MADe Annotations

Document, monitor and assess the quality of analysis across the asset life-cycle.

Key benefits

▶ Improve quality of analysis outputs

▶ Reduce GIGO!

▶ Provide traceability on analysis using data sources

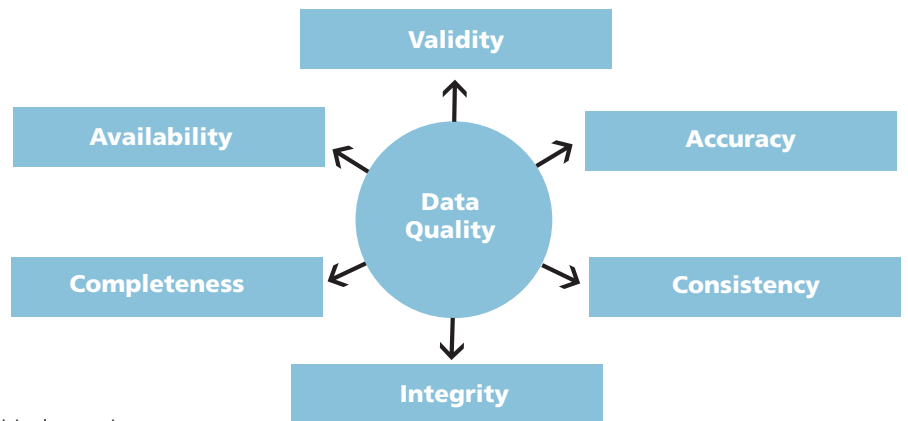### Key features

▶ Capture data sources and key assumptions

▶ Risk mitigation for data quality, integrity and currency

▶ Annotation process in MADe is configurable to meet specific workflows of your organisation

Problem: When it comes to model based engineering: Garbage In = Garbage Out. The quality of the assumptions, data and parameters used in a model directly affects the integrity of any analysis output. However, it is difficult to keep track of the data sources and assumptions that support any parameter used in a model, particularly if multiple stakeholders are involved in system development.

Solution: A structured approach to document and reference data for model based analysis is essential if quality is to be maintained across an engineering process. The annotations capability within MADe allows sources of data to attributed to item parameters based upon the live and current state of the system model.

How can you improve the quality of analysis data across the asset life-cycle?

Data quality key performance indicators.

What does MADe Annotations do?

MADe Annotations provides a means to answer critical questions regarding model data such as:

▶ Where does a particular parameter or data set come from?

▶ Who sourced this data?

▶ Why was it set to this particular value?

What does MADe Annotations output?

Once this information is captured, MADe Annotations generates reporting outputs that include:

▶ A summary of the overall asset model confidence based on the quality and quantity of data annotated

▶ An overview of the annotations in terms of type, status and sources

▶ A list of all active annotations in the model including pending annotation tasks
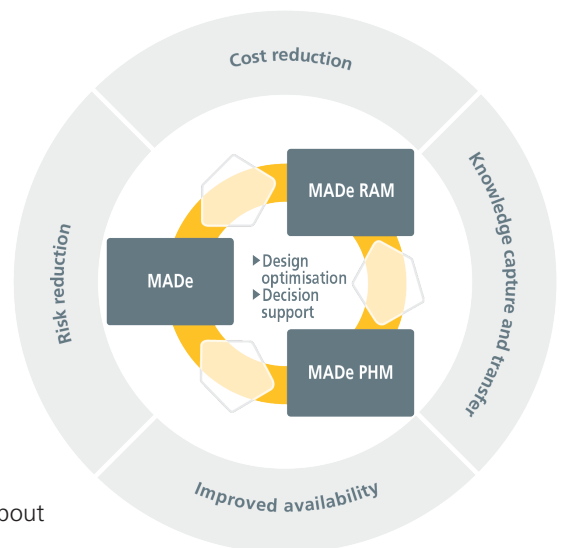
What benefits does MADe Annotations provide?

Optimise the confidence level in analysis outputs from a MADe model by:

▶ Documenting and reviewing all parameters used in the model / analysis

▶ Mitigating posting cycle issues as expert knowledge to a project file is retained

▶ Ensuring that all relevant supporting assumptions are captured

▶ Providing traceability to the modeling process

So what?

MADe is a model based integrated toolset that enables better informed decisions about design and supportability.

MADe Annotations ensures that the engineering function can assess the quality of the models and therefore the reliability of the analysis outputs using validation and verification processes that are displayed using Dashboard Indicators of Model Quality and Data Quality, and Confidence Level.

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How does MADe Annotations improve the quality of data / analysis?

MADe Annotations associates each parameter used in the model with a pending annotation – i.e. information about a decision or value – that is required to be entered by the user. This process provides auditability of all information.

Dashboard

▶ Generates an overall confidence level in the model based on data source quality and coverage of annotated data.

▶ Generates an overview chart of the data sources used in the model.

▶ Compares confidence assessments using alternate data sources.

▶ Provides each data source with a confidence rating based on inherent source reliability.

Annotations Editor - Model Parameters

▶ Lists all the model parameters created/edited by the user.

▶ Defines various details for each parameter – data source, person who sourced the data and status of the annotation (pending or annotated).

▶ Sorts and prioritizes annotations tasks using filter options.

Annotations Editor – Narratives, Assumptions and Comments

▶ Lists all the narratives, assumptions and comments created/ modified by the user.

▶ Defines various details for each piece of information– date, user, item, type, narrative and status of the annotation.

▶ Sorts information based on the editor or analysis that is annotated.

Annotations Policies

▶ Set/edit Annotation policies to define the annotation requirements for parameters in a model.

▶ Policy settings automatically impact the overall confidence in the model.

▶ Define pessimistic, agnostic or optimistic confidence level of sources and importance (severity) of crucial and standard variables in the system.

Annotations Tasks Reminder

▶ Automatically reminds the user to edit pending annotations – i.e. provide data sources and relevant information to the modified items/data.

▶ Sets/modifies the frequency of task reminders.

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