



## REDCap Multi-Language Management

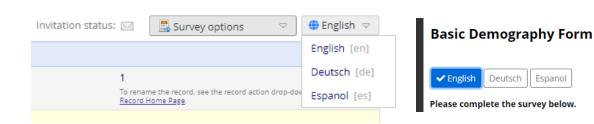
Sui Tsang REDCap@Yale Team 12/12/2023

### Introduction and Learning Objective

- Overview of Multi-Language Management (MLM) feature in REDCap
- Learn how to add languages to MLM
- Demonstrate how to add translations
- Understand what determines the active language
- Learn how to export and import languages
- Demonstrate a creative use case

# What is Multi-Language Management (MLM)?

- Provides the ability to present REDCap data entry interfaces in multiple languages (Data Entry and Survey Pages, Missing Data Codes, ASIs, Alerts & Notifications, PDFs)
- Compatible with piping, field embedding, branching logic
- Users / survey respondents can switch among the available languages at will







#### How does it work?

#### Basic concepts

#### Two Primary Translation Components for Each Language:

#### 1. User interface language:

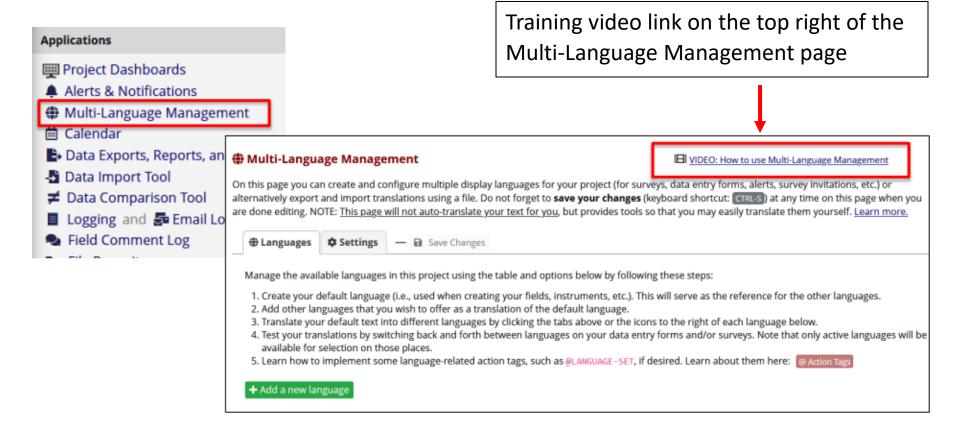
 ~500 REDCap messages and prompts encountered when entering data (common to ALL REDCap projects), e.g. "Next Page", "Submit", "Save & Exit Form".

#### 2. Project-specific language

 All data dictionary items (questions/field labels, choice labels, etc.), survey settings (survey title, survey instructions, etc.), survey queue custom message, ASI and alert message subjects and contents, etc.

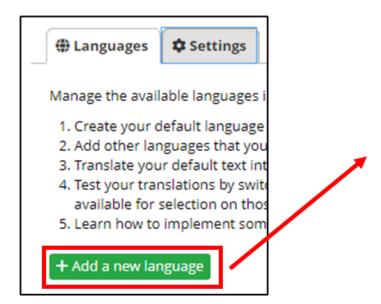


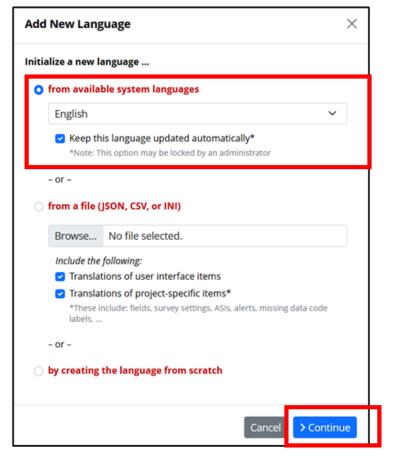
## How do I learn how to use the Multi-Language Management feature?



