



Deadline: 31 March 2016

Please use this template to comment on the [Exposure Draft of ISAP 1 A](#) Governance of Models, and the proposed revisions to the [Glossary for ISAP 1A](#).

The IAA invites comments on this Exposure Draft, particularly on the questions set out below. Comments are most helpful if they:

- (a) Comment on the questions as stated;
- (b) Indicate the specific paragraph or group of paragraphs to which they relate;
- (c) Contain a clear rationale; and
- (d) Include any alternative that the IAA should consider, if applicable within the scope of the Statement of Intent for ISAP 1A.

Identification and instructions		
Name of Individual:	Please indicate if your comments are personal, or represent your organization:	Orginazation
Name of organization		Royal Dutch Actuarial Association
Disclosure of comments:	Please indicate if your comments should be treated as confidential, and if so why:	Our comments don't have to be treated confidentially.
Instructions for filling in and sending the template	<p>Please follow the following instructions for filling in the template:</p> <ul style="list-style-type: none"> ⇒ Do not write in the yellow shaded cells ⇒ Write in the white cells ⇒ When commenting on a specific paragraph: <ul style="list-style-type: none"> ○ Please use a separate row for each paragraph, sub paragraph, or bullet. ○ Please include the full reference in the first column such as "Introduction 3rd paragraph 2nd bullet" or "2.6.1.b.ii" ○ Please insert/append extra rows as needed. <p>Please send the completed template, renamed with the organization's or individual's name, attached in <u>Word Format</u>, to</p> <p>ISAPIA.comments@actuaries.org</p>	



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	Specific Questions asked by the ASC	Response
Q1.	Is the guidance clear and unambiguous? If not, how should it be changed?	The guidance is recorded is clear, but not always unambiguous. Requirements on model management consisting of documentation, control processes and model review and validation are applicable in all phases of a model life cycle, but not all of these aspects are mentioned in all sections. We suggest to add a separate section on this, see also our suggestions on Q5.
Q2.	Is the guidance sufficient and appropriate? If not, how should it be changed?	No, we believe the guidance is not sufficient, see our response to Q5 on matters that could be included. Moreover, often it is mentioned that the actuary should be satisfied that... without explaining what the actuary should do if the specific requirement has not been met.
Q3.	Is it clear how the guidance in the proposed ISAP relates to the guidance in ISAP 1? If not, how should it be changed?	No, the relation should be clarified. In the appropriate practices for selecting an existing model a short list of topics that the actuary should consider is mentioned in 2.2.1: "Examples of items that the actuary should consider, if applicable, include but are not limited to the data that might be available, the granularity and the quality of inputs, the appropriateness of the relationships recognized, and the model's ability to capture possible volatility around expected values." As the ISAP 1 requirements with respect



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		<p>to data quality, assumptions and methodology are of course also applicable in model management we would like that an explicit reference to ISAP 1 is recorded here which highlights these main requirements. Next, any additional requirements for the selection of a new model should be recorded here explicitly such as 2.2.2. As the same applies for Modifying an Existing Model, Building a New Model and Using a Model it could be considered to record this in a general section.</p> <p>More specifically we note that the terminology used in both standards is not aligned and that the Glossary is not complete. In ISAP 1 the terms assumptions and methodology are used whereas in this standard the term model is used. Assumptions and methodology are terms which are traditionally used in provisioning and model is a term which is used more in risk management and capital calculations, but in the end both are aligned. As mentioned we would expect that ISAP 1A is complementary to the sections on data quality, assumptions and methodology from ISAP1 and we therefore would like to align the terms used in both standards. Furthermore, we would like that the Glossary should make the distinction clear between the key terms model, methodology, assumptions and data where we notice that the terms data and methodology are not defined in the Glossary, see also our comments on the Glossary section.</p>
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		<p>Furthermore, we would like to ask attention for the consistency between ISAP1A and ISAP5. As also mentioned in our comments on ED ISAP5 we recommend to make a more clear distinction between minimum model development requirements which should be recorded in ISAP1A and requirements which are very specific for Enterprise Risk Models which should be recorded in ISAP5. Articles like 2.3 (Assumption setting) and 2.5 (Assessing Consistency Among Models) in ISAP5 refers to guidance which could also be applicable to other actuarial models as well and it could be considered to record this as well in ISAP1A.</p>
Q4.	<p>Is the guidance at the right level of detail? If not, what text should be omitted because it is too detailed? In what areas do actuaries need more detailed guidance?</p>	<p>No, we believe that some more guidance can and should be given on certain aspects mentioned in the guidance, e.g.</p> <ul style="list-style-type: none"> - Considerations for fit to purpose, see for example ASOP46. - Model requirements and validation tests to be performed, see for example Solvency II <p>We also recommend to check the recent IAA publication Actuarial Aspects on ERM for Insurance Companies (January 2016) for elements that could be included in the standard.</p> <p>Finally, see our suggestions on Q5.</p>
Q5.	<p>Are there other matters that should be included in this standard on governance of models? Are there some included here that should not be?</p>	<ul style="list-style-type: none"> - We would like to start with a general section on model risk management which requires that an actuary involved in modelling and



