From reproducibility to interactivity:

to

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more than **70** percent

have tried and **failed** to reproduce
another scientist's experiments

Baker, Monya. "1,500 scientists lift the lid on reproducibility." Nature News 533.7604 (2016): 452.

more than **50** percent

have tried and **failed** to reproduce
their **own** experiments

Baker, Monya. "1,500 scientists lift the lid on reproducibility." Nature News 533.7604 (2016): 452.

Google Scholar yields

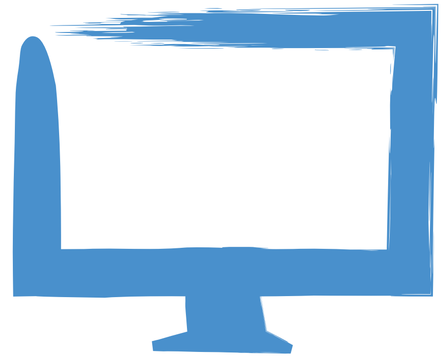
940

results containing the term **reproducibility crisis** just in **2019**

Baker, Monya. "1,500 scientists lift the lid on reproducibility." Nature News 533.7604 (2016): 452.

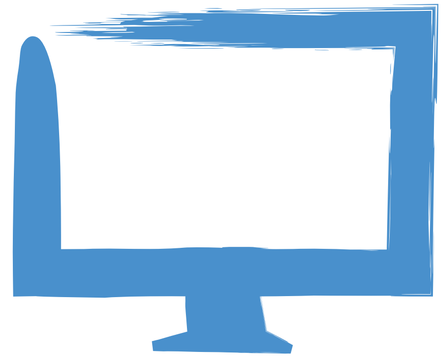
R Markdown

```
> 01-interactivity-in-r/01-rmd.Rmd
```



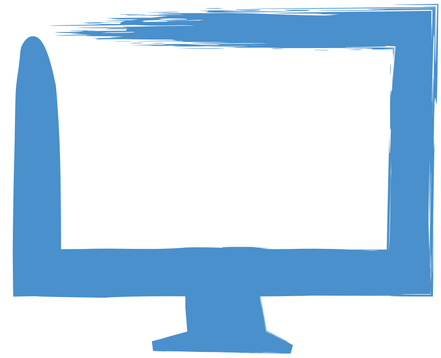
R Markdown + parameters

```
> 01-interactivity-in-r/02-rmd-with-parameters.Rmd
```



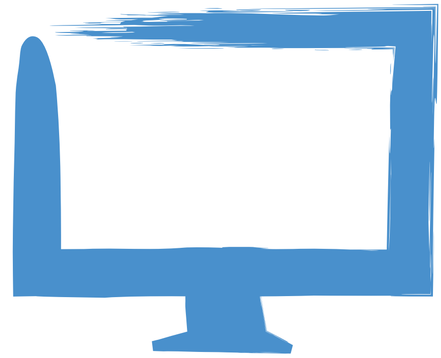
R Markdown + htmlwidgets

```
> 01-interactivity-in-r/03-rmd-with-htmlwidget.Rmd
```



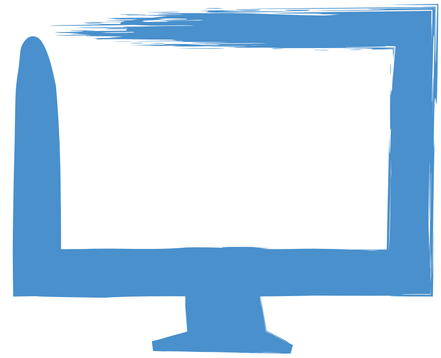
R Markdown + Shiny

```
> 01-interactivity-in-r/04-rmd-with-shiny.Rmd
```