### How to get started?

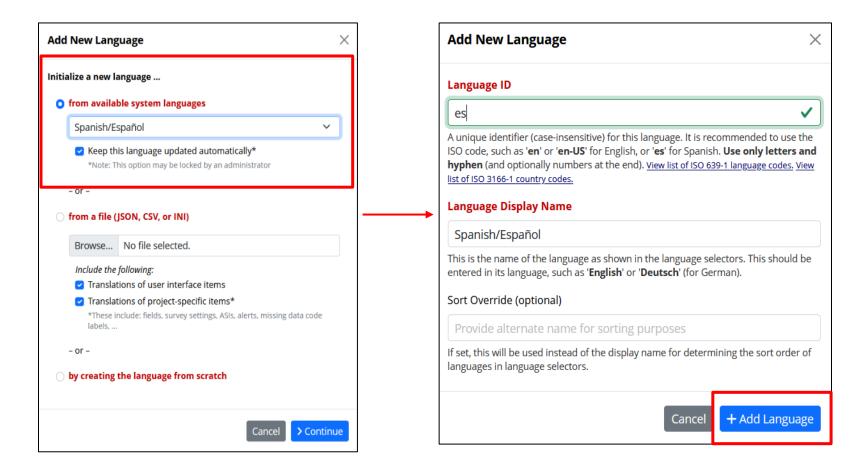
## Add the default language to your project.







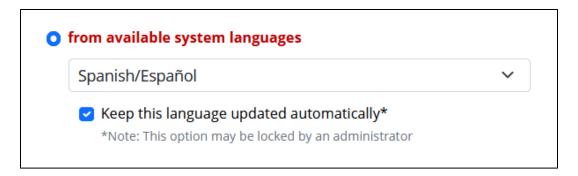
## 2. Add the second language.





## Three methods for initializing a new language

1. Initializing from available MLM system languages

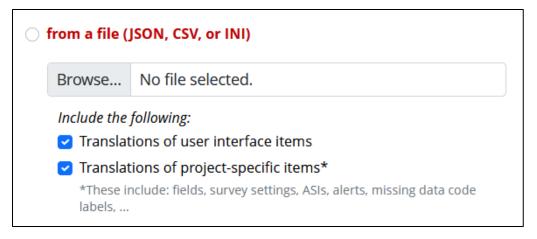


- Use this option if you need to translate user interface items.
- Currently available languages on our server include French, German and Spanish. If the language that you need is not available in the dropdown menu, send us an email at <a href="REDCap@yale.edu">REDCap@yale.edu</a>, we may be able to import the language from the REDCap consortium language library.
- The system language in the dropdown menu will include the user interface translations of the language imported from the REDCap consortium library.



## Three methods for initializing a new language

2. Importing from an existing file (.csv, .json, .ini)



 If you exported the translation from another project, use this option to import the translation.

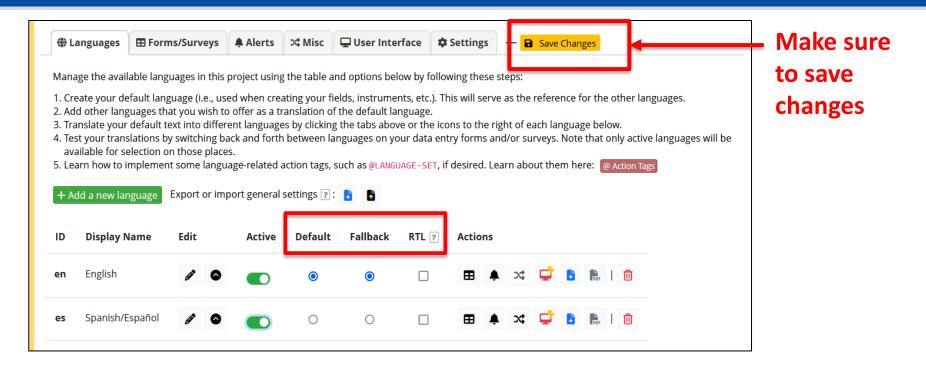
## Three methods for initializing a new language

3. Creating the language from scratch

by creating the language from scratch

 If you only need to translate the data entry forms and you do not need to translate the user interface language, use this option to initiate the language.

## Configure available options for each language



- Default: This setting specifies the default project language when entering data.
- Fallback: Specifies the language to be used when an item does not have a translation.
- RTL: This setting tells REDCap that the language should be displayed 'right to left'.

