



## REDCap Multi-Language Management

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## Introduction and Learning Objectives

- 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
- Live demonstration
- Demonstrate a creative use case (if time allows)
- Q&A



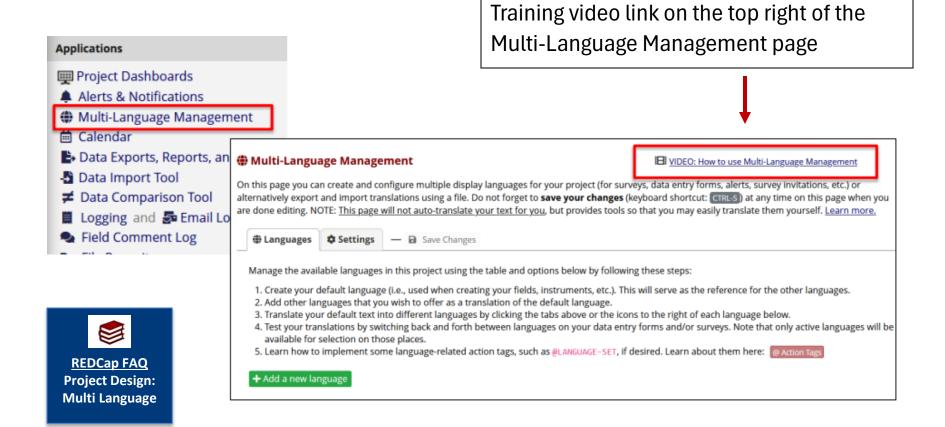
## MLM Availability

Server		System Languages Currently Enabled
REDCap I and II	redcap.med.yale.edu redcap.research.yale.edu	French German Portuguese Spanish
YNHH Standard REDCap	redcapynh.ynhh.org	Arabic Chinese Spanish
YNHH 21 Part 11 Validated REDCap	redcapynh-p11.ynhh.org	N/A

If the language you need is not currently enabled, 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.



#### **Learning Resources**





## 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 and 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.

#### Summary of Steps

1. Add languages

Three methods to choose from

2. Manage languages

Configure which languages should be used in which situations

3. Add translations

Enter translated material for each element

4. Test, test, test!

Beware of language cookies ——— Use a private browser window

## **Getting Started**

Three methods for initializing project languages:

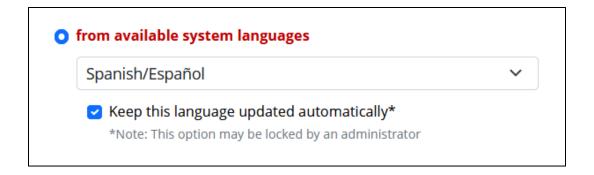
1. Initializing from available MLM system languages: User interface language is translated for you.

Use this option if your language is available!

- 2. Importing from an existing file, e.g. if you have a translation from another project
- 3. Building from scratch

## Methods for initializing a new language

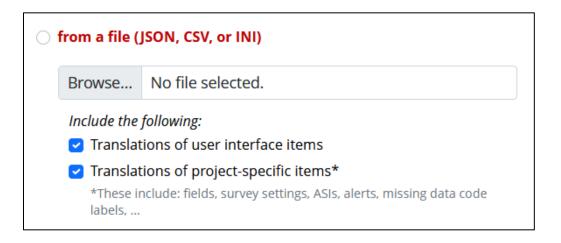
1. Initializing from available MLM system languages



- Use this option if you need to translate user interface items.
- The system language in the dropdown menu will include the user interface translations of the language imported from the REDCap consortium library.

## 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.

## Methods for initializing a new language

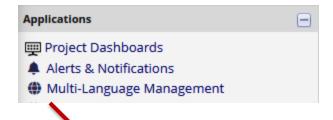
3. Creating the language from scratch

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.



