



## Motivation

Most survey platforms use **GUIs** or **spreadsheets** to define survey content. This approach limits:

- Reproducibility
- Version Control
- Collaboration

Few open-source platforms exist, resulting in:

- Limited Data Control
- High Costs
- Opaque Source Code

## Introducing surveydown

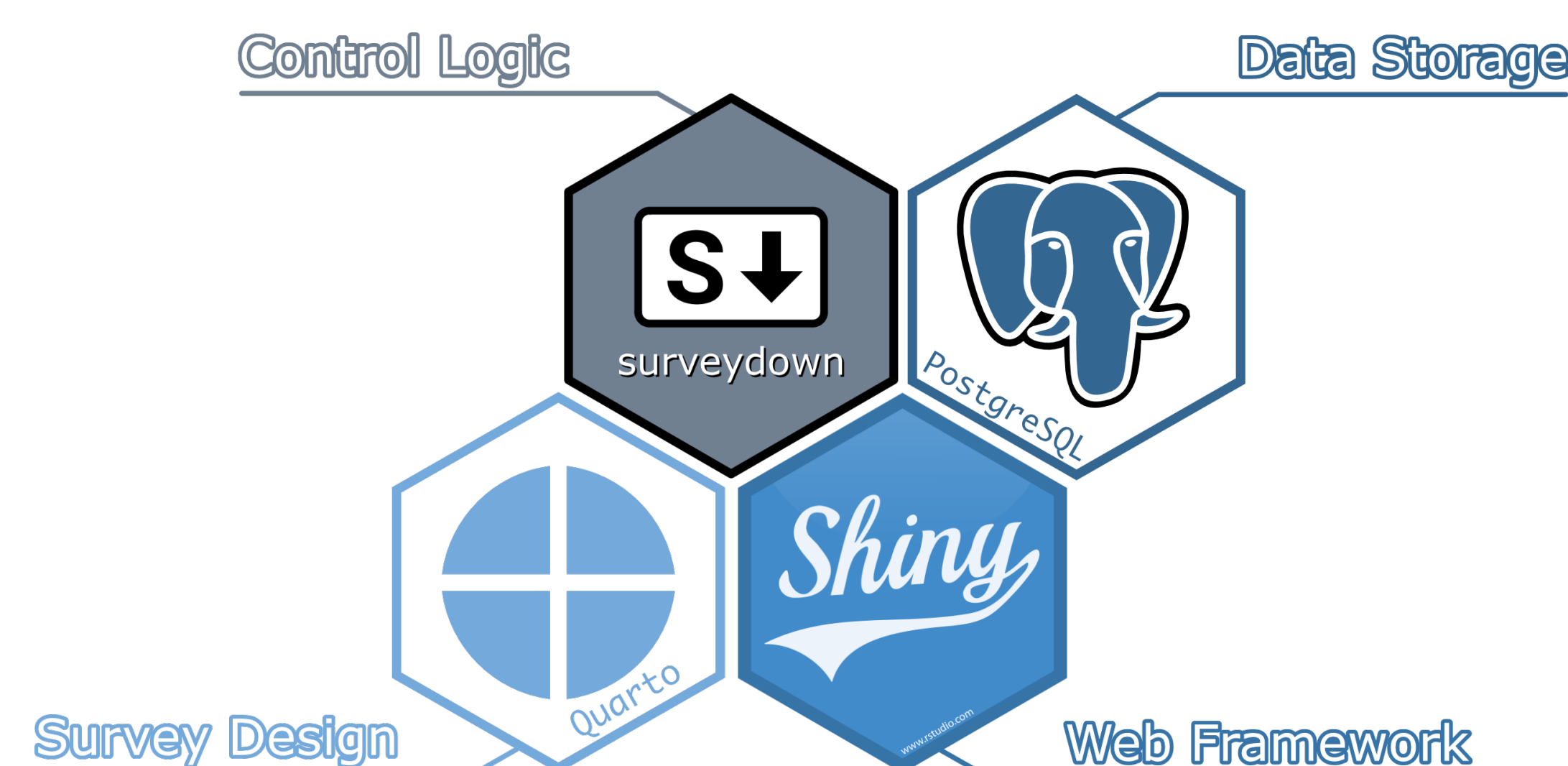


A flexible, open-source platform for making programmable, markdown-based surveys

### Features:

- 1.Open-Source** with R, Shiny, Quarto, and PostgreSQL
- 2.Reproducibility** from Code
- 3.Programmable** Interactivity via Shiny

## Technologies



- Design survey as **Quarto** document with markdown and R code.
- Render into **Shiny** app.
- Store response data in **PostgreSQL** database.
- R package **surveydown** provides control logic.

## Example Survey

### survey.qmd

```
```{r}
library(surveydown)

::: {.sd_page id=welcome}
# Welcome to our survey!

```{r}
sd_question(
  type = "mc",
  id = "penguins",
  label = "What's your favorite penguin?",
  option = c(
    "Adélie" = "adelie",
    "Chinstrap" = "chinstrap",
    "Gentoo" = "gentoo"
  )
)
sd_next()
:::
::: {.sd_page id=end}
This is the last page of the survey.
```{r}
sd_close()
:::

```

### Welcome Page

### app.R