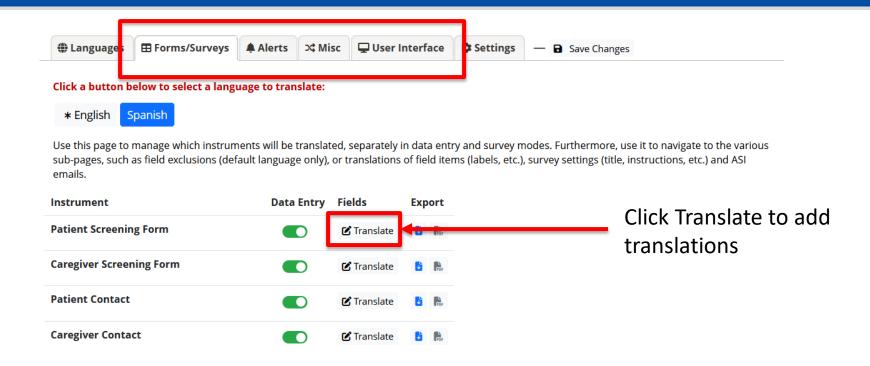


#### Buttons on the Language Tab

- The icons / buttons in the table on the Languages tab explained:
  - Edit the language's display name and id
  - Update a language (including importing from a file)
  - Access the Forms/Surveys tab for this language
  - Access the Alerts tab for this language
  - ス Access the Misc tab for this language (disabled for the Base Language)
  - ☐ Access the User Interface tab for this language (a red icon ☐ means that the language was initialized from a system language; an additional flash ☐ indicates that this language is "subscribed", i.e., subject to automatic updates).
  - Export translations for this language
  - Download translated instrument PDFs for this language
  - Delete this language



#### **Adding Translations**



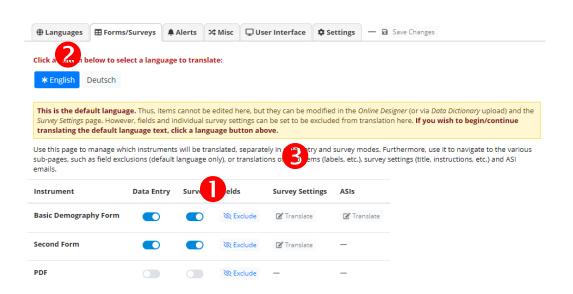
Click each tab (Form/Surveys, Alerts, Misc, etc.) to select the language to add translation. If you initiated the language from the available system languages, most User Interface text will already be translated.



#### Forms/Surveys (base language)

- 1.On each language tab, control whether this language is available for selection, separately for **data entry forms** and **surveys**.
- 2. The base language tab (indicated by an asterisk) is special:
- 3. There is nothing to translate, but fields can be excluded from translation (i.e., they won't show up on the respective tabs for other languages).

Note, a common pitfall is to forget to enable languages for individual data entry forms or surveys!





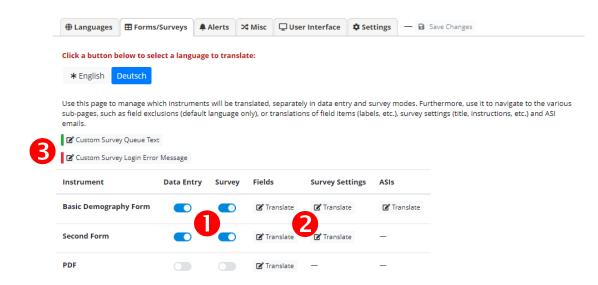
#### Forms/Surveys (other languages)

- 1.On each language tab, control whether this language is available for selection, separately for **data entry forms** and **surveys**.
- 2. Depending on whether an instrument is enabled as a survey and has ASIs, corresponding **Translate** buttons are available.

3.In case the Survey Queue is enable with custom texts, translation buttons

are available for these items.

Note, a common pitfall is to forget to enable languages for individual data entry forms or surveys!



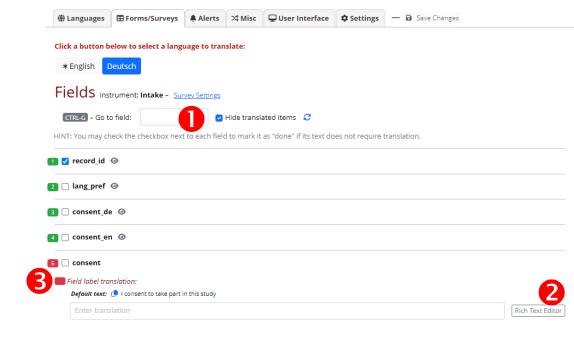
#### Forms/Surveys – Fields

- 1. Use the **Go to field** dropdown to quickly navigate to a specific field
- 2. Enter translations. When appropriate, a **Rich Text Editor** button is available
- 3.Indicators reflect the translation status of items/subitems (green = complete; red = not translated)

