

# Validation

*The reliable and complete solution for validation, audit & control of your business reporting data.*

## The need for XBRL Validation

To be a "valid" an XBRL instance needs to go through multiple different levels of validations. It starts first with XML validation (as the technical underlying structure of XBRL). Once the instance is structurally complete, you can then perform XBRL validations both for the XBRL specification and Taxonomy (and any extensions). After which optionally, any specific business rules and filing rules can be applied as required. E.g. Formula rules, Financial Reporting Instance Standards rules (FRIS). With the complete application of these validations the quality of the data is guaranteed.

Most business reporting rules are embedded in the taxonomy. This makes the taxonomy the "driver" of the validation. And if the taxonomy is followed correctly, with a generic approach, almost all rules can be modeled and adapted quickly. This ensures XBRL instances have reliable information between reporter and receiver. Reporter and receiver can exchange data with each other without worrying about the quality of data.

## Who are the typical users

Companies and intermediaries producing XBRL based reports, software vendors supporting the customers and regulators all need to have quality control of the produced and submitted XBRL instance documents.

Enterprise companies as well as ISVs can also embed or deploy our instances within their existing business processes. Therefore, providing the value and guarantee of qualified XBRL instance data available in their existing tools, processes, and applications.

## Why is this important to small businesses, enterprises, independent software vendors

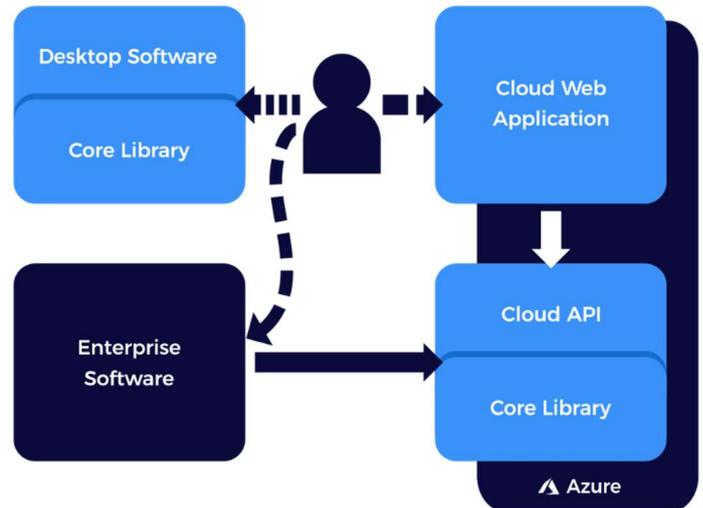
The validation processes of XBRL documents ensures that the information is complete and reliable. Processing of incorrect data in an XBRL document must be avoided. Validation in two areas of an instance document by both parties (reporter and receiver) is required to realize good quality reporting supply chains. Documents need to be validated on technical level as well as content level. Validation also ensures that the produced XBRL instance can be rendered in different formats and delivered to different locations with the confidence it will be accepted.

## How can Semansys help

We provide this validation functionality as a high performant and responsive service as well as a core library embedded in a variety of our technology platforms. This allows for a quick response to a complex question with a multiple different faceted technical artifact.

I.e. size of instance, complexity of taxonomy, rules, and validations to apply. Taxonomies also get updated, extended, etc. and our generic engine can support the majority of these differences in applied regulations or business rules.

## Architecture



We consider XBRL validation to be a core necessity in the business reporting chain. Therefore, it's available and utilized in a variety of our user facing software (desktop or cloud) as well as standalone via API on xbrlOne.



## Technical level validation

The first step is the validation against the XML schemas. A malformed XML file cannot be processed. The core XBRL technical validation goes a step further and checks if a XBRL document is technically correct according the XBRL specification. This is followed by the validation of the XBRL instance including a confirmation that all fact items represented in the XBRL document are allowed and match the taxonomy. Checks are made to see if data types are used correctly and definitions from the taxonomies are applied resulting in incorrectly presented data being marked as invalid.

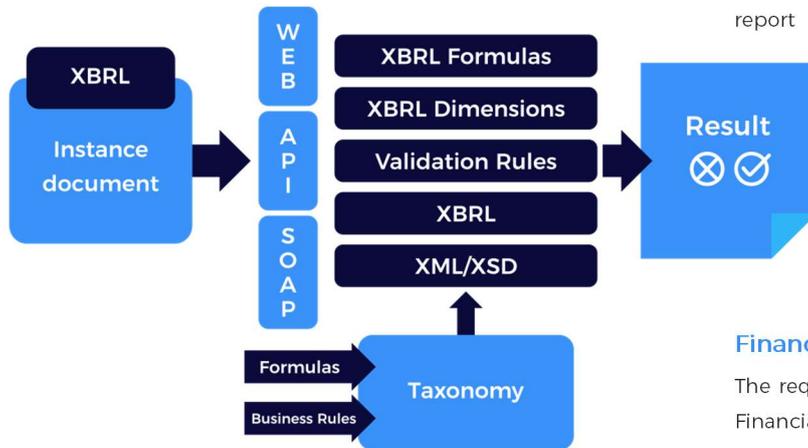
## Content level validation

Content validation of the XBRL documents runs the controls against the consistency rules and requirements of the receiver. These consistency rules may include validation of totals and aggregations, business calculations, formulas and presence of required values.



## Calculation control with validation

Calculation control refers to the calculation structures of a taxonomy. This validation allows a control on the aggregation rules in a taxonomy. With calculation rules it is possible that different totals in a report can be audited by the receiver.



## Validation with XBRL Formulas

Formulas in XBRL is an extensive, intensive and highly technical. The Formula link base is a standard for quality guarantee. Not only the simple business rules are included but also profound and complex formulas can be constructed. Formula link base makes a separation of specific data of report domains based on an abstract model of the report facts which ensures the quality of the content. Public authorities will want reporting requirements. With the Formula link base, the user can make sure XBRL documents are according to the reporting requirements of the public authorities. Users can also expand the Formula link base custom rules. Quality is guaranteed by using the Formula link base in the exchange of XBRL information.

## Financial Reporting Instance Standards

The requirements of a XBRL instance document are defined in the Financial Reporting Instance Standards (FRIS). FRIS is a best practice document containing all the basic requirements for the preparation of a XBRL instance document. Regulators can utilize or expand FRIS rules for additional requirement to the specific domains of tax authorities, Chamber of Commerce and Central Statistical Office.

Want to hear more? Feel free to reach out to [info@semansys.com](mailto:info@semansys.com) and one of our colleagues will get back to you within a few days. Additionally, please visit our website at [www.semansys.com](http://www.semansys.com) for up to date product news and information.



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