An MDA Proposal To Integrate the Measurement Lifecycle Into the Process Lifecycle

Ayman Meidan^{1,3,*}, J. A. García-García¹, Isabel Ramos Ramos¹, David Lizcano² and María José Escalona¹

Received 12 March 2021; Accepted 22 July 2021; Publication 22 October 2021

Abstract

Context: Measuring the Software Development Process (SDP) supports organizations in their endeavor to understand, manage, and improve their development processes and projects. In the last decades, the SDP has evolved to meet the market needs and keep abreast of modern technologies and infrastructures. These changes in the development processes have increased the importance of the measurement and caused changes in the measurement process and the used measures. *Objective*: This work aims to develop a solution to support the measurement activities throughout the process lifecycle. *Method*: Study the current state of the art to identify existing gaps. Then, propose a solution to support the process measurement throughout the SDP lifecycle. *Results*: The proposed solution consists of two main components: (i) Measurement lifecycle, which defines the measurement activities throughout

Journal of Web Engineering, Vol. 20_7, 2081–2130. doi: 10.13052/jwe1540-9589.2074 © 2021 River Publishers

¹University of Seville, Avenida Reina Mercedes s/n, Seville, 41012, Spain

²School of Computer Science, Madrid Open University (UDIMA), Collado Villalba, 28400, Madrid, Spain

³Aragón Institute of Technology, Calle María de Luna 7, 50018 Zaragoza, Spain E-mail: Ayman.meidan@gmail.com; julian.garcia@iwt2.org; iramos@us.es; david.lizcano@udima.es; mjescalona@us.es

^{*}Corresponding Author