#### Hints:

- The copy icons next to the default text can be used to quickly copy/paste them to translation tools
- In case an item changes after having been translated, this will be indicated (orange indicator):



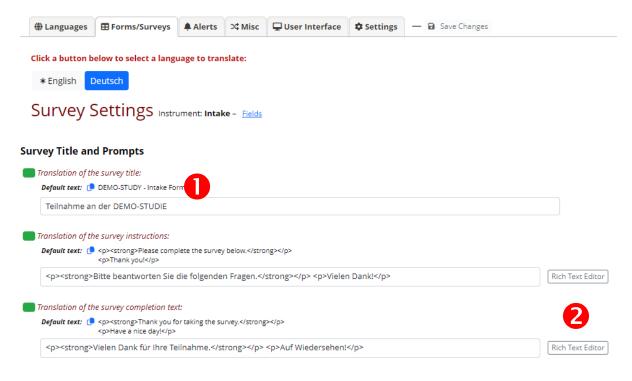




#### Forms/Surveys – Survey settings

- 1.Translate each item
- 2. Use the Rich Text Editor for any settings supporting HTML

Note, there is nothing to translate for the base language (marked with an asterisk). When clicked, this will take you to the field exclusion page)



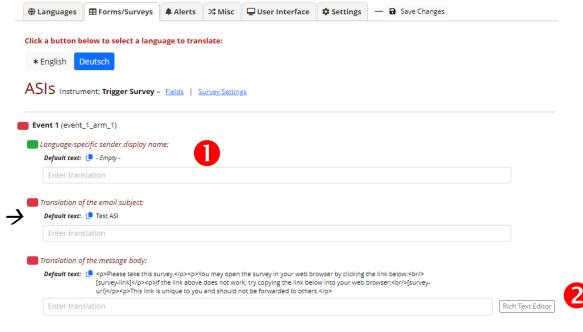


#### Forms/Surveys – ASIs

- 1. Translate each item
- 2. Use the **Rich Text Editor** for any settings supporting HTML

Note, ASIs for each event must → must be translated separately

Make sure to faithfully replicate → any pipings in the translations!



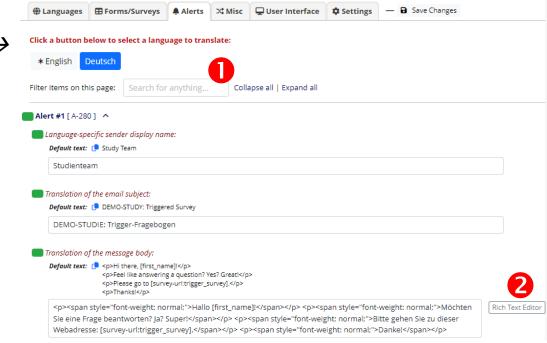


#### Alerts

- 1. Use the search box to quickly find the item you would like to translate / edit.
- 2. Use the **Rich Text Editor** for any settings supporting HTML

For Alerts, there are important settings to be made on the default language's page!

Make sure to faithfully replicate → any pipings in the translations!

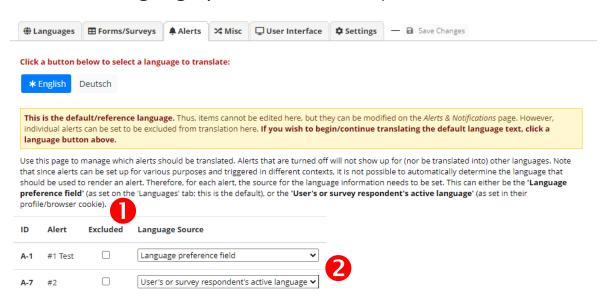




#### Alerts – Base language special options

- 1. Individual alerts can be excluded from translation
- 2. Since alerts may trigger under circumstances when the proper language cannot be determined automatically, use this to set a **Language Source** for each event.
  - Language preference field or User's or survey respondent's active language
  - What to choose will depend on how the alert is triggered (generally, however, this will be "Language preference field")

Select the base → language to get to this page!



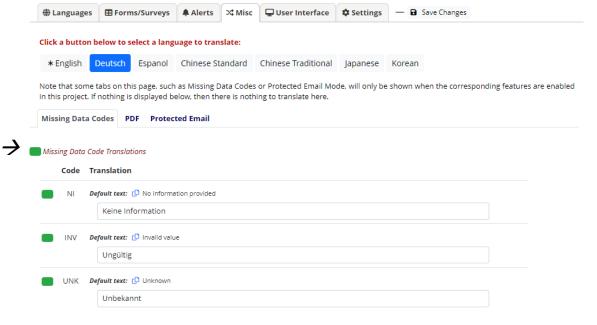


#### Miscellaneous items

- Missing Data Codes
- PDF customizations
- Protected Email customizations

For the base language, there  $\rightarrow$  is nothing to translate.

