makes it hard to improve a modeling tool against end user needs. In the past, the Software AG applied expert interviews, pre-release usability tests with pilot users of the ARIS community and other established usability methods in order to improve their modeling tool. However, only little knowledge on the challenges for the modelers' daily work could be identified and explicated.

Against that background, in the context of a research project we were looking for new approaches taking the real user behavior into account to be able to improve the modeling tool based on the real and not yet identified customer needs. Hence, the paper at hand aims at developing a method analyzing different dimensions of usability, whereby both the system design (in terms of a technical support of the process of process modeling) and the process of process modeling itself are explicitly addressed. Established process mining techniques are used for an automatic derivation of usage models which can then be enriched by manifold data like GUI information (e.g. element positions), or arbitrary user, system or context data (e.g. user experience). This renders it possible to analyze the real user behavior in detail and allows the target-oriented improvement of the modeling process and the corresponding software design, especially in terms of its usability. Referring to the general definition of software usability [3], the term "business process usability" should, in this paper, be understood as the extent to which a BPM software can be used for the effective, efficient and satisfactory management of business processes.

Since the potential method needs to combine different research fields from two different research disciplines, information systems (especially process mining) and software engineering (especially human computer interaction and usability engineering), it is necessary to identify the relevant literature from all fields involved. The identified methods and techniques are analyzed with respect to their applicability in the context of mining business process usability, which results in a collection of partial solutions for specific problems and a collection of gaps. To fill these gaps, a design science research approach is applied [4]. The approach of process mining is adapted with regard to the specific requirements of usability engineering. A phase model was developed and a corresponding tool support was implemented within the research prototype RefMod-Miner[1]. The resulting method is then evaluated in the context of a modeling scenario with the ARIS Designer, Version 9, of the Software AG by performing a user study.

After this introduction, Section 2 gives an overview of the related work in the mentioned research fields. Section 3 describes the developed method in the form of a continuous lifecycle, which is then applied in the context of the case study in Section 4. The results and limitations as well as some possibilities for transferring the method to other domains and application scenarios are discussed in Section 5. Section 6 gives an outlook on future developments and concludes this work.

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[1] http://refmod-miner.dfki.de