "Organizational Learning and ERP Post-implementation Phase: A Situated Learning Perspective" by Mehmood Chadhar and Farhad Daneshgar, tracks the sequence of events and issues that led to the enterprise systems failure during post-implementation phase in a large IT service management company in Australia. This study highlights how situated learning theories can enhance our understanding about the issues that create severe complexities and failure in the post-implementation phase of the enterprise systems and to assist management to make more effective strategies to minimize the issues.

Finally, the seventh paper, "Social Shaping Leadership in Enterprise System Acquisition and Development: The Influence of Reference Users in XiZi Holdings" by Barney Tan, Felix Ter Chian Tan, and Yuan Sun, emphasizes the role of appointing new reference actors and how reference users shape and lead the acquisition and development of enterprise systems in one of the largest private enterprises in China. This study provides lessons learnt on social shaping of technology and three intermediary mechanisms in negotiating inter-organizational enterprise systems adoption.

We sincerely thank the authors for their substantial contributions that made this special issue on frontiers of enterprise systems. We thank the editors-in-chief of *JITTA*, Carol Hsu and Monica Tremblay, for providing us with this opportunity to contribute to a topic of continuing importance. Finally, we thank the associate editors and reviewers of the special issue, who devoted their time and effort to bettering IS research.

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About the Authors

Darshana Sedera has authored over 100 peer-reviewed publications on enterprise systems, innovation management, technology use, user expertise, outsourcing and social media. His work has been published in journals such as *Journal of the Association for Information Systems*, *Journal of Strategic Information Systems*, *Information & Management Journal*, *Communications of the Association for Information Systems*, and *Australasian Journal of Information Systems*. His research has been funded by several Australian Research Council grants.

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