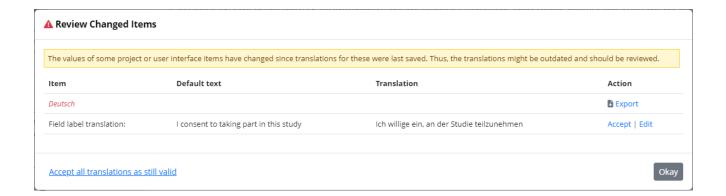
Sub-tabs will only show when there  $\rightarrow$  are customizations set outside of MLM. This means, it is not possible to add new text using MLM, but only to replace text (with translations).





#### Change notification

Whenever an underlying item changes, MLM will display a notification



#### What determines the currently active\* language?

\* i.e., the language a page, email, PDF is rendered in

#### Generally, it is determined by:

- A user's (survey respondent's) choice:
  - Set via the language selection widget



- Or a radio field when used with the @LANGUAGE-SET action tag
- On repeat visits through a cookie value

Note: When testing, always test in a fresh, private / incognito browsing window in order to not have "tainted" cookies!

#### When this is not available, e.g., in a process triggered by ASI logic:

- A field in the project:
  - Set through the Language preference field option on the MLM setup page



- Its value must correspond to the ID of an active language
- It can be set manually (e.g., on an intake form) or captured into a field with @LANGUAGE-CURRENT-FORM/SURVEY action tag
- On data entry forms/surveys, it can be used with @LANGUAGE-FORCE



#### Language preference field

**Optional:** For surveys, designate a field for storing a participant's language preference

For certain operations and under some circumstances, REDCap cannot deduce the appropriate language to use (e.g. ASI, Alerts). In such cases, the value of the language preference field, if available, will be used to set to language.

Note: This field behaves very similar to the designated email field, i.e. it will be synchronized across all events / repeat instances.

#### (Optional) For surveys, designate a field for storing a participant's language preference

Use this feature to set a source for a participant's language preference (their initial language setting). This must be a radio or dropdown field with choices matching the language ID you have defined for each language above, or a text box field with no field validation. The value of this field can be set manually through data entry/data import or with the @LANGUAGE-CURRENT-FORM/SURVEY action tags. The value of this setting will dictate the language used for rendering Automated Survey Invitations, Alerts, and PDFs. Text box fields are denoted with [T] while radio and dropdown fields are denoted with [R] and, in case they include all language keys, are highlighted with a green background.

Language preference field: | lang\_pref [R] - What is your language preference?

**NOTE:** Similar to a designated email field, when this field exists on multiple events in longitudinal projects, on a repeating instrument, or on a repeating event, the field's value will be synchronized across all instances/events so that changing it in one location will change the value across all events/instances where the field appears.



#### Setting the initially displayed language for surveys

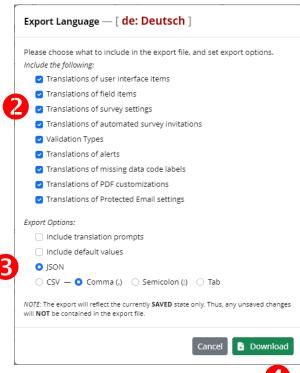
- Generally, the language displayed for survey respondents is governed by a browser cookie that is set when they (first) select a language.
- For new visitors, there are ways to control the initially displayed language
  - Add a field tagged with the @LANGUAGE-SET action tag to the survey while also populating it with @DEFAULT, setting the desired language id.
  - The @LANGUAGE-FORCE action tag can be used but will prevent the survey respondent from changing the language.

#### Exporting languages (for re-use/offline translation)

- 1. Click on the **Export** button in the language's row in the languages table
- 2. Choose the items that should be included in the export
- 3. Choose whether to include translation prompts and/or default values, as well as the file format (JSON or CSV)
- 4. Click the **Download Language** button

For offline translation, include **prompts** and **default values**! For transfers or backups, these are not needed.

