Research Center
Finance & Information Management

Fraunhofer FIT
Project Group
Business & Information
Systems Engineering

Data-driven Process Prioritization in Process Networks

by

Wolfgang Kratsch, Jonas Manderscheid, Daniel Reißner, Maximilian Röglinger

appears in: Decision Support Systems, 100, Special Issue on Smart Business Process Management, 2017, p.27-40

University of Augsburg, D-86135 Augsburg
Visitors: Universitätsstr. 12, 86159 Augsburg
Phone: +49 821 598-4801 (Fax: -4899)

University of Bayreuth, D-95440 Bayreuth
Visitors: Wittelsbacherring 10, 95444 Bayreuth
Phone: +49 921 55-4710 (Fax: -844710)

www.fim-rc.de

WI-582

Data-driven Process Prioritization in Process Networks

Wolfgang Kratsch[1] Jonas Manderscheid[1] Daniel Reißner[1] Maximilian Röglinger[2,a]

[1] FIM Research Center
University of Augsburg
Universitätsstraße 12
86159 Augsburg, Germany

[2] FIM Research Center
University of Bayreuth
Wittelsbacherring 10
95444 Bayreuth, Germany

[a] corresponding author
(maximilian.roeglinger@
fim-rc.de)

Abstract

Business process management (BPM) is an essential paradigm of organizational design and a source of corporate performance. The most value-creating activity of BPM is process improvement. With effective process prioritization being a critical success factor for process improvement, we propose the Data-Driven Process Prioritization (D2P2) approach. By addressing the weaknesses of extant process prioritization approaches, the D2P2 accounts for structural and stochastic process dependencies and leverages log data. The D2P2 returns a priority list that indicates in which future periods the processes from a process network should undergo the next in-depth analysis to check whether they actually require improvement. The D2P2 contributes to the prescriptive knowledge on process prioritization and process decision-making. As for evaluation, we discussed the D2P2's design specification against theory-backed design objectives and competing artefacts. We also instantiated the D2P2 as a software prototype and applied the prototype to a real-world scenario based on the 2012 BPI Challenge log.

Keywords: Business Process Management, Process Prioritization, Process Improvement, Business Process Architecture, Process Logs