

## Editors' Comments

### Special Issue Editorial: The Critical Contribution of Enterprise Architecture to the Performance of Large Private and Public Organizations

Enterprise architecture (EA) has a long history and is by now an essential point of reference for decisions covering business and technology matters. However, as IT has become more pervasive in the operations and strategies of large private and public organizations, research on the contribution of EA and its best practices has rarely been centre stage. An exception is the Ross, Weill and Robertson (2006) study of the strategic value of EA.<sup>1</sup>

This lack of research on how EA creates value in the context of organizational transformations is the motivation for this special issue. We started exploring the available related academic research by running a workshop affiliated with the International Conference on Information Systems in Auckland in December 2014. This workshop attracted in total 19 submissions and helped shape the collective understanding of the role and various forms of impact EA can have as part of different types of organizational transformations. In a multi-staged, thorough review process, we worked closely with the authors and finally selected four papers for this special issue.

These four papers paint a comprehensive picture of the many ways EA improves decision-making processes in complex transformations. These include the strategic change at USAA from selling insurance products to solving the life event challenges faced by its members, the well-orchestrated acquisition program that has made Cisco a world class technology company, the ready seizing of "crisis opportunity" by state governments to make EA relevant to their diverse needs, and the massive transformation of a large Australian retailer to proactively counter the competitive threats. The four papers are briefly outlined here.

Business Architecture is probably the EA layer that is most relevant to organizational transformations. However, it also seems to be the

EA component least understood in academia and practice. In light of this, we appreciate the paper by Mocker, Ross and Hopkins for its valuable insights into how one highly regarded financial service company, USAA, structured its business architecture to service the challenges contingent on its customers' life events.

Rather than taking a frequent internal view of EA, this paper shows how concentrating on customers and their relevant life events, including buying a car, marrying, or burying a loved one, enabled USAA to successfully transform itself into a novel and customer-centric insurance company. The authors discuss relevant design decisions to provide the reader with normative guidelines on how to best align an EA with the business strategy; for example, in the case of USAA, to help members to cope with critical life events. Four lessons learned summarize the paper, emphasizing the importance of EA in integrating business strategy, organization design, human development and IT.

Toppenberg, Henningsson and Shanks provide a very different take on the enabling role of Enterprise Architectures in the context of organizational transformations. Drawing on the longitudinal, global experiences of Cisco, the authors elaborate on the essential role of EA through four critical stages of an acquisition process. Based on over 170 acquisitions, Cisco has developed a sophisticated methodology for diagnosing and integrating acquisitions.

The paper discusses Cisco's approach to an EA-guided acquisition protocol, which covers pre-acquisition, selection, integration and post-acquisition review. Based on the acquisition of Video Solutions, the authors show how Cisco identifies threats to its successful acquisition. In particular, the paper outlines how Cisco derives short-term and long-term value relevant to its business and technology domain from this methodology.

The paper is grounded in qualitative data derived from interviews covering a diversity of stakeholders. These interviews demonstrate the multi-disciplinary challenges and opportunities of EA-enabled transformations. Related governance arrangements and frameworks complement the insights from the four-stage approach.

<sup>1</sup> Ross, J.W., Weill, P., & Robertson D. (2006). *Enterprise architecture as strategy: Creating a foundation for business execution*. Boston, MA: Harvard Business Press.

Together, they support five lessons relevant to organizations and executives responsible for the integration of large-scale acquisitions.

Neo's research on the EA implementations in three US State governments shows that EA is as critical to performance in the public sector as it is to success in the private sector. The analysis highlights the difficulties faced in making EA relevant to the business of government. The limited relevance of bottom-line accountability make public sector agencies potentially prone to the bureaucracy of establishing EA for perceived legitimacy only.

The author argues that EA needs to go beyond being "a really good set of ideas" on paper. The pragmatic use of EA to support business performance comes through strongly in the study of EA implementation in the three US State governments. Critically, managers do not need to adopt the accepted protocol of systematically evolving their EA implementation through an incremental "maturity" approach. Instead, they should be ready to act opportunistically to refresh EA or to implement a new EA program.

In addition, the study describes a number of practices to enhance the relevance of EA, including frequent EA updates to reflect changing needs; addressing existing concerns, rather than promising future gains; better engagement of stakeholders; and facilitating the development of architects with strong people skills to bridge user groups, and to better communicate and sell the value of EA. The message is that EA is not a one-time effort; rather continuous effort is required to sustain EA relevance in the context of dynamic government changes.

Finally, Tamm, Seddon, Shanks, Reynolds and Frampton describe how EA helps RetailCo, a leading Australian retailer in its A\$1B business transformation to counter competitive threats. To do this, EA plays a critical role in supporting a major IT-based renewal to realize the new vision. Specifically, the case study shows how EA creates value by improving IT decision-making processes, facilitating project delivery, and contributing to the robust design of the organization's new digitized business platform.

