

Introduction to the Digital Government and Business Process Management (BPM) minitrack HICSS'53

Andrea Delgado
Universidad de la Republica
adelgado@fing.edu.uy

Aurelie Montarnal
IMT Mines Albi Industrial
aurelie.montarnal@mines-albi.fr

Hernán Astudillo
Universidad Técnica Federico
Santa María
hernan@inf.utfsm.cl

Abstract

In the last decades the conceptual and technological support for e-government initiatives have evolved from simple websites where news and links to e-government organizations and documents were posted, to complex inter-organizational systems platforms providing dynamic support for collaborative business processes (CBPs) and interoperability within e-government organizations, users and partners. Business Process Management (BPM) deals with the process lifecycle and technologies in organizations willing to drive their business based on the underlying processes they perform, to provide services or products with value for end users. Although many advances have been made in both the foundations of BPM and the technological platforms supporting the enactment of processes, e-government collaborative process present several challenges to be yet addressed.

1. Introduction

In the last decades the conceptual and technological support for e-government initiatives have evolved from simple websites where news and links to e-government organizations and documents were posted, to complex inter-organizational systems platforms providing dynamic support for collaborative business processes (CBPs) and interoperability within e-government organizations, users and partners.

These collaborative processes involve organizations (employees, technologies), partners (providers, consumers), and users (citizens, foreigners) leading to complex interactions within different e-government models and available technologies [1]. Support for increasingly complex interactions between the involved actors is needed, as are capabilities for

payment, event awareness, compliance to regulations and requirements, security, process monitoring and analysis, open data, integration with social networks, business process and event prediction, among others.

Business Process Management (BPM) [2][3] deals with the process lifecycle and technologies in organizations willing to drive their business based on the underlying processes they perform, to provide services or products with value for end users. Successful cross-organizational processes management and enactment within e-government collaborative organizations will lead to better conceptual and technological integration, not only between each other but with citizens and users in general.

The Digital Government and BPM minitrack features e-government with focus on the collaborative processes that organizations and citizens carry out in order to be a part of it, in the context of BPM for e-government. New ideas on how to deal with the complexity of e-government collaborative processes definition, modeling, enactment, monitoring and analysis will provide key ways on improving the e-government experience both for organizations and citizens, taking into account several dimensions such as conceptual, technological, interoperability, agility, social, etc. We solicited papers dealing with any aspect of the business processes lifecycle, use of BPM principles and existing/emerging BPM approaches for discussing cross-organizational models, architectures, ICT integration and support, as well as case studies on the application of BPM to e-government.

2. Sessions

At this year's conference we have one session of the minitrack, where two papers are presented. We start with "Controlling Compliance of Collaborative Business Processes through an Integration Platform within an E-government Scenario", in which Gonzalez

& Ruggia propose an extension of their compliance management approach, addressing compliance requirements of CBPs within e-government scenarios. The work focuses on controlling requirements of CBPs concerning the order of messages (e.g. specified in a choreography). The complete proposed compliance control solution includes a System-level compliance control subsystem (SCC Subsystem) and a Compliance Policy Language (PL4C), and it is formalized using the Event-B method.

Next, Delgado et al. present their work “Towards a Metamodel supporting E-government Collaborative Business Processes Management within a Service-based Interoperability Platform” concerning the definition of a model-driven approach that is focused on the formalization and exploitation of e-government knowledge and information (i.e., metamodels and ontologies) to improve the definition, automated generation, control, monitoring and improvement of e-government collaborative BPs. An e-government metamodel is proposed and integrated into an existing core collaborative metamodel that is defined to support

inter-organizational collaborations whichever the field of application, which was already extended in [4] with four packages containing concepts dedicated to crisis management.

3. References

- [1] A. Delgado, L. González, and D. Calegari, “Towards setting up a collaborative environment to support collaborative business processes and services with social interactions,” in *Service-Oriented Computing - ICSOC 2017 Workshops and Satellite Events, Revised Selected Papers*, pp. 308–320, Springer, 2017.
- [2] M. Dumas, M. L. Rosa, J. Mendling, and H. Reijers, *Fundamentals of Business Process Management*. Springer, 2013.
- [3] M. Weske, *Business Process Management -Concepts, Languages, Architectures*, 2nd Edition. Springer, 2012.
- [4] F. Bénaben, M. Luras, S. Truptil, and N. Salatgé, “A metamodel for knowledge management in crisis management,” in *49th Hawaii International Conference on System Sciences, HICSS 2016*, pp. 126–135, IEEE Computer Society, 2016.