# Versioning system in the QDDT v1.0

Versioning assists the user in keeping track of changes to elements over time, as well as to be able to distinguish changes that are important from those that are not so important.

The QDDT has a business versioning system. It is also possible so save an element as a 'work in progress' revision.

## The business versioning system

The business versioning system has two levels, a minor and a major level. The minor level represents typos, changes in punctuation, spacing, capitalization or spelling, and other typographical and orthographical changes that do not change the meaning. All changes that affect the meaning of the element represent major changes.

The versioning system in the QDDT makes it possible to document the rationale for the change in a standardized way. A controlled vocabulary that allows the user to choose a rationale for the change has been developed (see tables below).  It is also possible to add a description related to the change.

A new version number is assigned automatically by the tool, depending on the selection of rationale code made by the user. A major change results in a change to the first digit of the version number, while a minor change (typo etc.) results in a change to the second digit.

Rationale code CV, level 1

| Code | Term | Definition |
|---|---|---|
| TypoOrNoMeaningChange | Typo or no meaning change | Minor changes such as changes in punctuation, spacing, capitalization or spelling, and other typographical and orthographical changes that do not change the meaning. |
| MeaningChange | Meaning change | Any other change that could affect the meaning. If the amendment is considerable enough, review whether becomes a new element rather than a new version. |

Rationale code CV, level 2 under 'MeaningChange'.

| Code | Term | Definition |
|---|---|---|
| ConceptualImprovement | Conceptual improvement | The change represents an amendment in wording in order to better cover the intended meaning, for example when a concept description wording is changed with aims of corresponding better with the intended concept |
| RealLifeChange | Real life change | The change corresponds to a real life change |
| AddContentElement | Add content element | A content element is added to the element inline or by reference, for example a name added to a question item etc. |
| OtherPurpose | Other purpose | The change is made for other purposes not found in the list |

### Saves as 'work in progress'

When an element is saved as work in progress a new revision of the element is created, but the business version number of the element does not change. It is possible to do more than one change to an element before you version it. It is however not possible to select more than one rationale code each time you version an element.

### Comparison functionality

A comparison functionality has been developed which allows the user to compare the current revision of the element with its latest business version. This assists the user in deciding which rationale code to choose, and how to best describe the reason for the change.

### Late and early binding in the tool

All elements belonging under 'Home' in the QDDT, that is Survey, Study, Questionnaire module and Concept, are late bound in the tool. This means that when an element is referenced by another element, the latest revision of the referenced element is always retrieved. If for example a Concept is versioned or saved as work in progress, the Questionnaire module using it will automatically be updated with the new revision.

Highly reusable elements like Categories, ResponseDomains, QuestionItems and QuestionConstructs are early bound in the tool. This means that when an element is referenced by another element, a specific version of the referenced element is always retrieved. This allows the user to select and bind a specific version of a ResponseDomain to a specific version of a QuestionItem, for example.

### Flagging of revision changes

Yellow exclamation mark

Saving as 'work in progress' is possible in the tool but before publication all elements should be versioned. When an element has been saved as 'work in progress' the tool, a yellow exclamation mark alert appears that alerts the user that the element needs to be versioned. This applies to all elements in the tool.

Green exclamation mark

Hierarchy updates of elements under 'Home' in the tool invoke a green exclamation mark in higher level elements. The purpose of this is to alert the user that changes to lower levels elements under 'Home' have been made. Green exclamation marks do not trigger a version change unless otherwise specified in the versioning policy.

### Publication of specific element versions

Elements should be versioned before publication to make sure that the same content is retrieved whenever this version of the element is published.

It is common practice for survey designers to continue the development of the questions after the concepts have been finalized. In the QDDT it is possible to add QuestionItems to Concepts to be able to view and publish concepts together with the questions used to operationalize them. Additions and deletions of QuestionItem versions to/from a Concept do not, however, trigger a version change of the Concept. When a concept is published it is possible to select its latest revision in order to bring

the current question versions along in the publication. This revision is identified by 'business version (version number) Latest version' in the tool.

## Other save types

It is also possible to save an element as a new element, or as a new element with a based on reference to the source element. The latter applies to Category, ResponseDomain, QuestionItem, QuestionConstruct and Publication package.

A controlled vocabulary has been developed to document the relationship between the new element and the element it is based on.

Based-on rationale codes

| Code | Term | Definition |
|---|---|---|
| CopyOfSource | Copy of source | The element is an identical copy  of a source element |
| VariantOfSource | Variant of source | The element is different from (different ID), but based on a source element. If the amendment is not considerable, review whether becomes a new version rather than a new element. |
| TranslationOfSource | Translation of source | The element is a translation of a source element |

## Identification and versioning in the DASISH Common metadata model

Further details regarding identification and versioning of the QDDT is described in the report 'DASISH 3.2 Towards a common metadata understanding for the three DASISH WP3.2 tools 2015_01_05_3.pdf' available at https://github.com/DASISH/survey-tools-metadata/blob/master/reports/DASISH%203.2%20Towards%20a%20common%20metadata%20understanding%20for%20the%20three%20DASISH%20WP3.2%20tools%202015_01_05_3.pdf

Differences from DASISH are as follows:

- In the tool only one RationaleCode is allowed for each save.
- The RationaleCode and the PublicationStatus example controlled vocabularies have been amended.
- Late binding in the tool works as described above in the QDDT.