openETCS Data Dictionary

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Bernd Hekele, DB Netz

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Topics

1. What is a Data Dictionary in SSRS? A Definition

2. Structure of the Data Dictionary

3. Use Cases

4. Roles and Processes

5. Tools
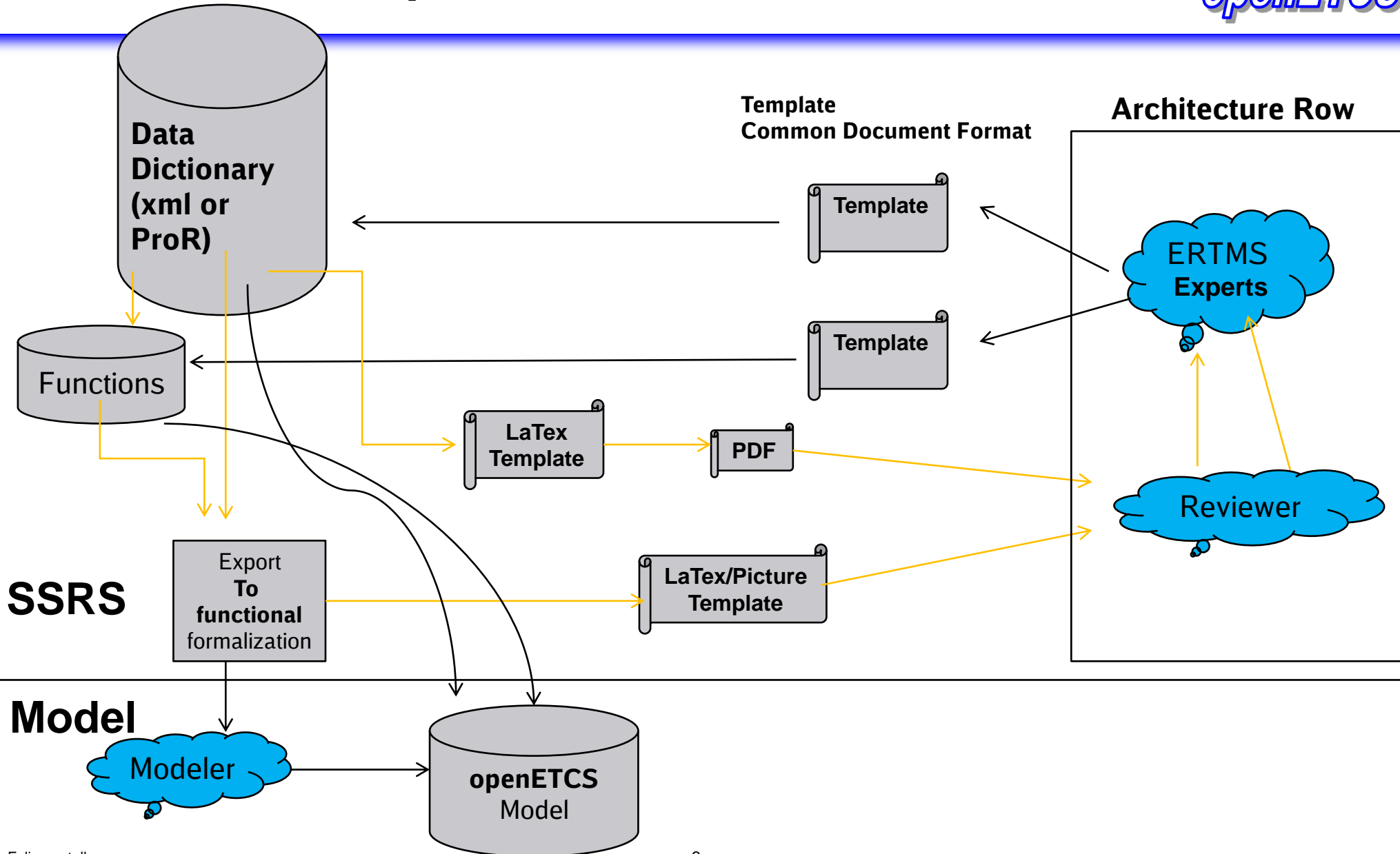
Definition

V&V Styleguide (by Marc Behrens):

https://github.com/openETCS/validation/wiki/Verification-Artifacts-Styleguide

mailto: datadictionary@openetcs.org or ddi@openetcs.org

- **Based on Templates: to be defined**

- **Unique, Central, synchronized and well-known place for information related to interfaces**

- **Covers Messages, Data and Functions when they are used as interfaces in the architecture**

- **Well structured to represent SRS definitions**

- **As much formal as possible to avoid ambiguities**

- **Extended with „plain text" for a good shared knowledge base**

- **In responsibility of a / some data wardens (experts for the interfaces)**

- **Data are collected with a template (push + open issue) and released after a short check (commit + close issue)**

Use Case

- **Basis for the definition of interfaces and data**

- **Linked to data definitions in SysML**

- **Helps to avoid double definitions of data**

- **Can be exported to other tools and for other purposes, e.g., documentation and verification**

- **Single Files according to naming convention**

- **Repository: to be clarified, Public**

- **Tools: to be clarified, option is ProR**

Backup

Overview SSRS process

Data Dictionary (xml or ProR)

Functions

SSRS

Export **To functional** formalization

Template
Common Document Format

Template

Template

LaTex Template

PDF

LaTex/Picture Template

Architecture Row

ERTMS **Experts**

Reviewer

Model

Modeler

openETCS Model

Roles and Process

- **Data Dictionary Warden: A single person or a defined group of persons (e.g., per domain) are responsible for the data dictionary.**

- **Changes get pushed to the Warden by developers.**

- **Warden checks duplicates, consistency and completeness.**

- **After correction cycle data is committed to the data dictionary.**

Tools – A Basis for Discussion

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- **Proposed format (Marc Behrens): .xml**

- **But:**

  - **Formal Parts a naturally home in the Modelling Tool: SysML?**

  - **Some are of textual structure: Requirements Management Tool?**

- **At least some transport function from data dictionary to modeling tools is mandatory**