#### Adding languages





VIDEO: How to use Multi-Language Management

On this page you can create and configure multiple display languages for your project (for surveys, data entry forms, alerts, survey invitations, etc.) or alternatively export and import translations using a file. Do not forget to **save your changes** (keyboard shortcut: CTRL-S) at any time on this page when you are done editing. NOTE: This page will not auto-translate your text for you, but provides tools so that you may easily translate them yourself. Learn more.



Manage the available languages in this project using the table and options below by following these steps:

- Create a base language. This is the language that corresponds to the project's language, i.e. the language of the REDCap user interface elements, such
  as this text, or the label of a submit button. This usually also matches the language used for field labels, survey instructions, etc., but not necessarily.

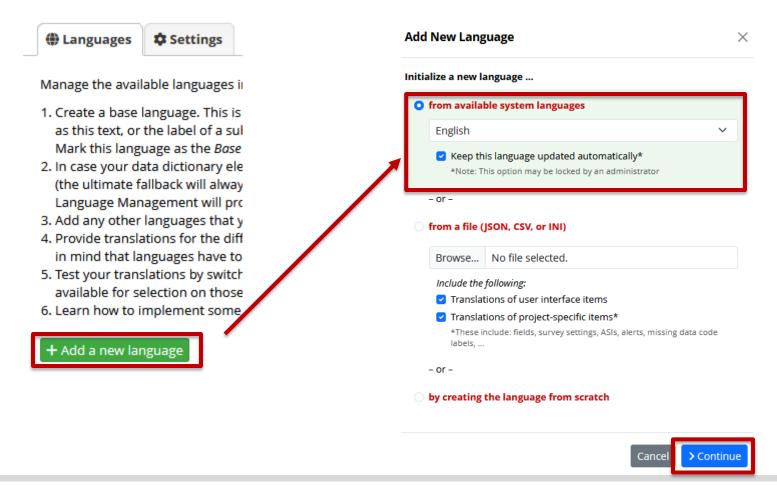
  Mark this language as the Base Language. If this language matches your data dictionary language, then you might want to mark it as the Fallback as well.
- 2. In case your data dictionary elements are not matching the Base Language, add a matching language. You probably will set this as the Fallback language (the ultimate fallback will always be the Base Language for all user interface elements, and the data dictionary elements as set up outside of Multi-Language Management will provide the ultimate fallback for those in case the Fallback does not provide a value).
- 3. Add any other languages that you wish to offer.
- 4. Provide translations for the different languages by clicking the tabs above, or use the icons to the right of each language in the table shown below. Keep in mind that languages have to be Active and enabled for individual instruments in data entry and/or survey modes separately.
- Test your translations by switching back and forth between languages on your data entry forms and/or surveys. Note that only active languages will be available for selection on those places.
- 6. Learn how to implement some language-related action tags, such as @LANGUAGE-SET, if desired. Learn about them here: @ Action Tags

+ Add a new language



## Adding Languages

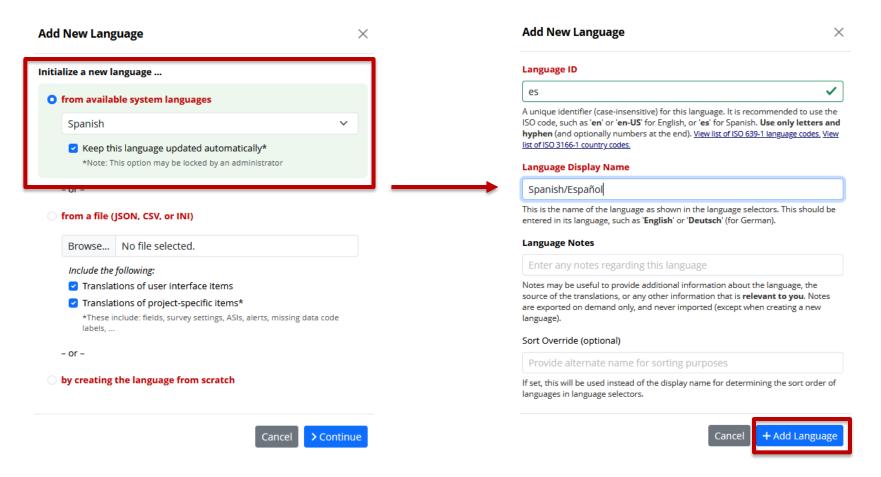
#### 1. Add the default language to your project.





