REDCap Erweiterungen:
Hooks, Plugins, Module
Konzepte und Beispiele

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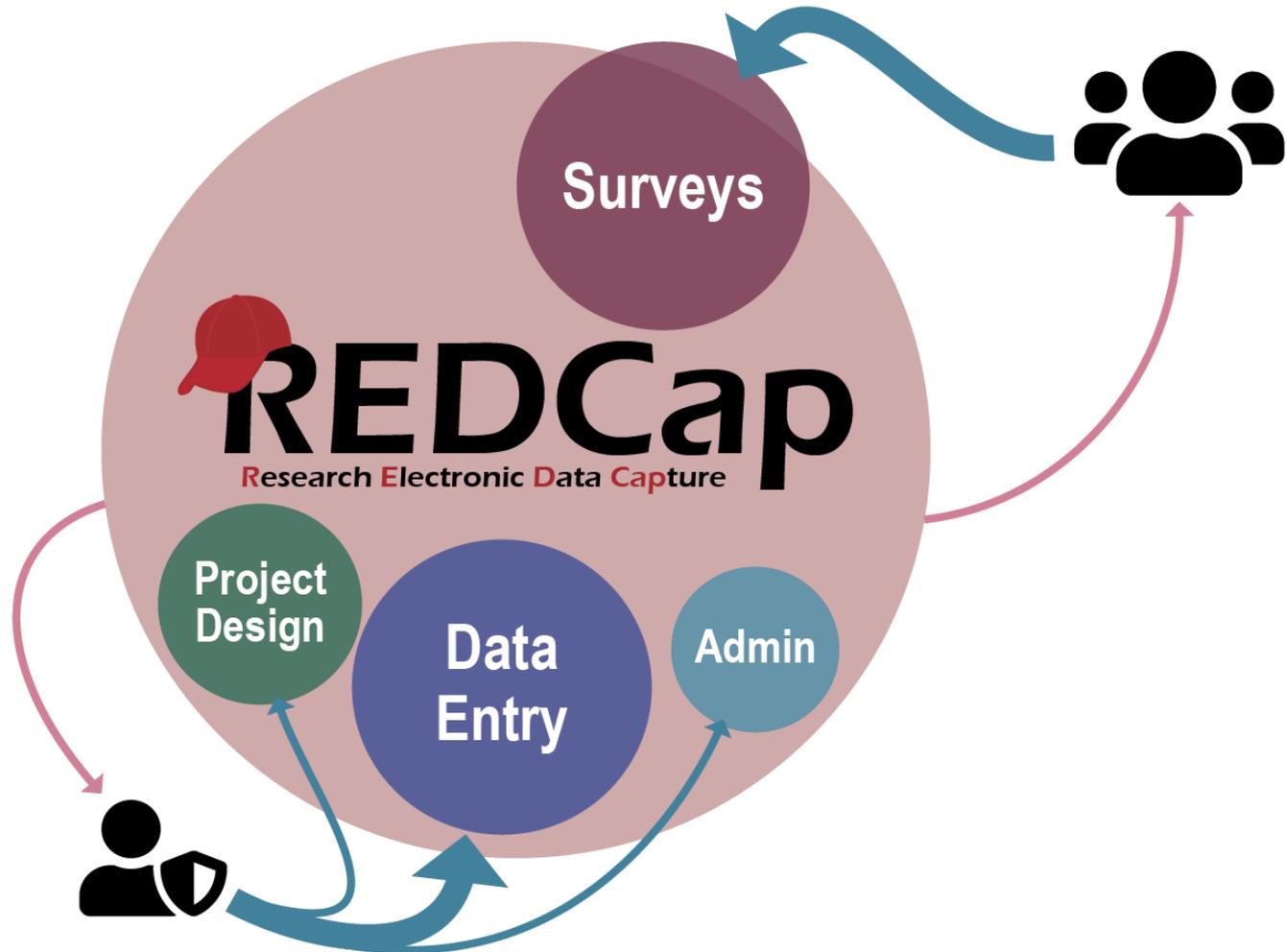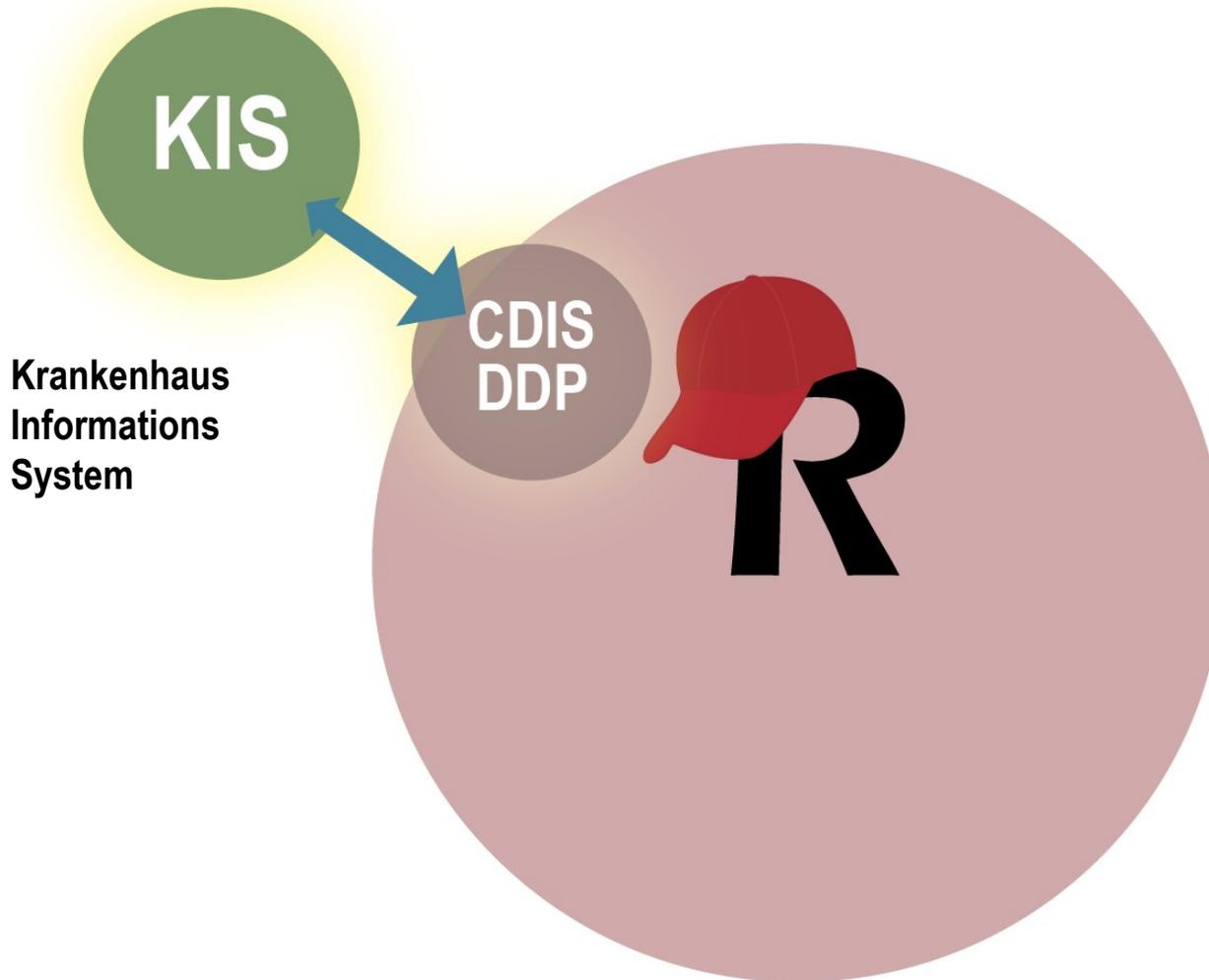Klinikum der Ruhr-Universität Bochum
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REDCap
Admin & User seit Mitte 2015

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REDCap Community: gunther.rezniczek
GitHub: grezniczek

