**Difference between a *Property* type and a *Property* type assignment:**

* A *Property* type defines the attributes of a metadata field. A *Property* type has the following attributes:
  + Label
  + Description
  + Data type
  + Vocabulary code (only if data type == CONTROLLEDVOCABULARY)
  + Metadata
  + Dynamic Script
* One and the same *Property* type can be assigned to many entity types. The attributes listed above stay the same globally. The following attributes can be defined locally for the *Property* type assignment to a specific entity type:
  + Mandatory
  + Editable
  + Section
* A *Property* type can exist independently of being assigned to any entity type. This can happen, e.g., when an entity type is deleted, but the *Property* types that were assigned to it are not deleted at the same time.

**Rules for checking Masterdata Excel files:**

* Check the Excel file for correct formatting (according to openBIS):
  + Has this to be coded by us or can we use the existing openBIS functions for that?
* **Check whether there already exists an entity type of the same hierarchy class** (Collection, Object, Dataset) in the instance that has an identical code.
  + If yes, give a hint “Entity type CODE\_OF\_ENTITY\_TYPE already exists” and check whether
    - **Check whether the following attributes of the entity type have been changed:**
      * **Description** [free text] 🡪 If yes, give a hint: “The Description of (COLLECTION/OBJECT/DATASET) type CODE\_OF\_ ENTITY\_TYPE” has been changed compared to the previous version.”
        + Check whether the new Description is in the correct format: “TEXT//TEXT” (with regex?)
      * **Auto generate codes** [TRUE/FALSE] 🡪 If yes, give a hint: “The value of “Auto generate codes” of entity type CODE\_OF\_ ENTITY\_TYPE has been changed from [TRUE/FALSE] to [TRUE/FALSE].”
      * **Validation script** [free text] 🡪
        + If the previously existing script has been deleted, give a hint: “The validation script XXX.py has been deleted from entity type CODE\_OF\_ ENTITY\_TYPE.”
        + If the name of the script has been changed, give a hint: “The validation script of entity type CODE\_OF\_ ENTITY\_TYPE has been changed from XXX.py to YYY.py.”
        + If a new validation script has been added where previously there was none, give a hint: “A validation script XXX.py has been added to entity type CODE\_OF\_ ENTITY\_TYPE.”
      * **Generated code prefix** [free text] 🡪 If yes, give a hint: “The code prefix of entity type CODE\_OF\_ ENTITY\_TYPE has been changed from PREFIX1 to PREFIX2.”
    - **Check whether the assigned set of assigned Property types to the entity type are identical with the set of the previously assigned Property types.**
      * If not, give a warning: “The set of Property types assigned to the entity type CODE\_OF\_ ENTITY\_TYPE has been changed compared to the previous version.”
        + If a Property type assignment has been deleted 🡪 If yes give a warning: “The Property type assignment PROPERTY\_CODE has been removed.”
        + If a Property type assignment has been added 🡪 If yes, give a warning: “The Property type assignment PROPERTY\_CODE has been added.”
      * Check for each assigned Property type (independent of whether they were previously assigned to the entity or not) whether the Property type already exists in the instance (must have an identical code).
        + If yes, check whether the following attributes have been changed:

**~~Mandatory~~** [TRUE/FALSE] 🡪 If yes, give a hint “The value of the attribute “Mandatory” of Property type CODE\_OF\_ PROPERTY\_TYPE has been changed from [TRUE/FALSE] to [TRUE/FALSE].

**~~Editable~~** [TRUE/FALSE] 🡪 If yes, give a hint “The value of the attribute “Editable” of Property type CODE\_OF\_ PROPERTY\_TYPE has been changed from [TRUE/FALSE] to [TRUE/FALSE].

**~~Section~~** [free text] 🡪 If yes, give a hint “The section of Property type CODE\_OF\_ PROPERTY\_TYPE has been changed compared to the previous version.”

Check whether the new Label is in the correct format (TBD)

**Label** [free text] 🡪 If yes, give a warning: “The label of Property type CODE\_OF\_ PROPERTY\_TYPE has been changed compared to the previous version.”

Check whether the new Label is in the correct format (TBD)

**Data type** [11 types] 🡪 If yes, give a warning: “The data type of Property type CODE\_OF\_ PROPERTY\_TYPE has been changed compared to the previous version.” (This is only permissible for some cases, e.g., “CONTROLLEDVOCABULARY” to “VARCHAR”!)

**~~Vocabulary code~~** 🡪 If yes, give a warning: “The vocabulary code of Property type CODE\_OF\_ PROPERTY\_TYPE has been changed compared to the previous version. This is not allowed.”

**Description** [free text] 🡪 If yes, give a warning: “The description of Property type CODE\_OF\_ PROPERTY\_TYPE has been changed compared to the previous version.”

Check whether the new Description is in the correct format: “TEXT//TEXT” (with regex?)

**Metadata** 🡪 *not sure about whether this one can be changed*

**~~Dynamic script~~**

If it has been added, give a warning: “A dynamic property script has been added retrospectively to the Property type CODE\_OF\_ PROPERTY\_TYPE.”

If it has been deleted 🡪 *not sure about whether this one can be changed*

* Check whether there already exists an entity type of the same hierarchy class (Collection, Object, Dataset) in the instance that has a different code but has the same set of Property types assigned.
  + If yes, give a hint: “The (COLLECTION/OBJECT/DATASET) type CODE\_OF\_NEW\_ENTITY\_TYPE is very similar to the existing (COLLECTION/OBJECT/DATASET) type CODE\_OF\_OLD\_ENTITY\_TYPE. Please consider whether you need to create a new entity type or whether you can re-use CODE\_OF\_OLD\_ENTITY\_TYPE.” (*Important: Don’t compare Collection types with Object types with Dataset types but only Object types with Object types etc.*)
* If the code of the entity type is in the format “PREFIX.SUFFIX”, check whether there already exists an entity type of the same hierarchy class (Collection, Object, Dataset) in the instance that has the code PREFIX. Note that the code can also be written in the format PREFIX1.SUFFIX1.SUFFIX2 etc. In this case, PREFIX.SUFFIX1 has to be treated as a PREFIX as well.
  + If yes, check whether all Property type assignments entity type PREFIX are included in the entity type PREFIX.SUFFIX without any changes to their attributes.
    - If there are changes, give a hint: “As a specification of the entity type PREFIX, the entity type PREFIX.SUFFIX must include all Property types of PREFIX without any changes.” *(+List which property type assignments are missing and/or what the changes to their attributes are.)*