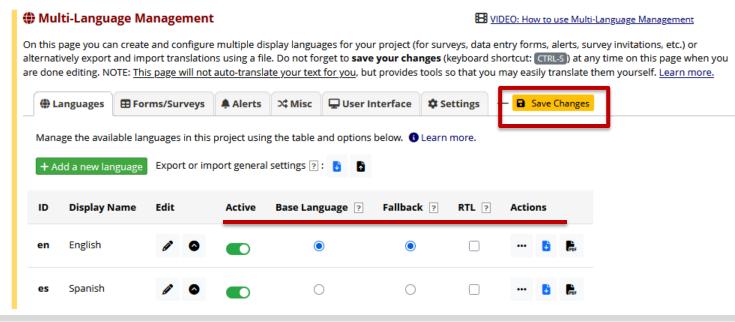
#### Adding Languages

#### 2. Add the second language to your project.





- 1. Turn on/off languages by setting their **Active** status
- 2. Set a language to represent **Base** and **Fallback** language status
- 3. Indicate if it's a right-to-left (**RTL**) language
- Use the Action buttons to navigate to other tabs or perform various operations on an individual language.
- 5. Save!





#### **Base Language:**

- The Base Language should match the **project language** (i.e. the language REDCap user interface elements are displayed in).
- Usually is also the language used during project design, i.e. for all data dictionary items, survey settings, ASI or alert messages, missing data code labels, etc.

#### Fallback Language:

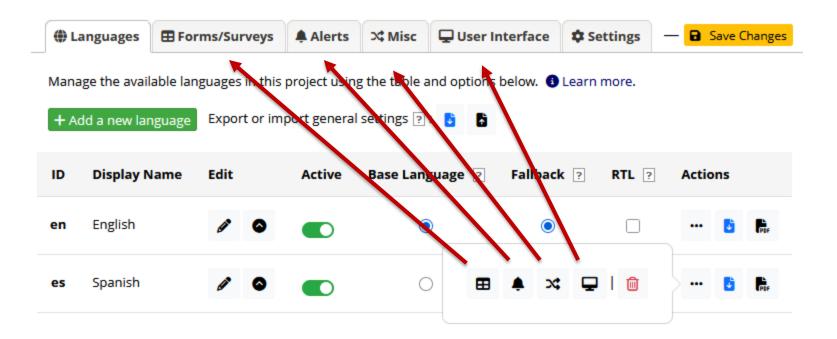
• Will be used when a translation is not available in the language that currently **should** be displayed. In case the fallback translation is missing, too, the project's base language will be used (i.e. whatever is in the data dictionary or, in case of UI strings, whatever language has been configured for the project by an admin).

**RTL**: This setting tells REDCap that the language should be displayed 'right to left'.



#### **Action Icons/Buttons on the Languages tab:**

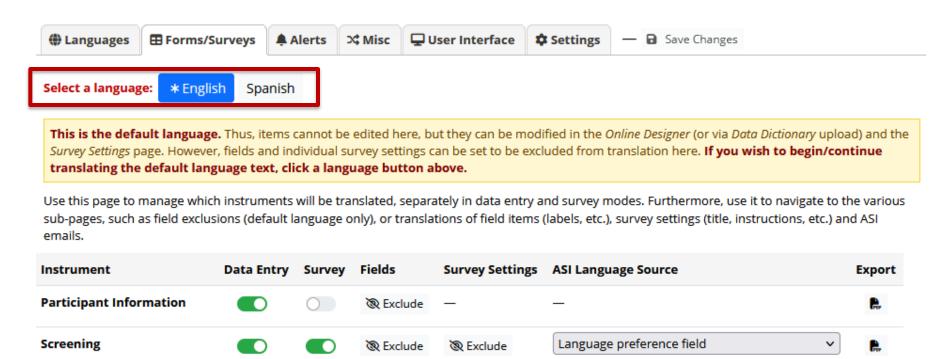
Shortcuts to MLM tabs....why?