Das System REDCap – Benutzerinteraktion

Integration mit Krankenaus-IT Systemen

KIS

Krankenhaus Informations System

CDIS DDP

R

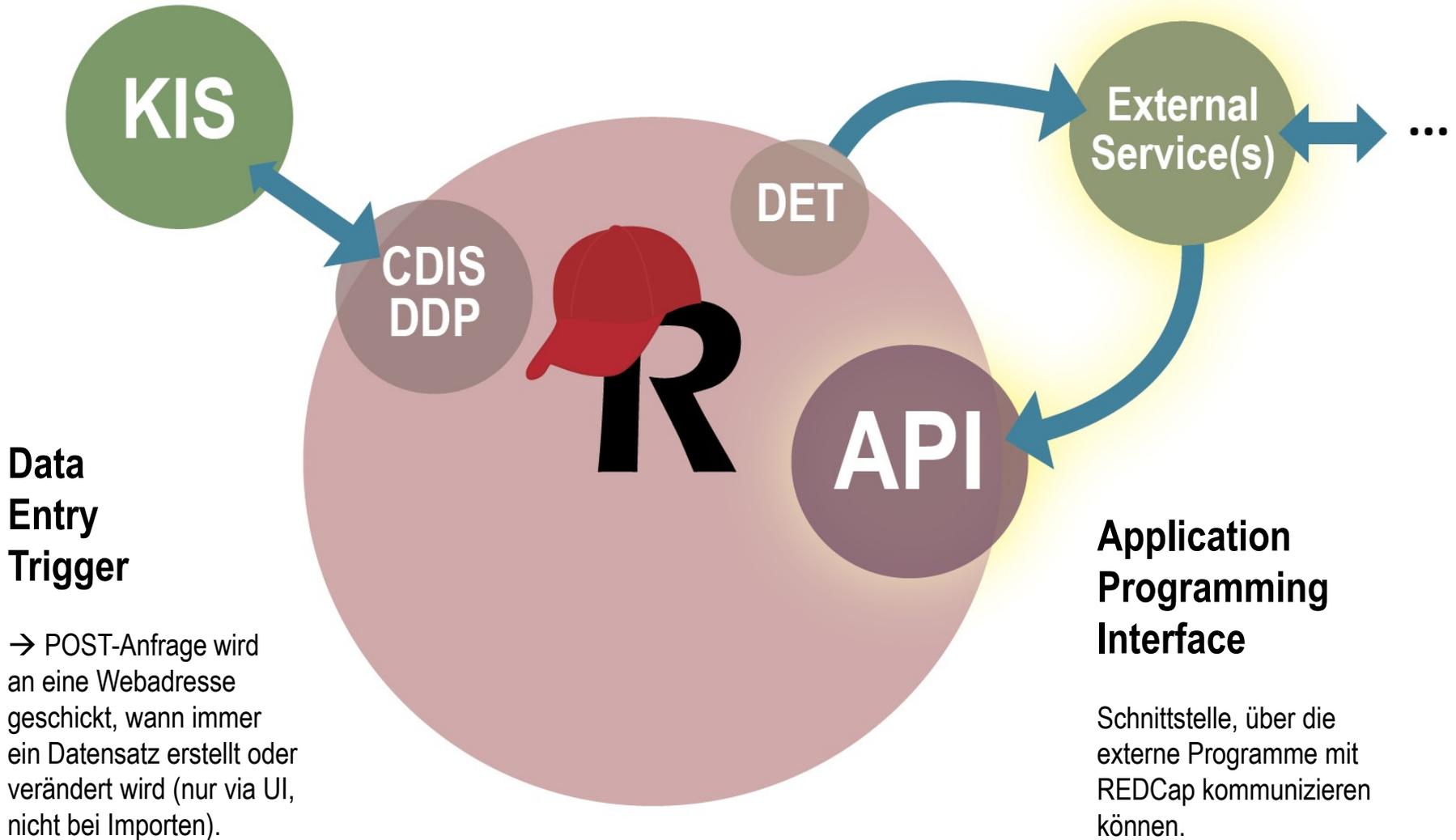**Clinical Data Interoperability Services**
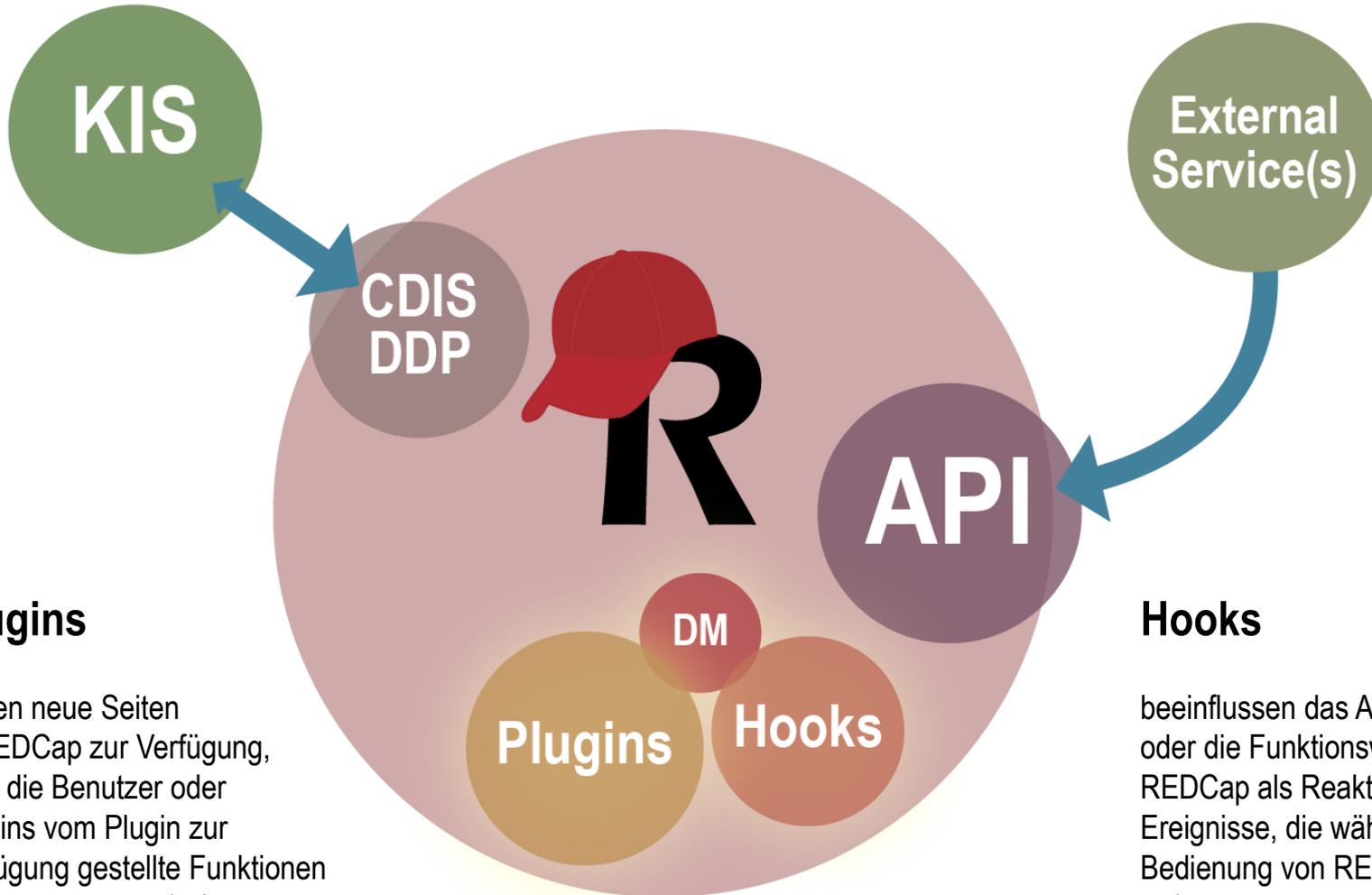
Clinical Data Pull
Clinical Data Mart

basierend auf **FHIR**, einem HL7 Standard
Fast
Healthcare
Interoperability
Resources

Dynamic Data Pull

Zugriff von außen via REDCap API

Data Entry Trigger

→ POST-Anfrage wird an eine Webadresse geschickt, wann immer ein Datensatz erstellt oder verändert wird (nur via UI, nicht bei Importen).

