**SESSION ONE EVALUATION QUESTIONS**

Modelling Process Evaluation

It would be beneficial for us to be able to argue over your expertise in the field of software safety practice. To that end we would be grateful if you could list the attributes of your experience as a software safety practitioner and indicate in parentheses afterwards the number of years' experience you have. For example:

1. Software Safety Engineer (5 years)
2. Principle Software Safety Engineer (3 years)
3. Safety Manager (3 years)
4. Independent Safety Assessor (2 years).

Please use the text box below and list all attributes you believe are relevant. There is no word count limit, but please complete this digitally using an appropriate word-processing software package (such as Microsoft Word), so that we can ensure all comments are fully legible.

| |
|---|
| Independent Safety Consultant with 35 years experience in developing, managing, assuring and certifying safety critical software-based systems. |

Having completed the process to model and understand safety engineering practice, you are now invited to state your levels of agreement with the following statements. Each statement is written at the start of a row, and you are requested to place an 'X' in the column which aligns your level of agreement with that statement. To avoid any ambiguity of responses, please complete this table digitally, using an appropriate word-processing software package (such as Microsoft Word), and only place an 'X' against one column for each statement (statements have a suffix of `EQn').

At the end of each question, a free-text box is provided for you to make any comments you wish to. There is no word count limit, but please complete this digitally using an appropriate word-processing software package (such as Microsoft Word), so that we can ensure all comments are fully legible.

This is not a 'test' of your knowledge, and there is no 'correct' or 'incorrect' answer. Your opinion matters.

| Statement | Fully Disagree 1 | Somewhat Disagree 2 | Neither Agree/ Disagree 3 | Somewhat Agree 4 | Fully Agree 5 |
|---|---|---|---|---|---|
| **Completeness**: Reflecting on your understanding of the process to understand software safety engineering practice, we would like your opinion on the following statement. In considering your response, we ask that you **also** consider applications and technologies **not** covered by the artefacts we provided you with (i.e. from experience throughout your career), and don't restrict your response to **just** the artefacts sent to you | | | | | |
| EQ1: The process considers all elements that together constitute software safety engineering practice (the 10 'steps') | | | | x | |
| It is not clear that the 'as desired' would fully capture all relevant aspects – I guess it comes down to what is understood by 'practice' and what is in scope of 'desired'. Activities and Artefacts could address aspects such as competence, supply-chain management, COTS etc, but it is not clear to me that the process inherently captures this without a reference model for the 'as desired' | | | | | |
| **Ease of Use**: Reflecting on your experience of following the steps in the process to model and assess software safety engineering practice, we would like your opinion on how much you agree with the following **three** statements. | | | | | |
| EQ6: The modelling process instructions are easy to follow (you could follow each step) | | | x | | |
| (Note: there is only one statement here!)<br>Only part of Step 2 has been followed so far… too early to tell.<br>It seems like the scope of application is to software based systems, which is much broader than software safety engineering. I think it would be helpful to be clearer in the scope – what is included and what is not. | | | | | |
| **Effectiveness**: Having applied part of the process to understand software safety engineering practice through the modelling and assessment of practice, we are interested in your thoughts on the overall usefulness of this process. How much do you agree with the following four statements? In considering your response, we ask that you **also** consider applications and technologies **not** covered by the artefacts we provided you with (i.e. from experience throughout your career), and don't restrict your response to **just** the artefacts sent to you | | | | | |

| Statement | Fully Disagree 1 | Somewhat Disagree 2 | Neither Agree/ Disagree 3 | Somewhat Agree 4 | Fully Agree 5 |
|---|---|---|---|---|---|
| EQ10: The process to understand software safety engineering practice will help to identify potential impediments to achieving best practice for software safety engineering | | | | x | |
| **(Pan-industry Applicability)** EQ11: The process to understand software safety engineering practice can be used for any industry and any technological application | | | | x | |
| The effectiveness is very dependent on scope, and the capture of the 'as desired' benchmark. The modelling makes clear the disconnects of the 'as required' definitions, though I suspect in part this is because the extract is not meant to represent the complete process.<br>Many goal based safety standards do not intend to specify all steps. They intentionally only set out outcomes to be achieved (e.g. ISO/IEC/IEEE 15288) and identify a hierarchy of processes, activities and tasks which MAY be used to achieve the outcomes. It also deliberately does not define specific artefacts. | | | | | |
| **(Consistency)** Having applied part of the process to understand software safety engineering practice through the modelling and assessment of practice, we are interested in your thoughts on the consistency of the outputs which the process creates. How much do you agree with the following two statements? | | | | | |
| EQ12: The process uses consistent terminology when considering each different element that constitutes software safety engineering practice | | | | x | |
| EQ13: The process creates models whose symbology is consistent across all elements of software safety engineering practice | | | x | | |

| Statement | Fully Disagree 1 | Somewhat Disagree 2 | Neither Agree/ Disagree 3 | Somewhat Agree 4 | Fully Agree 5 |
|---|---|---|---|---|---|
| I Found it useful to model at different levels of granularity, This can lead to a hierarchy of 'practice' models being applied across a hierarchy of product architectures and at differing levels of abstraction.<br>Which works best in a given situation will likely depend on context and intent of the exercise to 'understand system safety engineering practice' and is likely to be a learned skill from experience. Your research may offer an insight into the validity of this observation. | | | | | |

If you have any additional comments on the process, or on this specific evaluation you are invited to make them in the box below. There is no word count limit, but please complete this digitally using an appropriate word-processing software package (such as Microsoft Word), so that we can ensure all comments are fully legible.

I can see benefits form the modelling – but I can see challenges in understanding the objective of modelling, the fidelity required – and the degree of completeness needed to achieve a 'safety' focused outcome.

I have worked with some large generic process models designed to be tailored to the specific context (and most safety standards and in-house management systems are created in this mould). There is a real skill in capturing these in a way that conveys clearly the intent whilst also enabling the flexibility – I'm not sure that any of the cases I've seen have got it correct – but some are useful 😊.

I think the success of the approach will come down to the practical relevance of the findings that can be extracted from the 'understanding' that the approach enables.