#### Common pitfall:

When clicking on a **tab**, you are brought to the base language. It's easy to forget to choose the language that you're adding translation for. Using the shortcut from the individual language navigates you directly where you want to go.





#### Buttons on the Language Tab

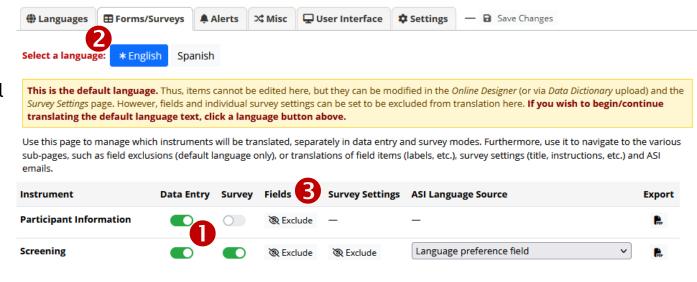
#### The icons / buttons in the table on the **Languages** tab explained:

- 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)
- Export translations for this language
- Download translated instrument PDFs for this language
- Delete this 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!



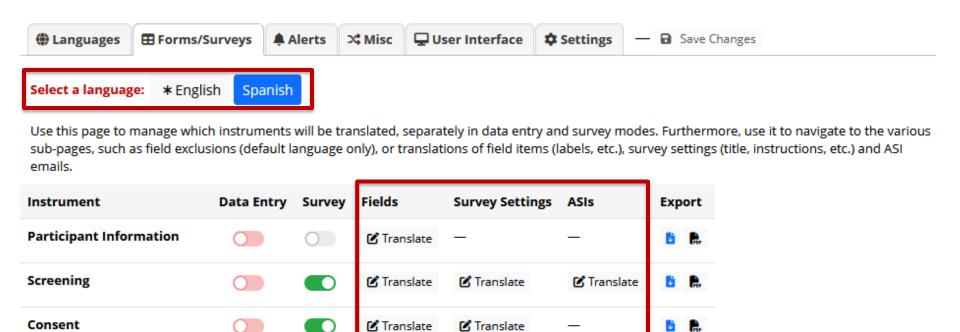


# QUESTIONS?



## **Adding Translations**

Depending on whether an instrument is enabled as a data entry form, survey, or has ASIs, corresponding **Translate** buttons are available.



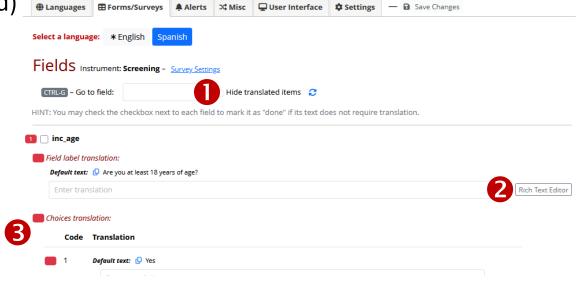


#### Adding Translations: Fields

- 1. Use the **Go to field** dropdown to quickly navigate to a specific field
- 2. Translate each item; use the **Rich Text Editor** for any settings supporting HTML

3. Indicators reflect the translation status of items/subitems (green = complete; red = not translated) 

⊕ Languages 
⊕ Forms/Surveys ♣ Alerts 
→ Misc □ User Interface → Settings - □ Save Changes