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		<p>using models should be satisfied that there is a model risk management framework in place consisting of the identification of model risks, the assessment of these risks and mitigation actions which can be carried out to mitigate the risks, like adequate documentation, process controls and model validation. Paragraph 2.5.1 deals with model risk management, but as the scope of model risk management is broader than only its use we would like to have a separate section on this and to elaborate this on specific aspects.</p> <ul style="list-style-type: none">- We suggest to define the different roles that should be distinguished in model governance, such as at a minimum the developer, validator and user and to lay down the minimum requirements with respect to independence and approval.- We also believe that more guidance should be given to internal control and audit trails as this is an important precondition for the use of model results.- We would like to have a separate section on model validation as the validation process is important in all phases of the model life cycle, that is, selecting an existing model, modifying an existing model, building a new model and using a model. This is a supplementary process that needs to be carried out by an independent function. For all model phases the actuary should be satisfied that an
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		<p>appropriate model review or validation has taken place by an independent function. This is mentioned in 2.2.4 and 2.4.2, but is also relevant for modifying an existing model and the use of the model. An alternative is to add this to the general section on model risk management.</p> <ul style="list-style-type: none">- We would like to have a separate section on the governance of expert (professional) judgment as these are important elements of the model life cycle. Expert Judgments are used in the model development phase, calibration and run of models. With respect to governance for this aspect it is important that elements like independent review, validation and approval are governed.- We suggest to add the requirement and guidance on a periodic review. The standard focuses on the development and use of the model, but a periodic review as a final step in the model life cycle is missing. In this step the adequacy of the model is assessed and includes among other an assessment of the appropriateness and use of the model.- In general we miss de the involvement of the end-user in de model development, expert judgement and use of the model. It is important that the end-user is involved in all phases and often this is arranged by an explicit sign-off by the end-user.
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General Comments on the ISAP 1A Exposure Draft	
	<p>The standard is not always consistent in its wording, e.g.</p> <ul style="list-style-type: none"> - Fit for its purpose (2.2.1) vs. suitability for purpose (2.3.1) - Review and validated (2.2.4) vs. validation (2.4.2) - Building (heading 2.4) vs. model development (2.4.2)

Comments on specific paragraphs of the ISAP 1A Exposure Draft		
Full paragraph reference	Change proposed to the paragraph (markup preferred)	Reason the change is needed (can be kept very brief or left blank if obvious from the change)
2.1	Suggest to mention here also the term methodology as this is term used in ISAP1.	Better alignment between ISAP1 and ISAP1A.
2.2	Sugges to write “reviewed or validated” instead of “reviewed and validated”	In our opinion a validation is an extensive review. In section 2.4 only the term validation is used. Advice to define these terms in the Glossary and to be consistent in the use.
2.3	Suggest to add guidance on the communication of model changes	It is important that the user is informed on model changes and especially the impact on the expected results of the model.
2.4	Suggest to rename this section to develop a new model	Model development is a more common term for this than building and in the section itself the term development is also used.



Comments on specific definitions in the Exposure Draft of the updated Glossary		
Note that only the proposed revisions are open for comment		
Defined Term	Change proposed to the definition (markup preferred)	Reason the change is needed (can be kept very brief or left blank if obvious from the change)
Model	A practical representation of relationships among entities or events using statistical, financial, economic, or mathematical concepts. A model uses assumptions, data and algorithms methodologies that simplify a more complex system and produces results that are intended to provide useful information on that system. Calculations simple enough to be effectively performed manually would not be considered a model.	We would like that the Glossary makes the distinction clear between the terms model, methodology, assumptions and data. The best way for this is to adapt the model definition to reflect this fact.
Data		Definition is missing
Methodology		Definition is missing
Validation		Definition is missing