

Appendix B: Interview preparation and conduction

The interview guide was compiled based on the research questions listed in the introduction of this work.

RQ 1: What are the key characteristics for the representation of continuous processes?

RQ 2: How do experts evaluate the current usability and comprehensibility of BPMN for continuous processes?

RQ 3: What potential improvements can be identified regarding the introduced extensions?

The interview guide is divided into three parts: Questions about key features of continuous processes (RQ1), questions about the experts' opinion of the extensions in terms of comprehensibility and usability (RQ2), and questions about potential improvement measures (RQ3). Questions regarding key features include, for example, a list of features that are to be assessed by the experts according to their relevance. In this first part of the interviews, the experts are asked about important graphical features for the representation of continuous processes as well. In the section dealing with the evaluation of the extensions with regard to usability and comprehensibility, the experts are shown examples of process models, among other things, which they are to evaluate according to the following criteria: Comprehensibility, clarity, simplicity, logic and extensibility. In the third part of the interview, the experts are asked about challenges, weaknesses, and opportunities for improvement in the extensions. These three parts of the interviews are not sharply separated from each other. The questions on the individual sections are partly intermixed in the interview guide.

Two variants of the guide were used to conduct the interviews. The first draft (V1) was tested in practice during the first two interviews (Group 1, Interview 1 and 2). After an initial evaluation, the guide was again expanded to include more precise questions about the usability of the extensions in use together with the BLINDED process engine. In addition, the introduction was adapted to the diverse set of experts in order to provide an example of continuous processes also to people from outside the process industry. A detailed overview of the most important differences is given in Table 1.

Table 1: Main differences between interview guide V1 and V2

V1	V2
Questions about process examples and procedure for modeling	Given examples for continuous processes
-	Introduction of specific terms
Ask about general features for continuous processes	Ask for graphical features
Listed features include more general terms	Features newly formulated to be more specific
Open feedback on models	Evaluation of models based on new set of criteria
Live introduction to BLINDED via browser	Introduction to extensions and BLINDED via screenshots
-	Additional set of questions for feedback on usability

In addition to the interview guide the material was extended for the group “Engineers” by a short introduction to BPMN with an example model and a description of the most important symbols, which are necessary for the understanding of the extensions. The guide was sent to the experts in advance in their native language or English. Due to a recommendation from Engineer 3, the second model was adjusted according to the instructions of the expert, as an error in the presentation could be identified. The relevant documents are attached to the supplementary material for this work along with an overview of the interview order, the respective language and guide version for each interview.

Table 2: Overview of key data on the expert interviews conducted

	Order	Language (DE/EN)	Interview guide version
Group 1			
Engineers			
I1	1	DE	V1
I2	2	DE	V1
I3	3	DE	V2
I4	4	DE	V2
Group 2			
Allrounders			
I1	6	DE	V2
I2	7	DE	V2
I3	10	DE	V2
I4	12	DE	V2
Group 3			
Modelers			
I1	5	EN	V2
I2	8	DE	V2
I3	9	DE	V2
I4	11	DE	V2

Individual appointments were made with the experts to conduct the interviews online. The interviews were conducted in the form of online meetings via video calls. This can be justified by the pandemic measures in place at the time of the conduction due to Covid 19, and the partly international situation of the experts. Experts of Group 1, “Engineers”, were introduced to BPMN using a clear presentation of the elements of BPMN 2.0 in poster form¹ before starting with the actual introduction to the topic. As a basis for the assignment to the three groups, the experts are first asked about their professional background. The auditory recording of each interview begins with the introduction of the interviewing researcher and the experts. The guide is shared with the experts on screen during the entire interview.

¹See http://www.bpm-b.de/images/BPMN2_0_Poster_EN.pdf, accessed 13 July 2021