```
db <- sd_db_connect()
ui <- sd_ui()
server <- function(...) {
  sd_server(db = db)
}
shiny::shinyApp(
  ui = ui, server = server
)
```

### End Page

## Comparison with Existing Platforms

Platform	User Interface	Reproducible	Cost	Open Source	Data Control	Programmable
Google Forms	GUI	<input type="checkbox"/>	Free	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
REDCap	GUI	<input type="checkbox"/>	Free/Paid	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Qualtrics	GUI	<input type="checkbox"/>	Paid	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sawtooth	GUI	<input type="checkbox"/>	Paid	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CASIC Builder	GUI	<input type="checkbox"/>	Paid	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SurveyCTO	GUI	<input checked="" type="checkbox"/>	Paid	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
QDS	GUI	<input type="checkbox"/>	Paid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LimeSurvey	GUI	<input checked="" type="checkbox"/>	Free/Paid	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Open Data Kit	XLSForms	<input checked="" type="checkbox"/>	Free/Paid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
oTree	GUI, Python	<input checked="" type="checkbox"/>	Free/Paid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SurveyJS	GUI, JavaScript	<input checked="" type="checkbox"/>	Free/Paid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
formr	XLSForms, markdown, R	<input checked="" type="checkbox"/>	Free	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
shinysurveys	R, CSV	<input checked="" type="checkbox"/>	Free	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
surveydown	markdown (Quarto), R	<input checked="" type="checkbox"/>	Free	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

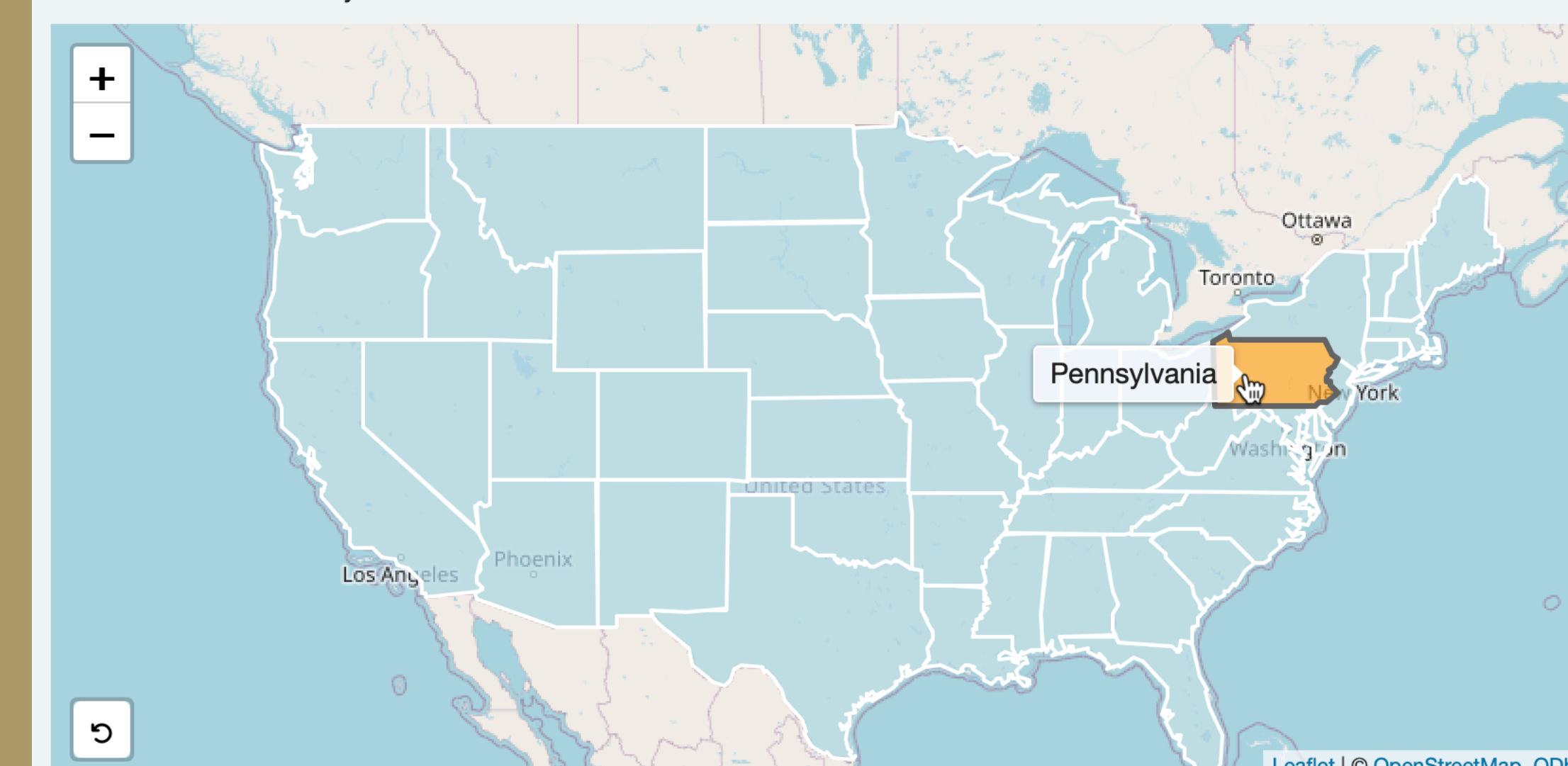
Legend: ☒= Yes, ☒= Partially, ☐= No

## Features

- All-in-one platform for:
  - survey designers
  - survey respondents
  - data analyzers
- Support for 13 question types.
- Automatic time stamps recording.
- Require question responses.
- Comprehensive restoration via cookies.
- URL parameters and redirection.
- Customizable language for system messages.
- Bootstrap themes and customizable SCSS themes.
- Custom interactive question.

### Custom interactive question, e.g. map

Click on the state you live in:



You live in: Pennsylvania

For more details of features, question types, and templates, visit:

[surveydown.org](https://surveydown.org)