Five lessons on EA value realization are presented to help other organizations that are setting out on an organizational transformation journey: (1) Build the EA capability prior to transformation, (2) Define rules for EA

engagement, (3) Exercise pragmatism and flexibility, (4) Balance project "quick wins" and platform "big wins", and (5) Adopt a service mindset for EA.

Overall, although the four cases are set in different contexts, they carry the same underlying message: EA is critical to the realization of synergies across an organization, whether strategic business units or state government agencies. This demonstrates that corporate or government functions (in which EA is typically located) play an essential role as overall orchestrators of synergies across all layers of an EA.

Creating value from centralized EA capabilities will increase in importance. The emerging digital economy is transforming most value chains, making the systematic view of holistic architectures a critical enabler to exploit digital potential in corporate or government contexts.

We are grateful to the authors who worked with us for the past 12 months on continuously improving their submissions. They all showed an unconditional commitment to providing the readers of this special issue with inspirational and rigorous research outcomes. We hope that the ideas and findings covered in the following four papers will further increase the value of EA in many organizational transformation projects. Finally, we hope that this special issue is motivational for researchers who like to dedicate their energy to this tremendously important domain.

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## From the Editor-in-Chief:

Our December issue has traditionally been a special issue, and this year is no exception. Sia Siew Kien, Michael Rosemann and Phillip Yetton have treated us to four enlightening papers on enterprise architecture. The special issue began with presentations at the annual SIM/MISQE Pre-ICIS workshop held last December in Auckland. Formal submissions to the special issue took place in February 2015, followed by a peer review process led by the three editors. The four papers published in this special issue were selected by the guest editors after two rounds of review and revisions. Please read SK, Michael and Phillip's editorial in this issue for a summary of the special issue papers.

The last feature of this December issue is an APC report by Heather Smith and Richard Watson describing how the Chubb Group of Insurance Companies has adapted its enterprise architecture in response to changes in technology and changes in the business. The report underscores that enterprise architecture is a malleable and ongoing effort. This case is a follow-up to a 2012 APC report titled "Developing an effective enterprise architecture at Chubb enterprise" (vol. 11, issue 2). APC stands for "Advanced Practices Council" and is membership program within the SIM organization. APC reports do not go through the MISQE review system, but are instead vetted by the APC Council.

As this issue is being finalized, plans are in place for this year's annual SIM/MISQE Academic Workshop to be held in Fort Worth, Texas on Saturday, December 12 from 9:00am to 4:00pm. There are seven presentations around the theme, "Digital Data Streams, the Internet of Things, and Real-time Events." *MISQE* Senior Editor Gabriele Picolli, along with Richard Watson and Federico Pigni, are serving as program chairs of the workshop as well as co-editors of the special issue. If you would like to attend the workshop but have not yet registered, please email Gabriele, Rick, or Federico. And please visit the *MISQE* website ([misqe.org](http://misqe.org)) for the agenda and for the call for submissions to the special issue.

Each year, *MISQE* publishes the results of the annual SIM IT Trends study. In this issue, authors Leon Kappelman, Ephraim McLean, Vess Johnson, and Russell Torres provide a guest editorial that previews the SIM IT Trends study results. The

March issue will contain the complete results and analysis.

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## The Largest IT Investments of Organizations

IT investments reflect the technological priorities of organizations. Participants were asked to select from a list of 41 technologies up to five for each of (a) their organization's largest current IT investments, (b) their personally most worrisome technologies, and (c) those that need more investment. Figure 2 presents the largest investments as a word cloud. Despite the abundance of off-the-shelf and cloud-based offerings, Application Software Development remains a top five investment for the second year in a row, indicating ongoing, widespread demand for bespoke applications.

## The Most Difficult to Find Technical Skills

For the past three years, the "IT Talent/Skill Shortage" has been senior IT leadership's second or third most personally worrisome IT management concern. Since highly skilled personnel are critical to IT's ability to support the organization effectively and efficiently, this year,

for the first time, we asked which technical and soft skills are the most difficult to find and most important to the organization. Figure 3 presents these most difficult to find technical skills as a word cloud.

## This Is Barely the "Tip of the Iceberg"

These issues and more will be discussed in the full report, including IT spending and workforce trends, outsourcing and offshoring, the role of IT in strategy and innovation, how CIOs spend their time and with whom, performance measurement of IT leaders and of in-house and outsourced IT, and much more. So be on the lookout for the full report of SIM's 36th Anniversary IT Trends Study in the March 2016 edition of the *MIS Quarterly Executive*.

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Figure 2: The Largest IT Investments Made of Organizations (N=785)



Figure 3: The Technical Skills Most Difficult to Find (N=785)

