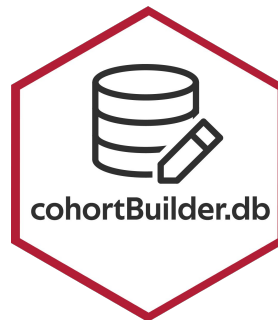


UseR 2024

Unlock Data Insights Faster: The 'cohortBuilder' Way



What is Cohort?

*In statistics, epidemiology, marketing and demography, a **cohort** is a group of subjects who share a **defining characteristic** (typically subjects who experienced a common event in a selected time period, such as birth or graduation).*



It's a group or subset of data where the inclusion and exclusion criteria were applied.

Dev challenges

Developing **a consistent API**
across multiple data sources.

Investing time in **UI design** and
learning new frameworks instead of
enhancing business value.

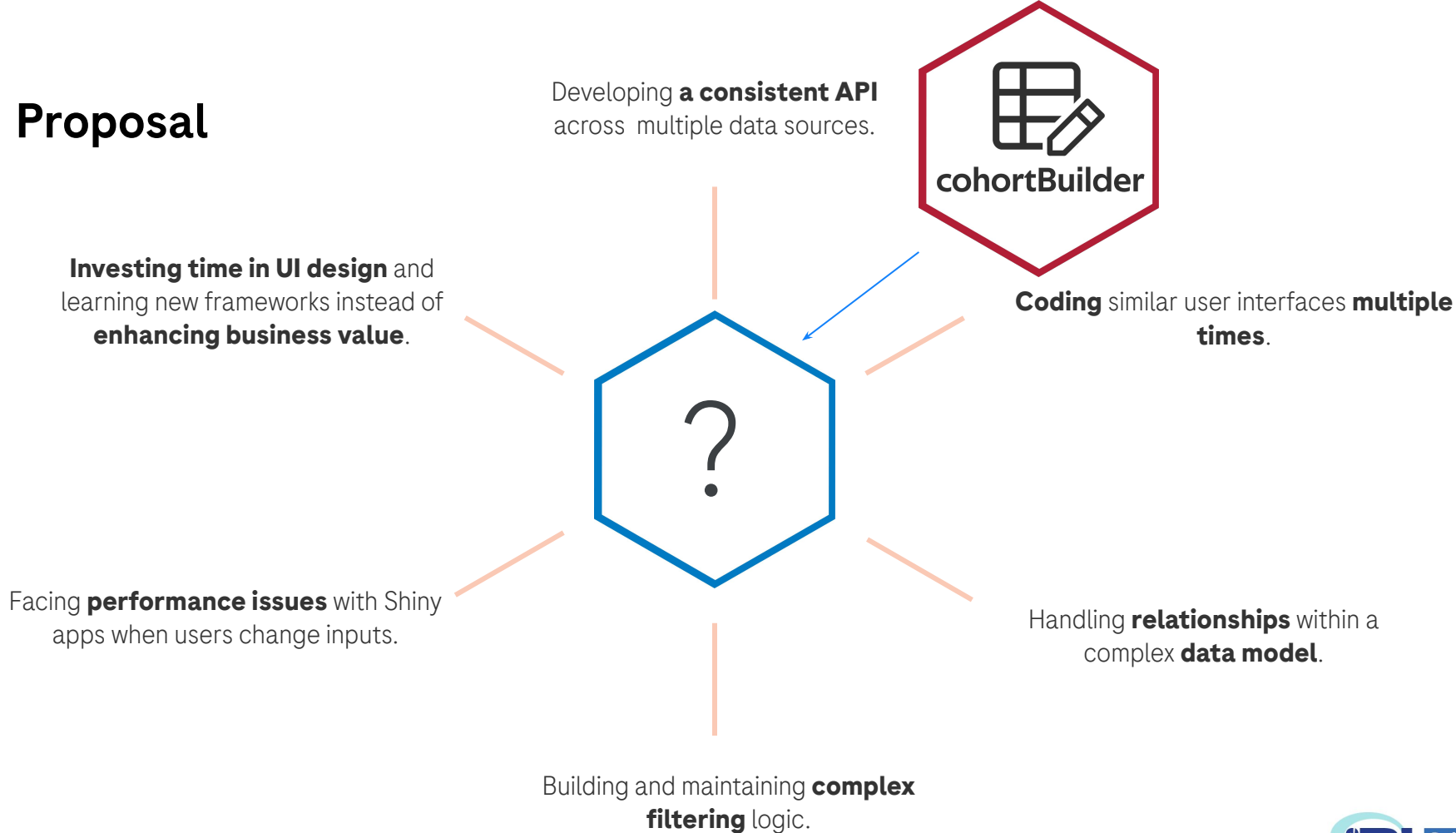
Coding similar user interfaces **multiple**
times.

Facing **performance issues** with Shiny
apps when users change inputs.

