Package 'inkaR'

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Title Download and Analyze Spatial Development Data from 'INKAR'

Version 0.6.1

Description A professional R interface to download and analyze spatial development indicators from the 'BBSR' 'INKAR' (Indikatoren und Karten zur Raum- und Stadtentwicklung) database. Features a bilingual interactive wizard, fuzzy search, multi-indicator downloads with automatic tidy merging (long/wide), robust disk caching, and premium 'ggplot2' themes for regional mapping.

URL https://github.com/ofurkancoban/inkaR

BugReports https://github.com/ofurkancoban/inkaR/issues

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Encoding UTF-8

LazyData true

RoxygenNote 7.3.3

Imports httr2, jsonlite, tibble, dplyr, rlang, utils, cli, stringdist, tidyr

Suggests readxl, testthat (>= 3.0.0), knitr, rmarkdown, sf, geodata, ggplot2, httptest2

VignetteBuilder knitr

Depends R (>= 4.1.0)

Config/testthat/edition 3

NeedsCompilation no

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Contents

`clear_inkar_cache` *Clear INKAR Cache*

Description

Clears the persistent disk cache used for API responses (like time reference metadata).

Usage

```
clear_inkar_cache()
```

Value

No return value, called for side effects.

`get_geographies` *Get Available Geographies or Region List*

Description

Retrieves a list of available spatial levels (if `geography` is NULL) or a list of regions for a specific level (e.g., "KRE").

Usage

```
get_geographies(geography = NULL)
```

Arguments

`geography`	Character. Spatial level code (e.g. "KRE"). If NULL, returns all levels.

Value

A data frame with `ID` and `Name`.

`get_indicators` *List Available Indicators*

Description

Returns a data frame of available indicators with bilingual support.

Usage

```
get_indicators(lang = c("de", "en"))
```

Arguments

`lang`	Language code: "de" (German) or "en" (English).

Value

A tibble containing indicator IDs, names, and descriptions.

`get_inkar_data` *Download Data from INKAR*

Description

Retrieves statistical data for a given variable and spatial level. Automatically handles time reference lookup.

Usage

```
get_inkar_data(
  variable,
  level = "KRE",
  year = NULL,
  lang = c("de", "en"),
  format = c("long", "wide"),
  csv = FALSE,
  export_dir = NULL
)
```

Arguments

variable	Character. The indicator ID (Shortname), e.g., "011".
level	Character. Spatial level code (e.g., "KRE" for Kreise).
year	Integer/Character vector. Specific year (e.g., 2021) or range (e.g., 2010:2020). If NULL, fetches all available years.
lang	Character. "de" (default) for German column names, "en" for English.
format	Character. "long" (default) for tidy format, "wide" for years as columns.
csv	Logical. If TRUE, saves the data to a CSV file in the directory specified by export_dir.
export_dir	Character. Directory to save the CSV file if csv = TRUE. If NULL (default), it saves to the current working directory (". ").

Value

A tibble containing the data.

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indicators *INKAR Indicators Metadata*

Description

A comprehensive list of available indicators from the INKAR database. This dataset is used to lookup indicator IDs, names, and descriptions.

Usage

```
indicators
```

Format

A data frame with the following columns:

ID Short identifier (e.g., "001")

M_ID Numeric internal ID used by API

Name_DE German name of the indicator

Name_EN English name (translated or placeholder)

Description_DE Detailed German description

Theme Group/Domain of the indicator

Active Logical. TRUE if verified as active in the API

Algorithmus Algorithm used (if any)

Anmerkungen Notes in German

Anmerkungen_EN Notes in English

Gemeinden Availability for Municipalities

Kreise Availability for Districts

Statistische Grundlagen Statistical basis (DE)

Stat_Grund_EN Statistical basis (EN)

Unit_DE Unit of measurement (DE)

Unit_EN Unit of measurement (EN)

Source

https://www.inkar.de/

`inkaR` *Download Data from INKAR (Alias)*

Description

A convenient alias for `get_inkar_data()`. Call `inkaR("011")` to download directly, or call `inkaR()` with no arguments in an interactive session to open a searchable menu.