Application Programming Interface

Schnittstelle, über die externe Programme mit REDCap kommunizieren können.

Plugins und Hooks als Erweiterungspunkte

KIS

External Service(s)

CDIS DDP

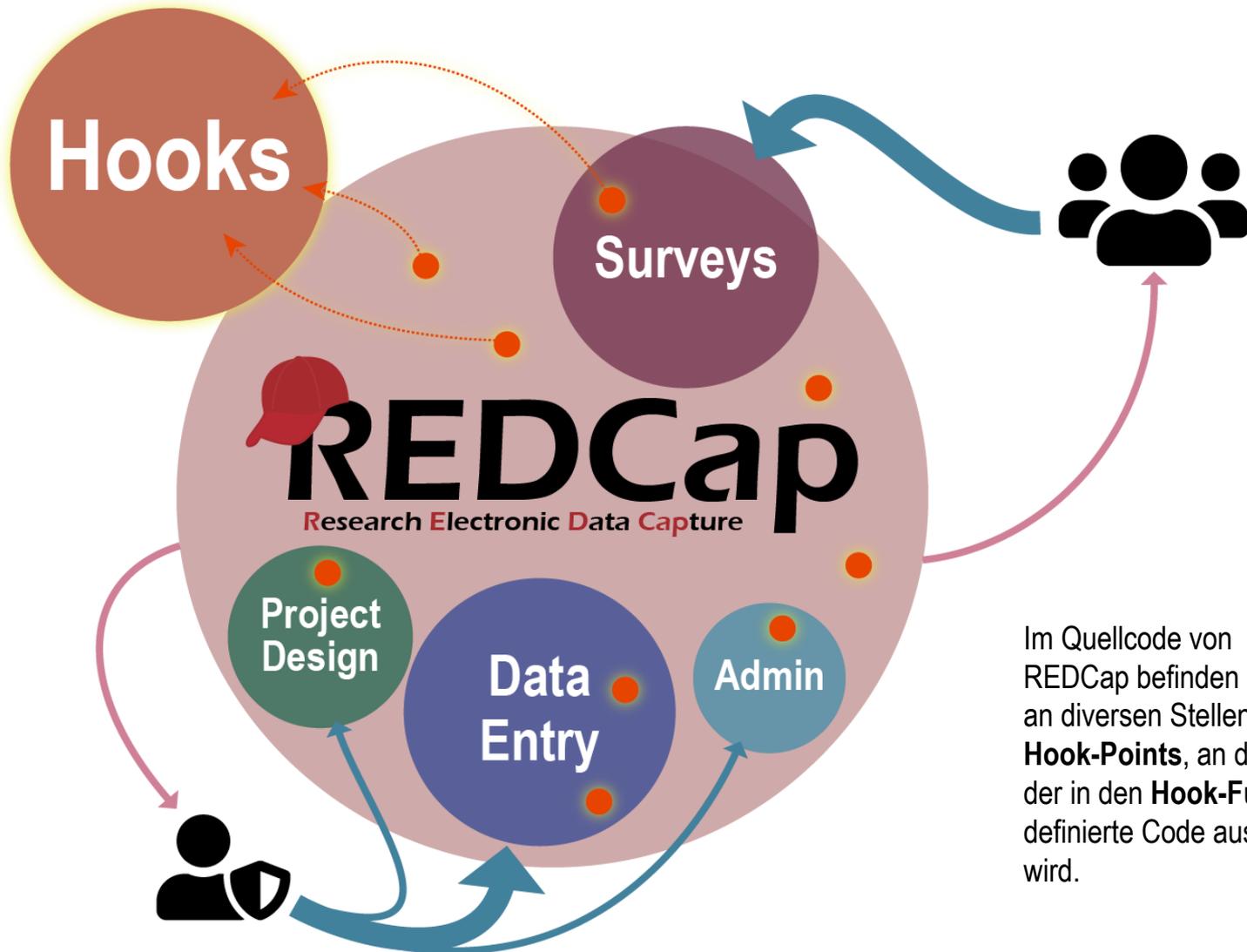**API**

DM

Plugins

Hooks

Plugins

stellen neue Seiten in REDCap zur Verfügung, über die Benutzer oder Admins vom Plugin zur Verfügung gestellte Funktionen oder Ansichten aufrufen können.
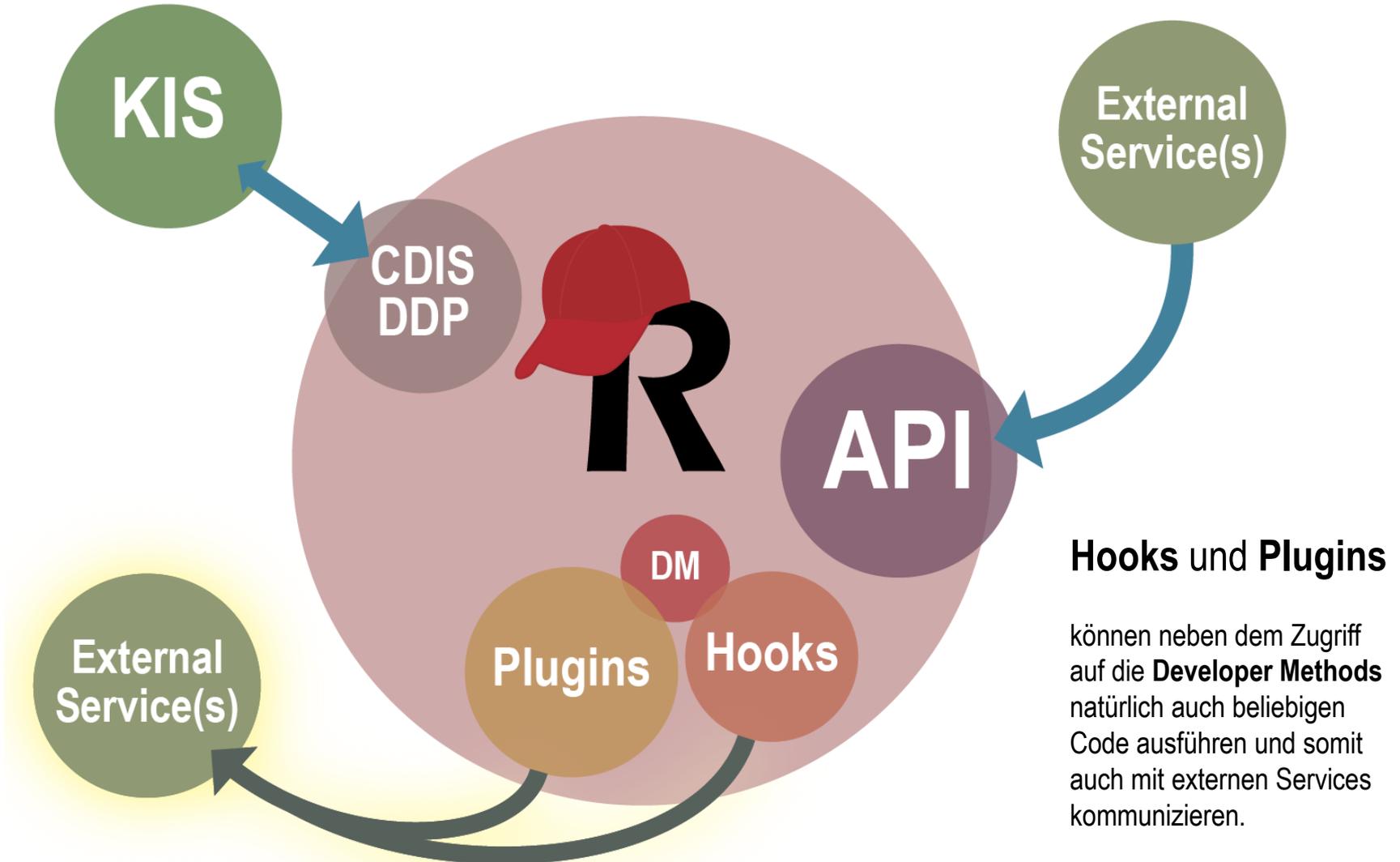
Hooks

beeinflussen das Aussehen oder die Funktionsweise von REDCap als Reaktion auf Ereignisse, die während der Bedienung von REDCap auftreten.

