Business Process Stories

Pedro Antunes

LASIGE, Faculdade de Ciências, Universidade de Lisboa
Universidade de Lisboa, Lisboa 1749-016, Portugal

2022

Business process stories are an innovative method for the elicitation and representation of business processes. Unlike 'traditional' process modeling methods (e.g., BPMN), which emphasize formalized, abstract and generalized process representations, process stories capture a diversity of knowledge about how organizations execute their business processes in an informal way.

Process stories combine knowledge about model-based behavior (established routines and rules) with knowledge about context-based behavior (contingent, emergent and improvised activities). Process stories are founded on storytelling theory, which seeks to explain how people make sense of their experiences through stories.

My initial research in this area led to the development of a collaborative tool for process elicitation [1]–[3]. The most innovative aspect of the tool was the adoption of cartoons to depict business processes. The tool provided a library of cartoons showing generic business situations and helped users telling their stories by arranging cartoons and configuring textual elements often seen in cartoons, such as narrative boxes and bubbles. The tool's capacity to generate process stories has been evaluated in various case studies [3], [4].

The experience developing and testing the tool led to a further development, where the dedicated tool was substituted by an off-the-shelf slide presentation tool (Microsoft's PowerPoint and Apple's Keynote). A set of presentation templates were developed to allow users to create their own process stories [3]. This template is available online.

I also developed a method for systematic analysis of process stories based on storytelling theory [5], [6]. The method combines quantitative and qualitative techniques to identify particular features of process stories, including activities, actors and decisions (model-based behavior), as well as references to people, emotions, communications, work settings, decisional factors, work methods, locations, and time-related elements (context-based behavior). The method supports process elicitation, analysis and improvement. In particular, the method helps representing business processes as collections of process stories, which highlight variations, knowledge gaps and attrition between different ways in which a process is instantiated. Therefore, the method contributes to improve process knowledge, representation and implementation.

I have also researched the adoption of process stories in judicial systems, where I suggested the development of judicial systems supporting the parts in a legal process to express their viewpoints using process stories [7], [8].

Bringing further process stories to the mainstream, I investigated how business process experts could use process stories to realize process flexibility [9]. Using interviews, the study provides insights on the dynamics of friction in the business process management lifecycle.

The most recent research related to process stories has been looking at their theoretical foundations and impacts on process flexibility. In a conceptual study, I discuss the theoretical foundations of business processes and how different conceptualizations influence process flexibility [10], [11]. I suggest that process stories help uncovering different process conceptualizations and their impacts on process flexibility. I also contribute to increase organizational flexibility by identifying the major conceptual shifts necessary to fully support process flexibility.

References

[1] D. Simões, P. Antunes, and J. Pino, 'Humanistic Approach to the Representation of Business Processes', in *16th IEEE International Conference on Computer Supported Cooperative Work in Design*, Wuhan, China, 2012, pp. 655–665. doi: 10.1109/CSCWD.2012.6221888.

[2] D. Simões, N. Thuan, L. Jonnavithula, and P. Antunes, 'Modelling Sensible Business Processes', in *2nd International Conference on Future Data and Security Engineering (FDSE). Ho Chi Minh City, Vietnam*, Heidelberg, 2015, vol. 9446. doi: 10.1007/978-3-319-26135-5_13.

[3] D. Simões, P. Antunes, and L. Carriço, 'Eliciting and Modelling Business Process Stories', *Business & Information Systems Engineering*, vol. 60, no. 2, pp. 115–132, 2018, doi: 10.1007/s12599-017-0475-3.

[4] D. Simões, P. Antunes, and J. Cranefield, 'Enriching Knowledge in Business Process Modelling: A Storytelling Approach', in *Innovations in Knowledge Management: The impact of social media, semantic web and cloud computing*, vol. 95, L. Razmerita, G. Phillips-Wren, and L. Jain, Eds. Heidelberg: Springer, 2016, pp. 241–267. doi: 10.1007/978-3-662-47827-1_10.

[5] P. Antunes, J. Pino, M. Tate, and A. Barros, 'Eliciting Process Knowledge Through Process Stories', *Information Systems Frontiers*, vol. 22, pp. 1179–1210, 2020, doi: 10.1007/s10796-019-09922-0.

[6] P. Antunes, J. Pino, and M. Tate, 'Method for Eliciting and Analyzing Business Processes Based on Storytelling Theory', Hawaii, 2019. doi: 10.24251/HICSS.2019.669.

[7] F. Leite, P. Antunes, N. Guimarães, and J. Pino, 'Method Supporting the Adoption of Visual Stories in Judicial Systems', Stockholm, Sweden, 2019. doi: https://aisel.aisnet.org/ecis2019_rp/73.

[8] F. Leite, N. Guimarães, and P. Antunes, 'Judicial Dialogue - Graphic Narrative Perspective', in *1st International Conference on Technologies and Law*, Porto, Portugal, 2013, pp. 139–146.

[9] N. Thuan, H. Ai-Phuong, M. Nkhoma, and P. Antunes, 'Using Process Stories to Foster Process Flexibility: The Experts' Viewpoint', *Australasian Journal of Information Systems*, vol. 26, 2022, doi: 10.3127/ajis.v26i0.3479.

[10] P. Antunes and M. Tate, 'Business Process Conceptualizations and the Flexibility-Support Tradeoff', *Business Process Management Journal*, vol. 28, no. 3, pp. 856–875, 2022, doi: 10.1108/BPMJ-10-2021-0677.

[11] P. Antunes, M. Tate, and J. Pino, 'Business Processes and Flexibility: A Theoretical Perspective', presented at the Australasian Conference on Information Systems, Fremantle, Australia, 2019. doi: https://aisel.aisnet.org/acis2019/7/.