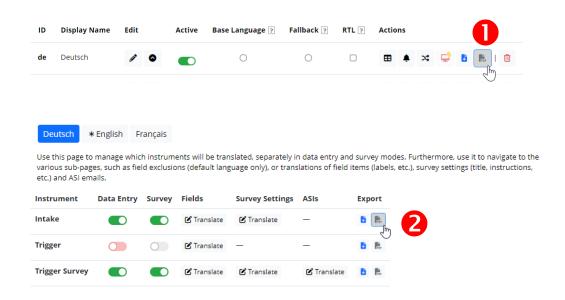






#### **Exporting translated instrument PDFs**

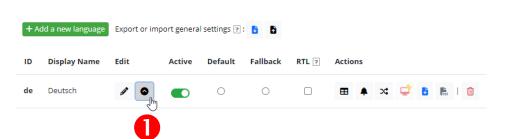
- Export all (blank) instrument PDFs for a language (Languages tab)
- 2. Export a translated (blank) PDF for an individual instrument (Forms/Surveys tab)
  - Note: Instruments without translations will be rendered in the default language

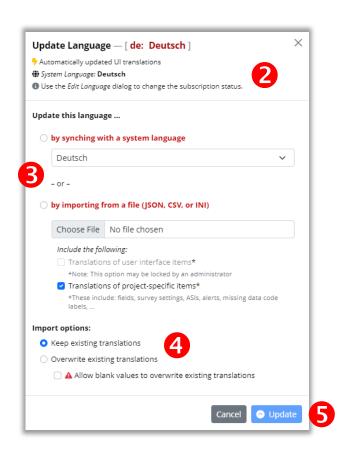




#### Importing (updated) translations

- 1. Click the **Update Language** button in the corresponding row in the languages table
- The Update Language dialog will inform about the linkage/subscription to a system language (when applicable)
- 3. Choose an update source and what to import
- 4. Set import options
- Click Update to perform the import (or synch) operation



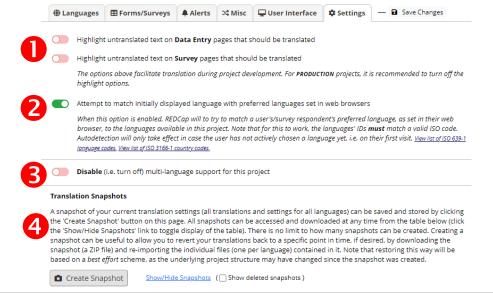




#### Other MLM settings / Translation snapshots

There are a number of options available under the **Settings** tab, such as the option to ...

- Highlight untranslated text (this is useful during development as a visual check for items missing translations in the set language on data entry form and surveys)
- 2. Attempt to auto-detect the language to initially use from the browser
- 3. Disable multi-language support in the project (useful for troubleshooting)
- 4. Create Snapshot (this will archive a ZIP with export files for all languages – these can be used to restore or backup all project language)





#### **Creative Use Case**

#### Using MLM to change the options for form completion status field

- 1. Add the default English language
- Choose the option 'by creating the language from scratch' for language initialization.
- 3. Give the new language ID and display name, e.g. custom.
- 4. Set both language as active and choose English as the default language

ID	Display Name	Edit	Active	Default	Fallback	RTL ?	Actions			
custom	custom			0	0		<b>⊞</b> ♠	<b>☆</b> 📮	PDF   iii	Ì
en	English	<i>i</i> •		•	•		■ •	х 🚅	POF	Ì

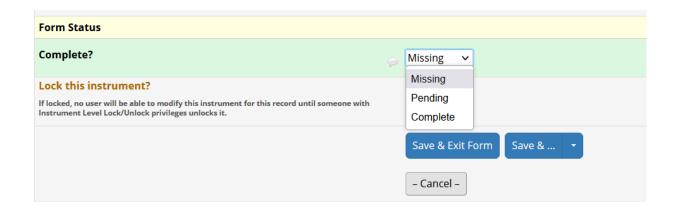
- 5. Under 'Forms/Surveys', click translate next to the form that you would like to change the options for the form status field.
- 6. Find the form status field and add the new options in the translation boxes.
- 7. Make sure to click 'Save changes' after each step.



### Creative Use Case

#### Using MLM to change the options for form completion status field

- 8. Open the online designer, add the action tag @LANGUAGE-FORCE='custom' to any field on the form that you just 'translated'. Click save.
- 9. The 'translated' options will be shown on the form.



#### Acknowledgement:

Slides adapted from 'Multi-Language Management - An End-User's Guide' by Günther Rezniczek, Marien Hospital Herne - University Hospital of Ruhr-Universität Bochum, Germany