Wie funktionieren <u>Hooks</u>?

Im Quellcode von REDCap befinden sich an diversen Stellen **Hook-Points**, an denen der in den **Hook-Functions** definierte Code ausgeführt wird.

Hooks und Plugins: Kommunikation mit der Außenwelt

Hooks und **Plugins**

können neben dem Zugriff auf die **Developer Methods** natürlich auch beliebigen Code ausführen und somit auch mit externen Services kommunizieren.

Hooks – Code / Aufruf / Funktion

Control Center

System Configuration
- Configuration Check
- General Configuration
- Security & Authentication
- User Settings
- File Upload Settings
- Modules/Services Configuration
- Field Validation Types
- Home Page Settings
- Project Templates
- Default Project Settings
- Footer Settings (All Projects)
- Cron Jobs

REDCap Hooks

To utilize REDCap hooks, you must specify the full file path to your Hook Functions file, which is a PHP file on your REDCap web server that contains all your hook functions. You may place the Hook Functions file in any directory you wish, and you may name it anything you wish. Once you have created it, provide its full file path here so that REDCap may then begin to utilize any hook functions inside it. For more info on REDCap hooks, see the documentation by clicking the 'Plugin, Hook, & External Module Documentation' link on the left-hand menu

`\Development\redcap\hooks\`**hooks_dispatcher.php**

Full path to your PHP file containing your REDCap hook functions

Example: D:\GR-Docs\REDCap\Development\redcap\hooks.php

```
∨ hooks
  ∨ project_hooks
    > all
    > bbmhh
    > pid33
    > pid34
    > pid36
    > pid43
    > pid94
  🐘 GRHelpers.php
  🐘 hooks_dispatcher.php
```

Hooks – Code / Aufruf / Funktion

Control Center

Technical / Developer Tools
- External Modules
- API Documentation
- Plugin, Hook, & External Module Documentation
- MySQL Dashboard

Plugins, Hooks, & External Modules

Introduction

FAQ for Plugins

FAQ for Hooks

External Modules Documentation

redcap_info()

Developer methods for Plugins, Hooks, & External Modules

REDCap::allowProjects

REDCap::allowUsers

REDCap::email

REDCap::escapeHtml

REDCap::evaluateLogic

REDCap:filterHtml

REDCap::getCopyright

REDCap::getData

REDCap::getDataDictionary

REDCap::getEventIdFromUniqueEvent

REDCap::getEventNames

REDCap::getExportFieldNames

REDCap::getFieldNames

REDCap::getFieldType

Hook functions

redcap_add_edit_records_page

redcap_control_center

redcap_custom_verify_username

redcap_data_entry_form

redcap_data_entry_form_top

redcap_every_page_before_render

redcap_every_page_top

redcap_project_home_page

redcap_save_record

redcap_survey_complete

redcap_survey_page

redcap_survey_page_top

redcap_user_rights

Hooks

REDCap Developer Tools:
Documentation for Plugins, Hooks, & External Modules
REDCap Version 9.3.6

RUB

redcap_every_page_top

(REDCap >= 6.14.0)

redcap_every_page_top — Allows custom actions to be performed at the top of every page in REDCap (including plugins that render the REDCap page header)

Description

```
void redcap_every_page_top ( int $project_id )
```

Allows custom actions to be performed at the top of every page in REDCap (including plugins that render the REDCap page header). You may utilize this hook to 1) perform back-end operations, such as adding or modifying data in database tables, which can be done when the page loads or when triggered by a user action on the page via JavaScript, or 2) output custom HTML, JavaScript, and/or CSS to modify the current page in any way desired. **NOTICE: Regardless of the modifications made to the REDCap user interface with this hook, the REDCap copyright statement must still be visible on every page. If the copyright statement is obscured or removed by a hook, it should be displayed somewhere else on that page using REDCap::getCopyright.**

Location of Execution

The function is executed at the very top of *every* page in REDCap (right after the initial BODY tag) on project and non-project pages.

Parameters

`project_id`
> The project ID number of the REDCap project in which the hook is being called. If this hook is called on a non-project page, project_id will be NULL.

Return Values

Examples

Example #1:

Add some custom CSS to every page to change the style of the entire application.

```
function redcap_every_page_top($project_id)
{
    ?><link rel="stylesheet" type="text/css" href="/plugins/fancy/style.css" media="screen"><?php
}
```

Hooks – Code / Aufruf / Funktion


```php
function redcap_every_page_top($project_id = null)
{
    $hook_name = 'redcap_every_page_top';
    // Check whether hook is enabled
    if (CustomHooks::GlobalEnabled[$hook_name]) {
        // Check whether hook is denied for all
        if (in_array(-1, CustomHooks::DeniedProjects[$hook_name], true)) return;
        // Check whether hook is not denied for project
        if (!in_array((int)$project_id, CustomHooks::DeniedProjects[$hook_name], true))
        {
            // Check whether hook is on for all projects (-1)
            if (in_array(-1, CustomHooks::AllowedProjects[$hook_name], true)) {
                // Execute general hook
                $all_handler_script = dirname(__FILE__) . "/project_hooks/all/$hook_name.php";
                if (file_exists($all_handler_script)) {
                    include $all_handler_script;
                }
            }
            // Check whether hook is allowed for project
            if (in_array((int)$project_id, CustomHooks::AllowedProjects[$hook_name], true)) {
                // Execute project specific hook
                $project_handler_script = dirname(__FILE__) . "/project_hooks/pid{$project_id}/$hook_name.php";
                if (file_exists($project_handler_script)) {
                    include $project_handler_script;
                }
            }
        }
    }
}
```

Help & Information   ⊟

 ❓ Help & FAQ
 ▦ Video Tutorials
 ↪ Suggest a New Feature

 ✉ Contact REDCap administrator

Datenschutz

Marien Hospital Herne -
Universitätsklinikum der Ruhr-Universität
Bochum

Impressum | Datenschutz

```php
hooks > project_hooks > all > 🐘 redcap_every_page_top.php > ...
  1    <?php
  2    function all_redcap_every_page_top()
  3  > { ...
 84    }
 85    // Call the "hooked" function (this is packaged in a function to get proper IDE support
       in the file)
 86    all_redcap_every_page_top();
```
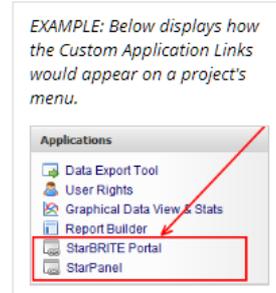
Plugins – Code / Aufruf / Funktion

Plugins – Code / Aufruf / Funktion
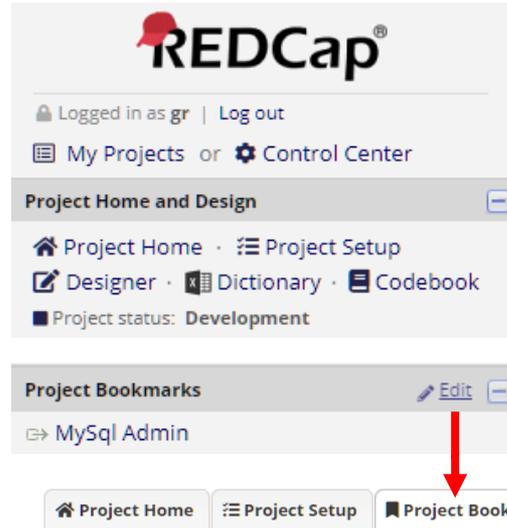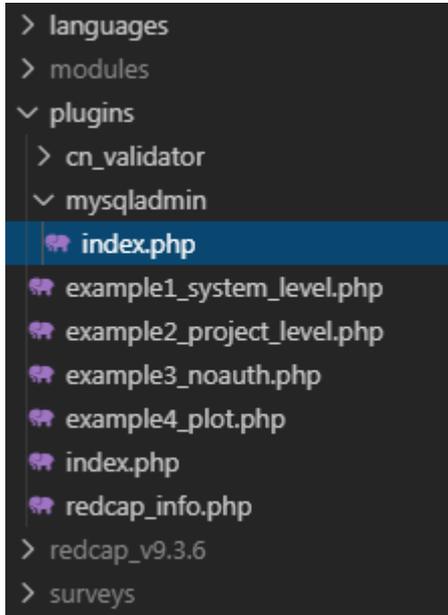
Plugins – Code / Aufruf / Funktion

