



SETE 2024

Measuring MBSE Model Maturity – A Library-Supported Approach

Brett Morris and Derek Rogers
(formerly of) Shoal Group Pty Ltd

ABSTRACT

This paper covers recent work undertaken at Shoal to investigate and develop maturity metrics to increase understanding of the maturity of MBSE models that are built on Shoal and Shoal client projects. Maturity metrics are an important engineering tool that can collectively serve as a leading indicator for project performance. If a project is at a lower level of maturity heading into a major milestone than required there is a good chance of cost and schedule over-run, or quality deficiency. The paper commences with a review of the open literature that identified different methods to track model maturity. The information uncovered during the literature review is then synthesized into an MBSE model maturity assessment method that includes the ability to select MBSE model maturity metrics from a library. The work undertaken to generate a metrics library is presented and the paper concludes with some observations and lessons learned, as well as plans for further work. The approach presented could be used by organisations undertaking MBSE modelling to build their own library of metrics to measure the maturity of their MBSE models as they are developed.

© Shoal Group Pty Ltd 2024