#### Field label translation:

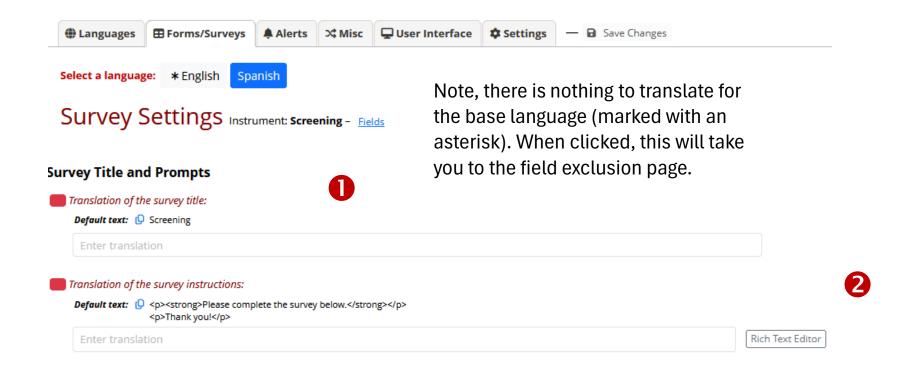
La siguiente serie de preguntas se refiere a su cansancio durante la última semana. Responda utilizando una escala de 1 a 7,

Rich Text Editor



## Adding Translations: Survey Settings

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



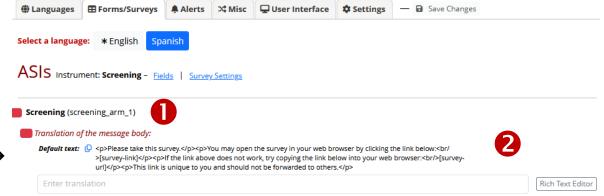


#### Adding Translations: ASIs

- 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 piping in the translations!

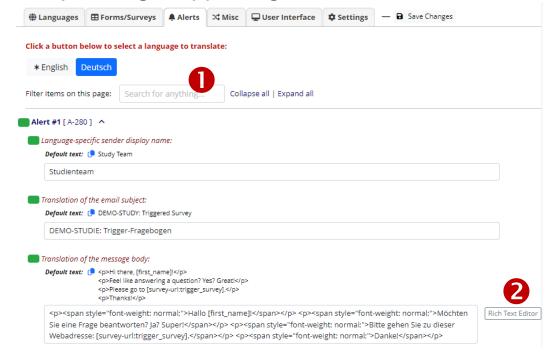


## Adding Translations: Alerts

- 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  $\rightarrow$  settings to be made on the default language's page!

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

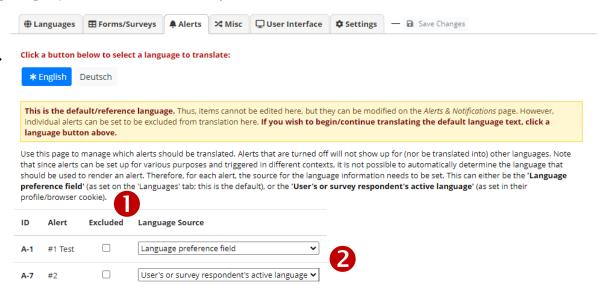




#### Alerts – Base language special options

- 1. Individual alerts can be excluded from translation
- 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  $\rightarrow$  language to get to this page!



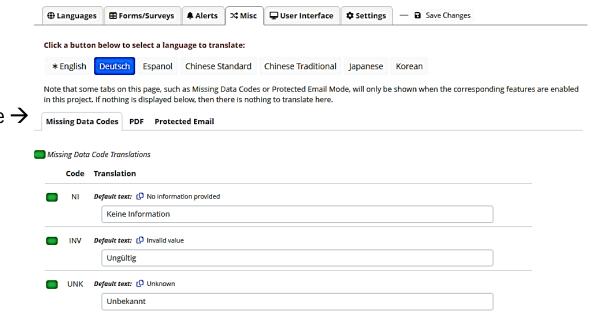


#### Miscellaneous items

- 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).



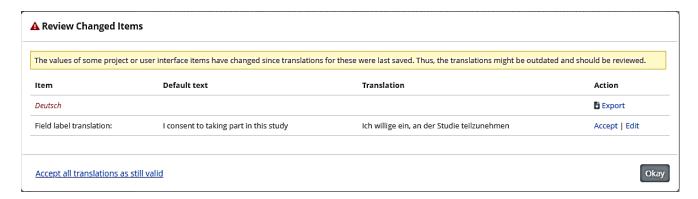


# QUESTIONS?



#### **Change Notification**

 Whenever an underlying item changes (either project or user interface items), MLM will display a notification



After reviewing the items, they can be edited or accepted as still being valid.