External Modules – die „Turbo-Plugin-Hooks"
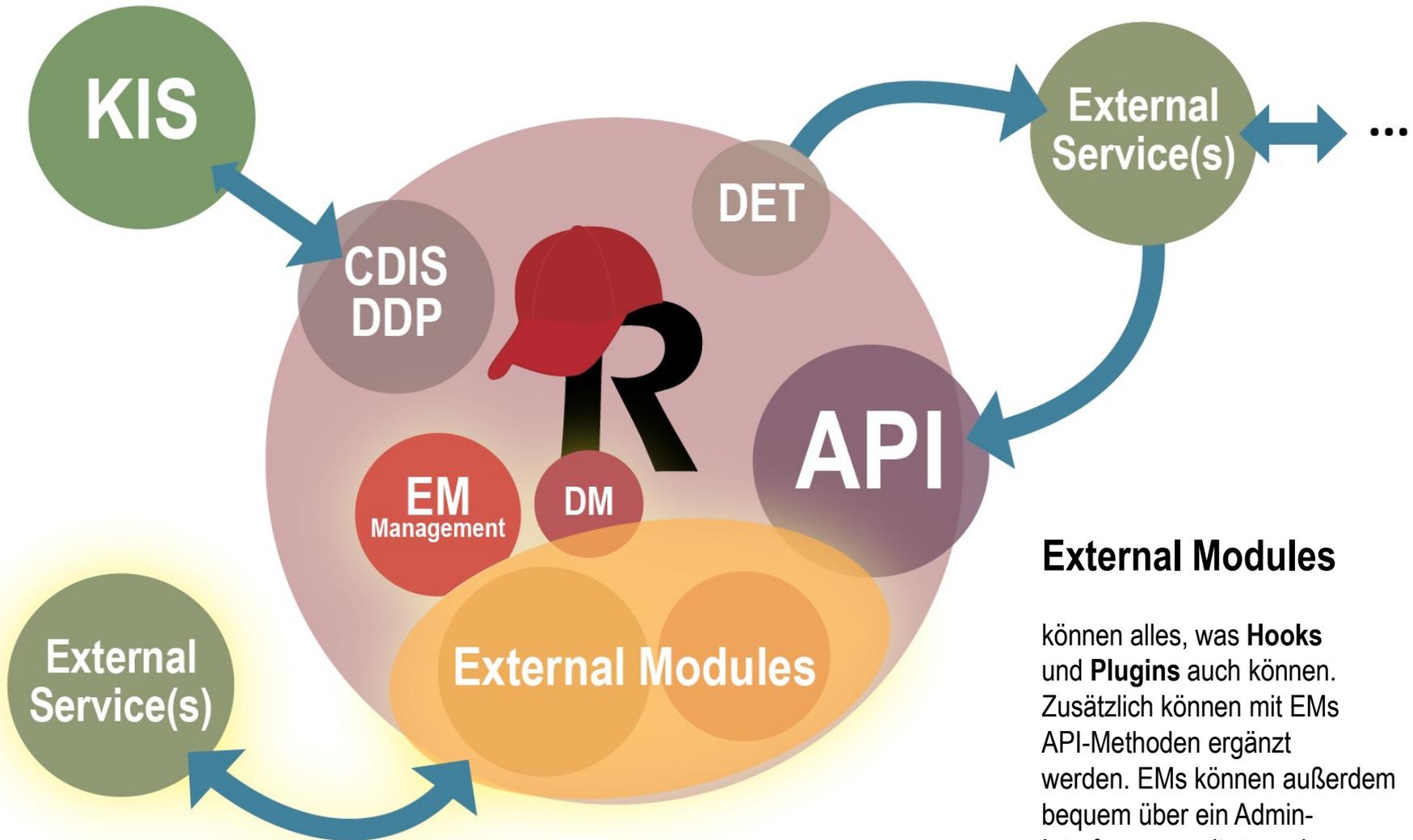
External Modules

können alles, was **Hooks** und **Plugins** auch können. Zusätzlich können mit EMs API-Methoden ergänzt werden. EMs können außerdem bequem über ein Admin-Interface verwaltet werden.

Plugins, Hooks und Externe Module im Vergleich

Plugins	Hooks	Externe Module
• Stellen Seiten bzw. Funktionen „außerhalb" REDCaps zur Verfügung (PHP, HTML, JS) • Können REDCap-Seiten nicht verändern • Aufruf via Bookmarks oder Application Links • Code üblicherweise in redcap/plugins (oder irgendwo) • Developer Methods verfügbar • REDCap Auth ist opt-in • Plugin-Code kontrolliert, wer (welches Projekt) Zugriff hat • Können API-Methoden zur Verfügung stellen (aber: Endpunkt außerhalb von redcap/api).	• Keine komplette Skripte, sondern PHP-Funktionen mit bestimmten Namen und Signaturen • Laufen während der Ausführung von REDCap-eigenen Seiten • Können daher in Aussehen und Funktionsweise eingreifen • Code üblicherweise in redcap/hooks (oder irgendwo) • Developer Methods verfügbar • Admin/Programmierer muss kontrollieren, in welchem Kontext (Projekt, User, bestimmte Seite) ein Hook ausgeführt wird • Hook-Framework notwendig (Administration außerhalb von REDCap, oft direkt in der Server-Shell)	• Alle Möglichkeiten und Vorteile von Plugins und Hooks, ohne deren Nachteile • Developer Methods (und weitere Funktionen aus dem EM Framework) verfügbar • REDCap Auth ist opt-out • REDCap API kann erweitert werden (unter redcap/api) • Code befindet sich in redcap/modules • Administration direkt in REDCap integriert, Dokumentation und Konfigurationssystem für Module (System-Ebene, Projekt-Ebene) • Leicht wiederverwendbar bzw. teilbar (EM Repo)

Was sind External Modules?

" External Modules are individual packages of software that can be downloaded and installed by a REDCap administrator. Modules can extend REDCap's current functionality, and can also provide customizations and enhancements for REDCap's existing behavior and appearance at the system level or project level.

REDCap Control Center, External Modules

Anwender

Für den Endanwender (Dateneingeber, Fragebogen-Teilnehmer) komplett **transparent** (nichts, was auf „Externe Module" hinweisen würde; Wirkungen sind einfach „da").

Projekt-Designer

Menüpunkt External Modules (Applications). Sieht vom REDCap-Admin freigegebene Module und kann diese für sein Projekt aktivieren und gegebenenfalls konfigurieren.

REDCap-Admin (Superuser)

Kann Externe Module zu REDCap hinzufügen (automatische Installation aus dem REDCap Repository oder manuell durch Kopieren auf den Server), konfigurieren und für Projekte freigeben.

Manche Module lassen sich nur durch Admins nutzen.

Modul-Entwickler

Nutzt die vom EM Framework bereitgestellten *Programmierschnittstellen* und *Konventionen*, um relativ einfach die Funktionalität von REDCap anzupassen bzw. zu erweitern.

RU B

Control Center Home
- Notifications & Reporting
- To-Do List
- Enter PID to go to project

Administrator Resources
- REDCap Community
- Project REDCap website
- REDCap Training Materials

Dashboard
- System Statistics
- Activity Log
- Activity Graphs
- Map of Users

Projects
- Browse Projects
- Edit a Project's Settings
- Survey Link Lookup

Users
- Browse Users
- Add Users (Table-based Only)
- User Whitelist
- Email Users
- API Tokens
- Administrators & Acct Managers

Technical / Developer Tools
- External Modules
- API Documentation
- Plugin, Hook, & External Module Documentation
- MySQL Dashboard
- MySQL Simple Admin

Miscellaneous Modules
- Clinical Data Interoperability Services
- Dynamic Data Pull (DDP) - Custom
- Custom Application Links

External Modules - Module Manager
✎ Set custom text for Project Module Manager page

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You may click the 'View modules' button below to navigate to the REDCap Repo (Repository of External Modules), which is a centralized catalog of curated modules that have been submitted by various REDCap partner institutions. If you find a module in the repository that you wish to download, you will be able to install it, enable it, and then set any configuration settings (if applicable). If you choose not to enable the module in all REDCap projects by default, then you will need to navigate to the External Modules page on the left-hand menu of a given project to enable it there for that project. Some project-level configuration settings, depending on the module, may also need to set on the project page.