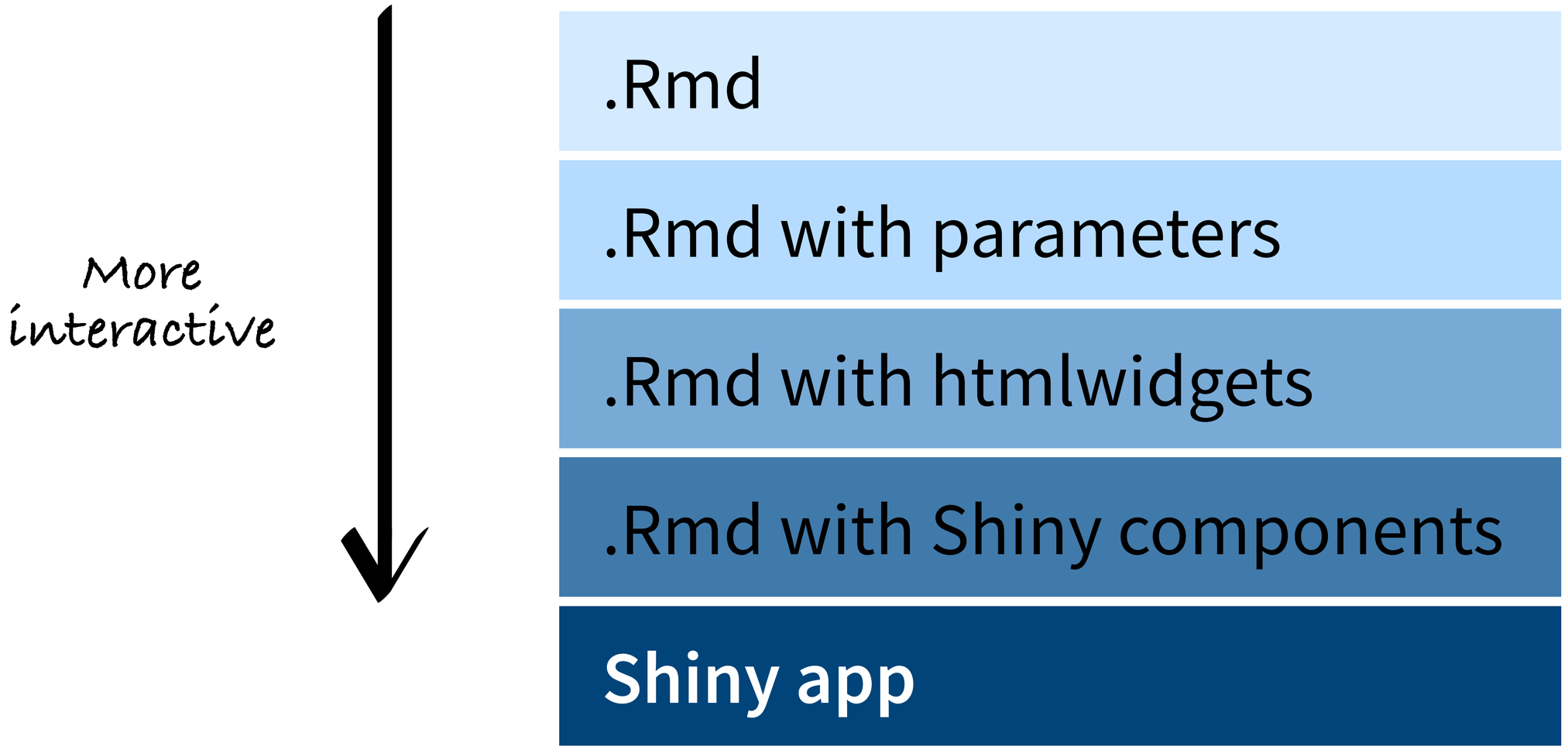


Flexdashboard + Shiny

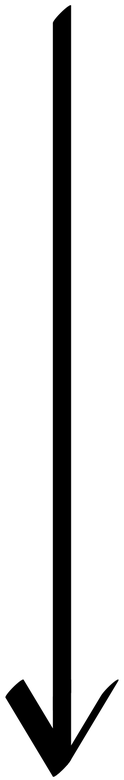
```
> 01-interactivity-in-r/05-rmd-dashboard-with-shiny.Rmd
```



Ladder of interactivity


More interactive
.Rmd
.Rmd with parameters
.Rmd with htmlwidgets
.Rmd with Shiny components
Shiny app

More complicated



.Rmd

.Rmd with parameters

.Rmd with htmlwidgets

.Rmd with Shiny components

Shiny app

Change the data more than once per session?

.Rmd

.Rmd with parameters

.Rmd with htmlwidgets

.Rmd with Shiny components

Shiny app

.Rmd

.Rmd with parameters

.Rmd with htmlwidgets

.Rmd with Shiny components

Shiny app

Need more than a document or dashboard?

Your turn

- Open `01-reproducible-to-interactive/06-shiny-to-param-rmd.R`, run the app, observe its functionality.
- Now open `01-reproducible-to-interactive/07-shiny-to-param-rmd.Rmd` and fill in the blanks to convert the app to a parametrised R Markdown document.

5m 00s

Solution

Solution to the previous exercise

```
> 01-reproducible-to-interactive/08-shiny-to-param-rmd.Rmd
```