Usage

```
inkaR(variable = NULL, level = NULL, year = NULL, lang = c("de", "en"), ...)
```

Arguments

`variable`	Character. Indicator ID, shortname, or partial name. If `NULL` (default), opens an interactive selection menu (interactive sessions only).
`level`	Character. Spatial level code (e.g., `"KRE"` for Kreise). If `NULL` and `variable` is also `NULL`, an interactive level menu is shown.
`year`	Integer/Character vector. Specific year (e.g. 2021) or range.
`lang`	Character. "de" (default) for German column names, "en" for English.
`...`	Additional arguments passed to `get_inkar_data()`, such as `format` or `csv`.

Value

A tibble containing the downloaded data, or `NULL` if selection was cancelled.

Examples

```
if (interactive()) {
  df <- inkaR()  # opens interactive menu
}


  try(df <- inkaR("bip", level = "KRE", year = 2021))
  try(df <- inkaR("Bruttoinlandsprodukt", level = "KRE"))
```

plot_inkar *Plot INKAR Data on German Maps*

Description

Automatically projects regional INKAR data onto administrative boundaries of Germany using the geodata and sf packages. Supports Kreise (KRE) and Bundesländer (BLD) levels.

Usage

```
plot_inkar(data, variable = NULL, year = NULL, mode = c("light", "dark"))
```

Arguments

data	A data frame returned by get_inkar_data().
variable	Character. For wide-format data with multiple indicators, specify which indicator column to plot.
year	Integer/Character. If the data contains multiple years, specify which year to plot. If NULL and multiple years exist, the most recent year is plotted.
mode	Character. "light" (default) or "dark" theme.

Value

A ggplot2 object displaying the mapped data.

search_indicators *Search Indicators and Print Results*

Description

Search for indicators by keyword. Prints a formatted table and invisibly returns the matches so you can copy the ID for use in inkaR().

Usage

```
search_indicators(pattern, lang = c("de", "en"))
```

Arguments

pattern	Text to search in names and descriptions.
lang	Language to search in ("de" or "en").

Value

A filtered tibble of indicators (invisibly).

select_indicator *Interactively Select an Indicator*

Description

Opens a GUI selection list (e.g., in RStudio) to browse and pick an indicator. For code-based workflows, use `inkaR("name")` or `search_indicators()` instead.

Usage

```
select_indicator(pattern = NULL, lang = c("de", "en"))
```

Arguments

`pattern`	Optional character. Pre-filter the list by a keyword or regex. If `NULL` (default), the full indicator list is shown.
`lang`	Language for names: `"de"` (default) or `"en"`.

Value

Character. The selected indicator ID, or NULL if cancelled.

select_level *Interactively Select a Spatial Level*

Description

Provides an interactive console menu to choose an INKAR spatial level. If a variable ID is provided, it probes the live API to find which levels actually have data for that indicator.

Usage

```
select_level(variable = NULL)
```

Arguments

`variable`	Optional character. The indicator ID to probe available levels.

Value

Character. The selected level ID, e.g., "KRE".

select_years *Interactively Select Years*

Description

Probes the API for available years for a specific indicator and level, then allows the user to select one or more years.

Usage

```
select_years(variable, level)
```

Arguments

variable	Indicator ID.
level	Spatial level ID.

Value

Character vector of years.

theme_inkaR *Premium ggplot2 theme for inkaR*

Description

Premium ggplot2 theme for inkaR

Usage

```
theme_inkaR(mode = c("light", "dark"), base_size = 11)
```

Arguments

mode	Character. "light" or "dark".
base_size	Numeric. Base font size.

`view_indicators` *View Indicators in RStudio Viewer*

Description

Opens the available indicators in the RStudio data viewer for easy filtering and searching.

Usage

```
view_indicators(lang = c("de", "en"))
```

Arguments

`lang`	Language code: "de" (German) or "en" (English).

Value

Invokes `View()` on the data frame.

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