🔔 **13 External Modules have updates available for download from the REDCap Repo.**
[View updates]

[⊕ Enable a module] [⬇ View modules available in the REDCap Repo] [📅 Configure Cron Start Times]

Modules Currently Available on this System
[Search enabled modules]

Admin Dashboard - v3.3.1
Provides a sortable table view of various reports on REDCap metadata (users, projects, etc). Includes a number of built-in reports as well as support for custom SQL queries.
by Eric Neuhaus (University of Iowa Institute for Clinical and Translational Science)

📄 View Documentation

[Configure] [Disable] [View Usage]

Administrator Only DAG Renaming - v1.0.0
Prevents users that are not REDCap administrators from renaming DAGs.
by Mark McEver (Vanderbilt University Medical Center)

[Configure] [Disable] [View Usage]

Auto Populate Fields - v2.3.0

REDCap
Research Electronic Data Capture

Control Center Home
- 🛈 Notifications & Reporting
- ☰ To-Do List
- → [Enter PID to go to project]

Administrator Resources
- 🌐 REDCap Community
- 🌐 Project REDCap website
- 👤 REDCap Training Materials

Dashboard
- ⊞ System Statistics
- 📋 Activity Log
- 📊 Activity Graphs
- 📍 Map of Users

Projects
- 📚 Browse Projects
- 📝 Edit a Project's Settings
- 🔗 Survey Link Lookup

Users
- 👥 Browse Users
- 👤 Add Users (Table-based Only)
- 👤 User Whitelist
- ✉ Email Users
- 🗐 API Tokens
- 👥 Administrators & Acct Managers

Technical / Developer Tools
- 📦 External Modules
- 🖥 API Documentation
- 🔌 Plugin, Hook, & External Module Documentation
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Miscellaneous Modules
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📄 View Documentation

[Configure]
[Disable]
[View Usage]

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by Mark McEver (Vanderbilt University Medical Center)

[Configure]
[Disable]
[View Usage]

Auto Populate Fields - v2.3.0

REDCap Repo

Stand 23.10.2019: **124** Externe Module

Admin

Admin Dashboard
Administrator Only DAG Renaming
Analytics
Instance Marker
Mobile API Request to Survey
MySQL Simple Admin
Quick Deleter
Quick Permissions
REDCap Project Ownership
Single Line System Informational
   Text
Survey Link Lookup
Unban IP
Username Verification
Warn Users of Pending Suspension
WUSM Repo Handler Module

Cosmetic

Color Matrix
Field Notes Display
Form Field Tooltip
Hide "Create Empty Project"
Hide Custom Application Links
Hide Homepage Email Addresses
Hide Save & Return Button
Inline Descriptive Popups
Language Editor
Modify Contact Admin Button
My Projects Tweaks
REDCap CSS Injector
REDCap Custom Footer
REDCap Field Help
Right-to-Left Module
Shazam
Show Lock Language
Sticky Matrix Headers
Survey UI Tweaks

Cosmetic (ctd.)

Two Column Checks
UI Trimmer

Data Entry

Fields
Auto Populate Fields
Custom Imagemap
Date Calculated Fields
FHIR Ontology Autocomplete Module
Hide Choice by Event
hookutils
Image Map
Instant Field Concatenation
Matrix Question Randomization
REDCap Chart Field

REDCap Repo

RUB

Data Entry (ctd.)

Forms
Module to pre-populate an
  instrument with data from a
  previous event / instance
Multilingual

Field Enhancements
Complete Row
Hide Randomization Values
Image Viewer
Instance Table
Simple Ontology Module
User Agent Info

Data Entry Workflow

Auth
Hidden by role
nedCAPTCHA
REDCap Survey Auth
REDCaptcha
  (integrated, REDCap 8.11)
Restrict Survey Referrers
Shibboleth Esignature
Show by role
User Rights By Record

Flow
AutoContinue Skip Logic
Auto-Schedule
Custom Survey Landing Page
Form Render Skip Logic
Linear Data Entry Workflow

Data Entry Workflow (ctd.)

DAGs
Auto DAGs
DAG Switcher
Public Survey DAG
WUSM Assign DAG

Misc
Email Alerts
  (integrated, REDCap 9+)
QR Code Shortcut
Save Survey PDF to a Field
Stealth Queue
Verify all (Data Resolution
  Workflow)

Data Visualization

ViDER Visualizations
Vizr

REDCap Repo

RUB

Data Import/Export/Sync

API Sync
Auto Record Generation
Big Data Import
Cross Project Piping
Cross-Project Check for Duplicate
   Records
Custom Report Builder
Custom Template Engine
Dynamic Report Push
PDF @ActionTags
Project Aggregator
REDCap-ETL Module
REDCap Web Services
Survey Queue Interface
Tableau Web Data Connector
WUSM Project To Project Field
  Replication Module

Project Enhancements

General

Annotated PDF
Codebook Concertina
  (integrated, REDCap 9+)
Data Driven Project Banner
Hide Codebook
   Randomization Numbers
Orca Call List
Orca Search Module
Quick Permissions
Record and Event Pager
Rochester Accessibility Survey
Save Randomisation Date
Survey Dashboard

Project Enhancements (ctd.)

Special Project Type

FAQ Builder
Flight Tracker for Scholars
Flight Tracker Lite
MyCap
PubMed Search
VoteCap

Tech / Programming / API

emLogger - Logging Utility
External Module Templater
Locking API
Quick Projects
Randapi (Randomization)
REDCap Entity
REDCap JavaScript Injector
Seamless IFrames
Session Checker

Administration von Externen Modulen

- **Download / Installation**

  Server-Rechte, Code Review, Konfiguration

- **Richtlinien für den Einsatz**

  Nutzererwartungen, Limitationen, Aufwand(sentschädigung), Custom-Programming

  Antragsformular (für Aktivierung bereits vorhandener, Beantragung neuer EMs)

- **Tracking von Externen Modulen**

  Welche EMs sind in welchen Projekten aktiv?

  Wechselwirkung zwischen EMs? Code Review / Testen!

- **Updates und Validierung**

  Benachrichtigung im Control Center (Internetverbindung, Server-Rechte)

  Updates auf Knopfdruck

  Funktionelles Testen – Testprojekt für jedes EM mit entsprechenden Testszenarien

→ nützlich: External Module Administration Tracking Tool (Training Materials Repository)

REDCap
Research Electronic Data Capture

⚙ Control Center

📦 External Modules - Module Manager ✏ Set custom text for Project Module Manager page

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You may click the 'View modules' button below to navigate to the REDCap Repo (Repository of External Modules), which is a centralized catalog of curated modules that have be partner institutions. If you find a module in the repository that you wish install it, enable it, and then set any configuration settings (if applicable). module in all REDCap projects by default, then you will need to navigate left-hand menu of a given project to enable it there for that project. Som settings, depending on the module, may also need to set on the project

Set custom text for Project Module Manager (optional) ✖

You may optionally provide custom text in the text box below that will appear to users on the External Modules 'Project Module Manager' page in each project. It may be useful to provide some custom text to users for any of the following reasons: 1) To make users aware of institutional policies or procedures required before an administrator can enable a module, 2) To display guidelines (or a link to an external page with guidelines) regarding the usage of particular modules at your institution, or 3) To bring to the user's attention anything that might be helpful regarding particular modules or External Modules in general.

Custom text displayed on Project Module Manager page:

Um die Aktivierung eines Externen Moduls für Ihr Projekt zu beantragen, füllen Sie bitte folgendes Formular aus:

Antrag auf EM-Aktivierung

NOTE: HTML may be used in order to adjust the style of the text or to display links, images, etc.