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

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

#### Generally, it is determined by:

A browser cookie that is set when first selecting a language.



#### For new visitors – or for items like ASI/Alerts immune to cookies:

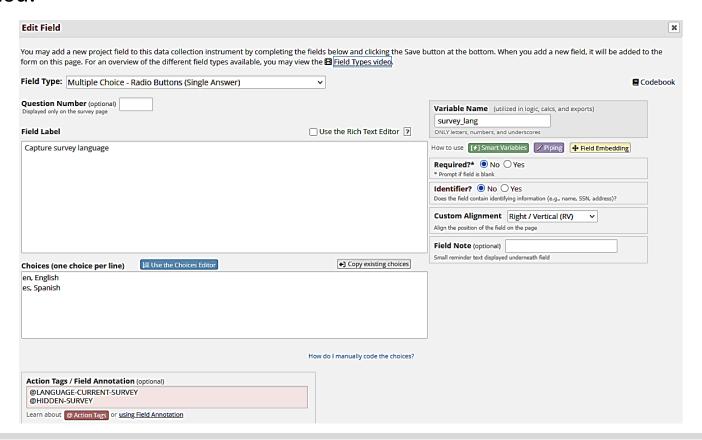
- A field in the project:
  - MLM Action tags that direct REDCap to use a particular language
  - Language Preference field

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

#### Language Action Tags

#### @LANGUAGE-CURRENT-FORM and @LANGUAGE-CURRENT-SURVEY

This will automatically set the language in a field to the current language selected.

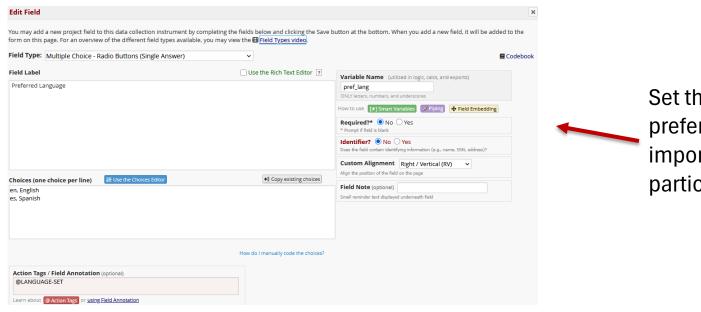




## Language Action Tags

#### **@LANGUAGE-SET**

This will set the language of a form or survey based on a selection



Set the language preference via data import for each participant

Set the language preference for all participants via @DEFAULT



Action Tags / Field Annotation (optional)

@LANGUAGE-SET
@DEFAULT='es'

Learn about @ Action Tags or using Field Annotation



## 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 <code>@LANGUAGE-CURRENT-FORM/SURVEY</code> 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.



pref\_lang [R] - Preferred Language

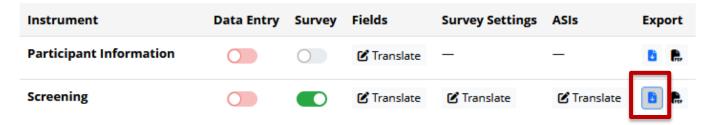


## **Export/Import Functions**

Exporting a language:



#### Exporting an instrument:



Importing a language or instrument:





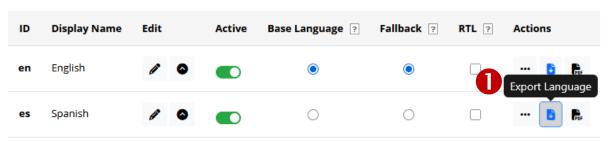
## LIVE DEMO

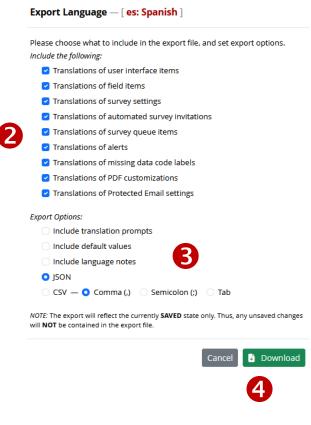


# Exporting languages (for re-use/offline translation)

- 1. Click on the **Export** button in the language's row in the languages table
- 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.