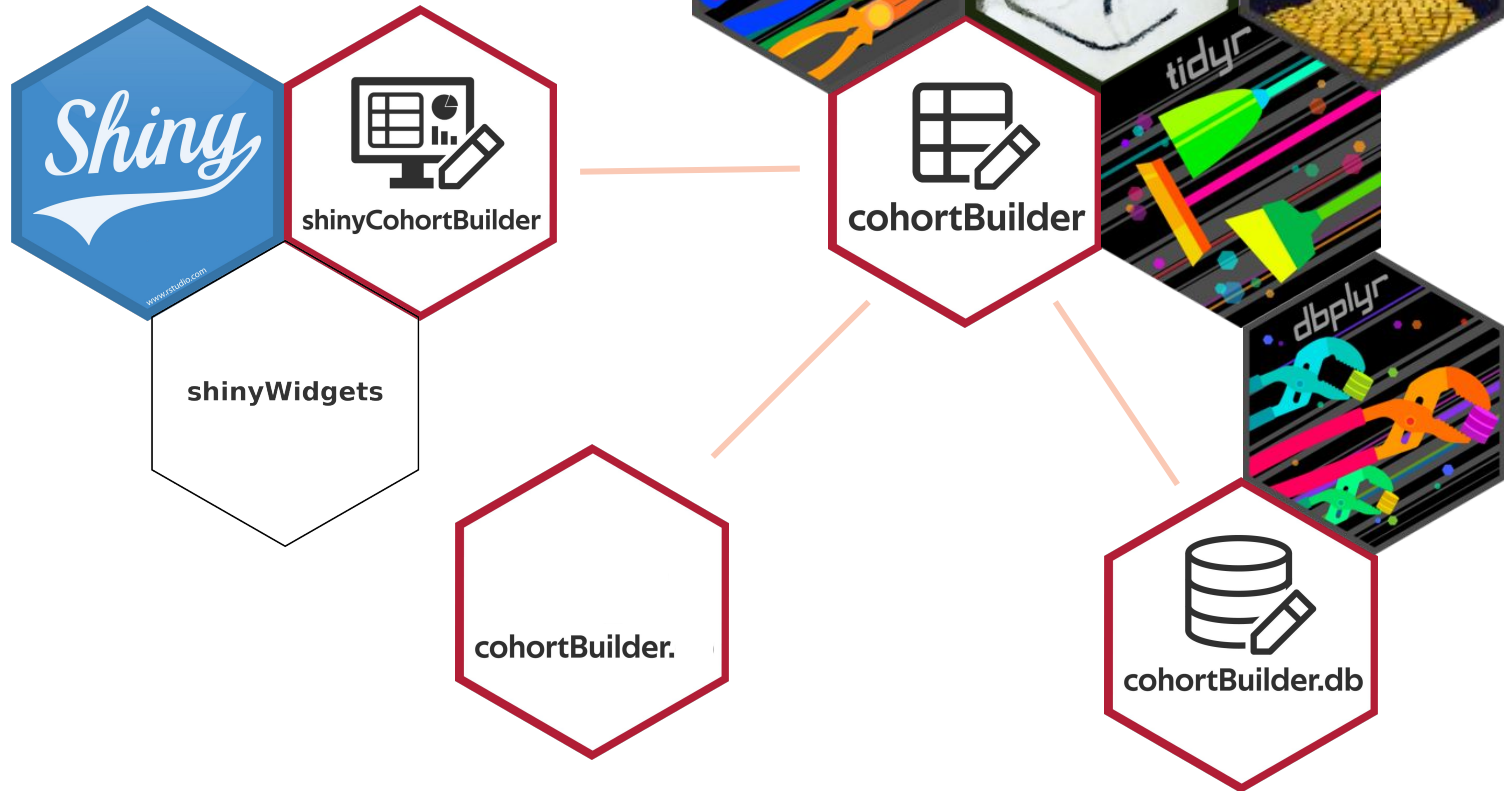
Handling **relationships** within a
complex **data model.**

Building and maintaining **complex**
filtering logic.

Proposal



Avoid Competitiveness



Demo

And much more...

- Compatibility with native **shiny bookmarking**
- Name-value **mappings for columns**
- Extensive documentation including **tutorials** for **creating custom filters** and **source layers**
- Step-level **attrition** plots
- Binding keys support
- ...

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Managing Cohort Object

On this page
Managing filters

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Variants for Cohort Configuration

Source: [vinettes/cohort-configuration.Rmd](#)

On this page
Filtering steps in Source
Filtering steps in Cohort

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Specifying data relations with Binding Keys

Source: [vinettes/binding-keys.Rmd](#)

On this page
Classic approach
Binding Keys

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Implementing custom filters

Source: [vinettes/custom-filters.Rmd](#)

On this page
Filter structure
Logical filter

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Writing custom extensions

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cohortBuilder: markane is adapted to work with various data sources and shinyCohortBuilder 0.2.0 [Get started](#) [Functions](#) [Articles](#) [News](#) [Issues](#) Search for

Implementing custom GUI filter layer

On this page
input
feedback
server
update
post_stats
multi_input

In this document you'll learn how to write custom filter controller for the selected filter.

GUI Filter Layer as a S3 Method

When working with cohortBuilder in order to configure filter you need to precise its type:

```
library(cohortBuilder)
#>
#> Attaching package: 'cohortBuilder'
#> The following objects are masked from 'package:stats':
#>
#>   filter, step
iris_source <- set_source(tbl(iris = iris))
species_filter <- filter(
  type = "discrete",
  id = "species",
  dataset = "iris",
  variable = "species",
  value = "setosa"
)
```

Such filter evaluated on Source (the operation happens within the Cohort) becomes an object of class equal to the filter type:

```
evaluated_filter <- species_filter(iris_source)
class(evaluated_filter)
#> [1] "cb_filter" "discrete"
```

For the further needs let's highlight what methods and parameters are origin the evaluated filter object:

```
str(evaluated_filter, give.attr = FALSE)
#> List of 10
#> $ id
: chr "species"
```



Do you want to build your Shiny apps faster?

Ready to dive in?

Try cohortBuilder now!

- **Open Source** <https://github.com/r-world-devs/>
- Possibilities for building **internal & external** extensions
- Your filtering logic can be **tested**, and is **reproducible** in Shiny
- **Accelerate** Shiny App Development
- Great opportunity to **contribute** into cohortBuilder ecosystem
- Check longer virtual UseR 2024 presentation



Thank you!