[Save] [Cancel]

Test

📦 External Modules - Project

External Modules are individual packages of software extend REDCap's current functionality, and can also pr appearance at the system level or project level.

As a REDCap administrator, you may enable any modu settings might be required to be set, in which administrators or users in this project with Project Setup/Design privileges can modify the configuration of any module at any time after the module has first been enabled by an administrator. Note: Normal project users will not be able to enable or disable modules.

DISCLAIMER: Please be aware that External Modules are not part of the REDCap software but instead are add-on packages that, in most cases, have been created by software developers at other REDCap institutions. Be aware that the entire risk as to the quality and performance of the module as it is used in your REDCap project is borne by you and your local REDCap administrator. If you experience any issues with a module, your REDCap administrator should contact the author of that particular module.

Um die **Aktivierung eines Externen Moduls** für Ihr Projekt zu beantragen, füllen Sie bitte folgendes Formular aus:

Antrag auf EM-Aktivierung

Fehler in einem EM gefunden? Feature-Wünsche?

1. Informationen sammeln
- Name und Version
- Version der REDCap-Installation
- Details zur Serverumgebung (Versionen von Win/Linux, PHP, mySQL)
- Projekttyp (klassisch, longitudinal, wiederholende Instrumente/Events)
- Detaillierte Fehlerbeschreibung (idealerweise mit Angabe der Schritte, um den Fehler zu reproduzieren)

2. Community Site
- In der Rubrik „IT / Technical → External Modules" einen Post erstellen.
- Modul-Autor(en) taggen!
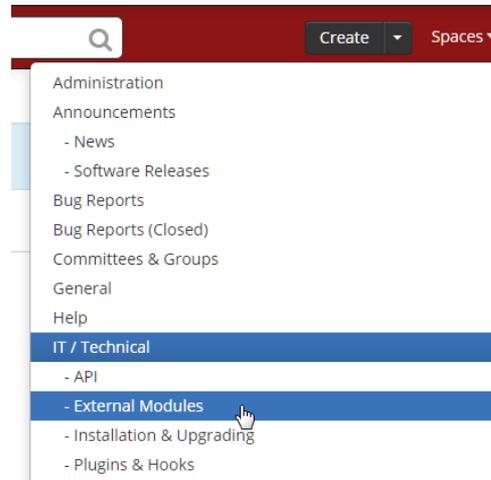
3. Issue auf GitHub erstellen
- Fast immer wird für Module ein GitHub Repository angegeben (in der Auflistung im Control Center).
- Dort einen „Issue" erstellen.
- Autor(en) auch hier taggen.
- Falls eine Lösung vorhanden ist, diese am besten als „Pull request" bereitstellen.
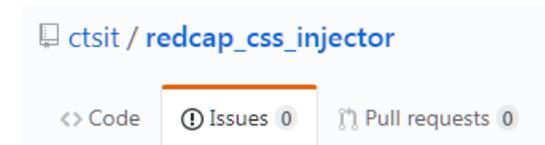
Programmierung von Hooks/Plugins/External Modules

- Falls REDCap 8.0.3 oder höher im Einsatz ist
  - → wegen der vielen Vorteile **jedenfalls als EM realisieren**

- **Gute Startpunkte:**

  - Control Center > Technical / Developer Tools > **Plugin, Hook, & External Module Documentation**

    - Hier insbesondere der Link „**External Modules Documentation**"
    - und darin der Link „**Click here for method documentation**",
    - sowie die Dokumentation der **Developer Methods** und **Hook functions**

  - **External Module Templater** kann zur Erstellung eines Templates verwendet werden (die aktuelle Version 1.3 ist etwas buggy und der generierte Code ist nicht direkt lauffähig, aber nimmt einem doch einiges an Tipperei ab).

External Module Templater   v1.3

Builds out external module template files for quick module generation   **Carl Reed, Kyle McGuffin**

RUB

FEATURES
1. Admin only (Control Center).
2. Provides an interface (web form) to collect data about an external module to be made.
3. Generates code (PHP class, config JSON) as specified.
4. Code can be downloaded (ZIP archive).

USE CASES
- External module development.
- Good starting point for developers new to EMs.

Configure New REDCap External Module

Module

GENERAL INFO

Class Name *
MyModule
This will be the name of the actual PHP class that holds business logic as well as the .php file that contains the class definition

Namespace *
MyOrgName\MyModule
Final sub-namespace must be the module's class name (e.g., **MyOrgName\NotMyModule** is not allowed)
Multiple namespaces allowed (e.g., **MyOrgName\MyTeam\MyModule**)

Description *
This module does A, B, C, ...

Initial Version
0.1
Must be in format X.X.X or X.X where X is any integer from 0 to 100

Directory Name
my_redcap_module_v0.1
Should match pattern [any_unique_snake_case_name]_v[INITIAL_VERSION]
You can search the REDCap Repo to ensure your name will be unique

Authors

Add Author   Remove Author

AUTHOR(S)

1

Author Name *
Module Author

Email Address
module.author@example.com

Organization
My Organization

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❶

External Modules
- Admin Dashboard
- ➡ Generate External Module Template
- REDCap Translator
- Survey LDAP Authentication
- Survey Link Lookup

❷

SPECIFY HOOKS

Hooks

Every page hooks? ☐ By default, hooks only activate on certain project specific pages. Enable this option to allow system pages to tri...

REDCap Hooks	Description	Function
redcap_add_edit_records_page	Allows custom actions to be performed on the "Add/Edit Records" page in a project	void **redcap_add_edit_records_page** (int $project_id, string $instrument, int $event_id)
redcap_control_center	Allows custom actions to be performed on any of the pages in REDCap's Control Center	void **redcap_control_center** (void)
redcap_custom_verify_username	Allows custom actions to be performed and (optional) custom messaging to user when someone attempts to grant a user access to a REDCap project on the User Rights page (to be used for external authentication methods only)	array **redcap_custom_verify_username** (string $username)
redcap_data_entry_form	Allows custom actions to be performed on a data entry form (excludes survey pages)	void **redcap_data_entry_form** (int $project_id, string $record = NULL, string $instrument, int $event_id, int $group_id = NULL, int $repeat_instance = 1)
redcap_data_entry_form_top	Allows custom actions to be performed at the top of a data entry form (excludes survey pages) - exactly like redcap_data_entry_form but executed in a different location	void **redcap_data_entry_form_top** (int $project_id, string $record = NULL, string $instrument, int $event_id, int $group_id = NULL, int $repeat_instance = 1)
redcap_every_page_before_render	Allows custom actions to be performed by every PHP script in REDCap (including plugins) before the script itself begins to be formally processed.	void **redcap_every_page_before_render** (int $project_id)
redcap_every_page_top	Allows custom actions to be performed at the top of every page in REDCap (including plugins that render the REDCap page header)	void **redcap_every_page_top** (int $project_id)
redcap_project_home_page	Allows custom actions to be performed on the "Project Home" page in a project	void **redcap_project_home_page** (int $project_id)
redcap_save_record	Allows custom actions to be performed immediately after a record has been saved on a data entry form or survey page	void **redcap_save_record** (int $project_id, string $record = NULL, string $instrument, int $event_id, int $group_id = NULL, string $survey_hash = NULL, int $response_id = NULL, int $repeat_instance = 1)

External Module Templater v1.3

Builds out external module template files for quick module generation **Carl Reed, Kyle McGuffin**

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External Modules
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Links

Add Link   Remove Link

| 1 |

Link Name: MyModule Config Page

URL: mymodule/config.php

Icon: report
The name of an icon in REDCap's image repository

Locations:
☐ Project
☑ Control Center

NOAUTH: ☐ If checked, this link will not require REDCap user authorization

ADD LINKS

Crons

Add Cron   Remove Cron

| 1 |

Cron Name: myCron

Description: This cron will run every hour.

Method: my_method_name
Refers to a PHP method in the module class that will be executed when the cron is run.