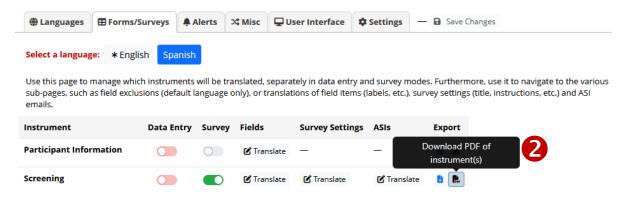
## Exporting translated instrument PDFs

Option 1: Export all (blank) instrument PDFs for a language (Languages tab)



## Option 2: Export a translated (blank) PDF for an individual instrument (Forms/Surveys tab)

Note: Instruments without translations will be rendered in the default language

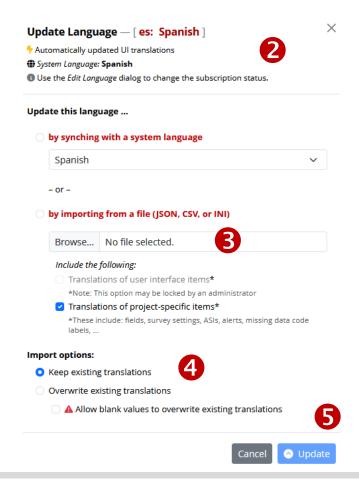




## Importing (updated) translations

- 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
- 5. Click Update to perform the import (or synch) operation



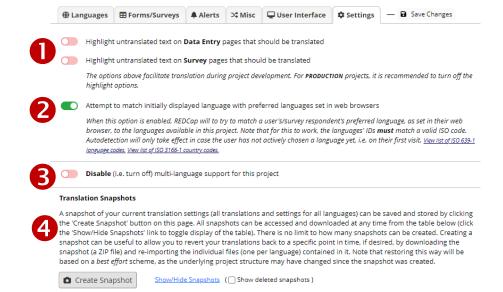




## Other MLM settings / Translation snapshots

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

- 1. 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)
- 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)





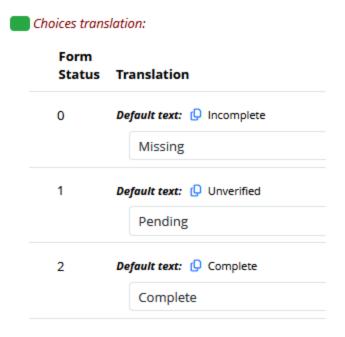
# Creative Use Case: Using MLM to change the options for form completion status field

- 1. Add the default English language
- 2. 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	Base Language ?	Fallback ?	RTL ?	Actions
custom	Custom	<i>i</i>		0	0		··· Pos
en	English	<i>P</i> •		•	•		··· B

# Creative Use Case: Using MLM to change the options for form completion status field

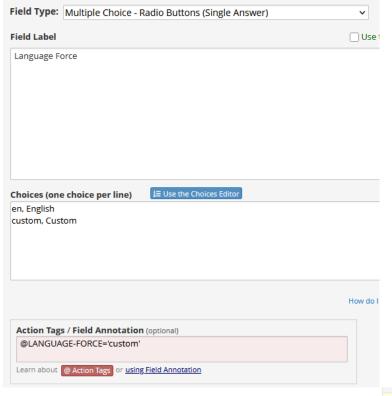
- 4. Under 'Forms/Surveys', click translate next to the form that you would like to change the options for the form status field.
- 5. Find the form status field and add the new options in the translation boxes.



6. Remember to click 'Save changes' after each step.



# Creative Use Case: Using MLM to change the options for form completion status field



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





## THANKS!

#### Acknowledgement:

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