Frequency (s): 1800

Max Run Time (s): 60

ADD CRON JOBS

REDCap
Research Electronic Data Capture

External Module Templater v1.3

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RUB

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❷

ADD A LICENSE

License

Include LICENSE?   ☐ If selected, a file named LICENSE with the text below will be added to the template .zip archive

Description

Copyright (c) <YEAR> <COPYRIGHT_HOLDER_NAME>

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial

Default shown is the MIT License from https://opensource.org/licenses/MIT

❸

Generate External Module Template

❶

External Modules
- Admin Dashboard
- ➡ Generate External Module Template
- REDCap Translator
- Survey LDAP Authentication
- Survey Link Lookup

❹

my_redcap_module_v0.1.zip - WinRAR

File Commands Tools Favorites Options Help

Add   Extract To   Test   View   Delete   Find   Wizard   Info   VirusScan   Comment   SFX

my_redcap_module_v0.1.zip - ZIP archive, unpacked size 1.559 bytes

Name	Size	Packed	Type	Modified	CRC32
..			Dateiordner		
config.json	1.003	484	JSON-Datei	02.08.2019 17:31	A29C3A08
MyModule.php	517	271	PHP-Datei	02.08.2019 17:31	B5E96631
README.md	39	37	Markdown-Quelldatei	02.08.2019 17:31	39AC4792

Total 1.559 bytes in 3 files

Entwicklungsumgebung

Voraussetzungen

- LAMP-System; unter Win/Mac z.B. XAMPP (oder auch VM, Docker, ...)

- REDCap (lauffähig konfiguriert)

Editor / Tools

- PHP Debugger (z.B. Xdebug)

- Editor (z.B. Visual Studio Code)

Empfohlene Plugins für VS Code:

- PHP Intelephense (Ben Mewburn) - meiner Meinung nach deutlich besser als PHP IntelliSense

- PHP Debug (Felix Becker)

- Debugger for Chrome (Microsoft)

- markdownlint (David Anson)

- Live Server (Ritwick Dey) oder browsersync (Jeremy Rajan)

File Edit Selection View Go Debug Terminal Help   config.json - redcap_custom_footer_v1.0.5 - Visual Studio Code

🐘 CustomFooterExternalModule.php   {} config.json ✕   ⓘ README.md

EXPLORER

∨ OPEN EDITORS
   🐘 CustomFooterExternalModule.php
  ✕ {} config.json
   ⓘ README.md
∨ REDCAP_CUSTOM_FOOTER_V1.0.5
  > .vscode
  ◆ .gitignore
  {} config.json
  🐘 CustomFooterExternalModule.php
  🔑 LICENSE
  ⓘ README.md

{} config.json > {} compatibility > abc php-version-min

```json
1   {
2       "name": "Custom Footer",
3       "namespace": "RUB\\CustomFooterExternalModule",
4       "description": "Allows admins and project admins to add a custom footer to survey
        and project pages. Depending on system settings, project admins may not be able to
        configure or disable this module. <strong><a href=\"https://github.com/grezniczek/
        redcap_custom_footer\">See full documentation here</a></strong>.",
5       "permissions": [
6           "redcap_every_page_top",
7           "redcap_module_configure_button_display"
8       ],
9       "enable-every-page-hooks-on-system-pages": true,
10      "authors": [
11          {
12              "name": "Günther Rezniczek",
13              "email": "guenther.rezniczek@rub.de",
14              "institution": "Ruhr-Universität Bochum"
15          }
16      ],
17      "system-settings": [
18          {
19              "name": "Enabled on",
20              "key": "customfooter_system_enabled",
21              "type": "radio",
22              "choices": [
23                  { "value": "disabled", "name": "Disabled" },
24                  { "value": "dataentry", "name": "Project / Data Entry Pages" },
25                  { "value": "survey", "name": "Survey Pages" },
26                  { "value": "both", "name": "Both" }
27              ],
28              "repeatable": false
29          },
30          {
31              "name": "Do not force a footer on pages lacking a #footer",
32              "key": "customfooter_system_notforced",
33              "type": "checkbox",
34              "repeatable": false
35          },
36          {
37              "name": "Title for section in left side menu (when footer is displayed on
                data entry pages)",
38              "key": "customfooter_system_menutitle",
39              "type": "text",
40              "branchingLogic": {
41                  "type": "or",
42                  "conditions": [
```

⑂ master   ⊗ 0 ⚠ 0   Ln 219, Col 32 (1 selected)   Spaces: 4   UTF-8   CRLF   JSON   Prettier   ☺ ⌀

REDCap Custom Footer

A REDCap External Module that allows system admins and project admins to add custom footers to REDCap pages (survey, project, and system pages).

Purpose

This External Module was designed to allow REDCap administrators to add custom footers to any pages displayed by REDCap. The reasons for wanting or having to add custom footers are most likely due to regulatory requirements, such as e.g. conformance with General Data Protection Regulations (GDPR) or other legal requirements.

In the EU, for instance, on each page of a website *direct* access to imprint information and privacy policies has to be provided. Usually, this is only necessary on publicly exposed pages, which in most cases is limited to REDCap survey pages. In some circumstances, however, REDCap's "regular" user interface (system pages, data entry pages) may be exposed to outside parties, e.g. participating physicians/institutions in a register study, and the duty to provide the information mentioned above has to be fulfilled.

Since recently, REDCap provides *"Settings relating to Data Privacy (e.g., GDPR)"* on the *"Edit a Project's Settings"* page (accessible from *Control Center*). However, the facilites provided there do not cover all scenarios outlined above. Thus, this External Module tries to fill this gap, by providing the means to add custom footers (containing any required information or appropriate links) as a system setting, as well as to provide a means for individual projects to add to (or replace) the system settings (if the REDCap administrator chooses to allow this).

Effect

Custom footer messages will be injected into REDCap pages depending on the page type:

- **Survey pages**: Under the "Powerd by REDCap" line. The complete footer will remain visible even on small screens. If the standard footer is missing, like on the survey reCAPTCHA page, it is added first.
- **Project pages**: In the menu sidebar on the left side, as a new section following *Help & Information*.
- **Other pages** (such as the login page or *Home* or *My Projects*): Under the REDCap version and copyright notice.

Requirements

- REDCAP 8.1.0 or newer (tested with REDCap 8.11.7 on a system running PHP 7.0.33).

Installation

File   Edit   Selection   View   Go   Debug   Terminal   Help

CustomFooterExternalModule.php ×   {} config.json   ⓘ README.md

EXPLORER

OPEN EDITORS
× 🐷 CustomFooterExternalModule.php
  {} config.json
  ⓘ README.md   1
REDCAP_CUSTOM_FOOTER_V1.0.5
  > .vscode
  .gitignore
  {} config.json
  🐷 CustomFooterExternalModule.php
  🔑 LICENSE
  ⓘ README.md   1

> OUTLINE

🐷 CustomFooterExternalModule.php > 🗂 CustomFooterExternalModule > 🔷 addCustomFooter

```php
<?php

namespace RUB\CustomFooterExternalModule;

use ExternalModules\AbstractExternalModule;

//region Configuration Helper Classes ...

/**
 * ExternalModule class for Custom Footer.
 */
class CustomFooterExternalModule extends AbstractExternalModule {

    public $CONFIGVALUE_PREFIX = "customfooter_";

    private $_systemValues;
    private $_projectValues;
    private $_projectId;

    //region Hook implementations

    function redcap_every_page_top($project_id = null) {
        $this->_projectId = $project_id;
        $this->addCustomFooter();
    }

    /**
     * Only show the Configure button when this is enabled in the
     * system settings for this project (or for all projects).
     */
    function redcap_module_configure_button_display($project_id) {
        // Superusers can always access configuration.
        if (SUPER_USER) return true;
        // Check project-specific settings.
        if ($project_id) {
            $config = $this->_getConfig($project_id);
            switch ($config->allowsettings) {
                case "deny":
                    return null;
                case "all":
                    return true;
                case "selected":
                    if (in_array($project_id, $config->allowsettingsids))
                        return true;
                    return null;
            }
        }
```

⑂ master   ⊗ 0 ⚠ 1   Ln 206, Col 44   Spaces: 4   UTF-8   CRLF   PHP   ☺   ♫ 2