

A grayscale photograph of a city skyline, likely Johannesburg, with a prominent cable-stayed bridge in the foreground. The bridge has two tall white pylons and numerous stay cables. The city is filled with various buildings, including skyscrapers and lower-rise structures. In the lower left, there are train tracks and a billboard that says "Rwanga HOLA 7". Another billboard in the center says "PARK STATION 1887".

# Using Quarto, the next generation of R Markdown, to generate websites

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# Agenda

1. Introduction
2. Quick demo
3. Johannesburg R User Group Website



# Introduction

Slides are from Getting Started with Quarto by Tom Mock ~ rstudio::conf  
2022 Workshop

# Why Quarto?

- Shakespeare's [Hamlet as a “Quarto”](#)



- We wanted to use a name that had meaning in the history of publishing and landed on Quarto, which is the format of a book or pamphlet produced from full sheets printed with eight pages of text, four to a side, then folded twice to produce four leaves. The earliest known European printed book is a Quarto, the Sibyllenbuch, believed to have been printed by Johannes Gutenberg in 1452–53.

# What about RMarkdown?

## A brief history of knitr

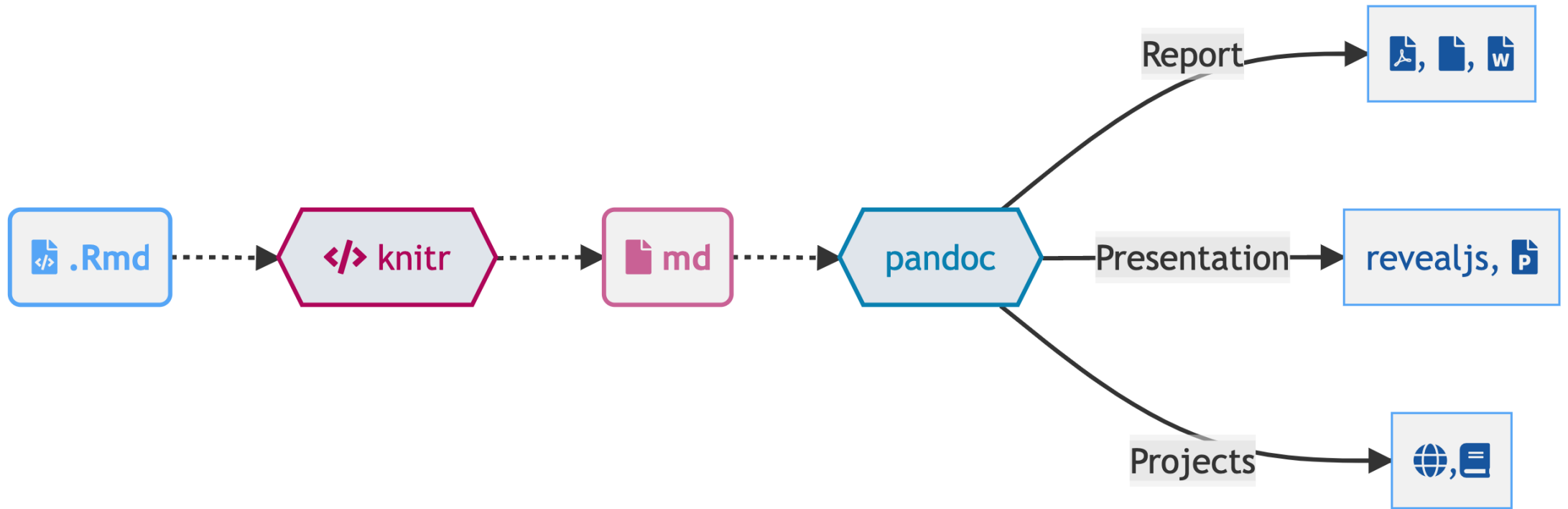
- 2011-10-16: initial development
- 2012-01-17: initial CRAN release
- 50 CRAN releases in 10 years <https://cran.r-project.org/src/contrib/Archive/knitr/>

## A brief history of rmarkdown

- Initial experiment: `knitr::pandoc()` (2014)
- Matured as the rmarkdown package (2015)



# What about RMarkdown?

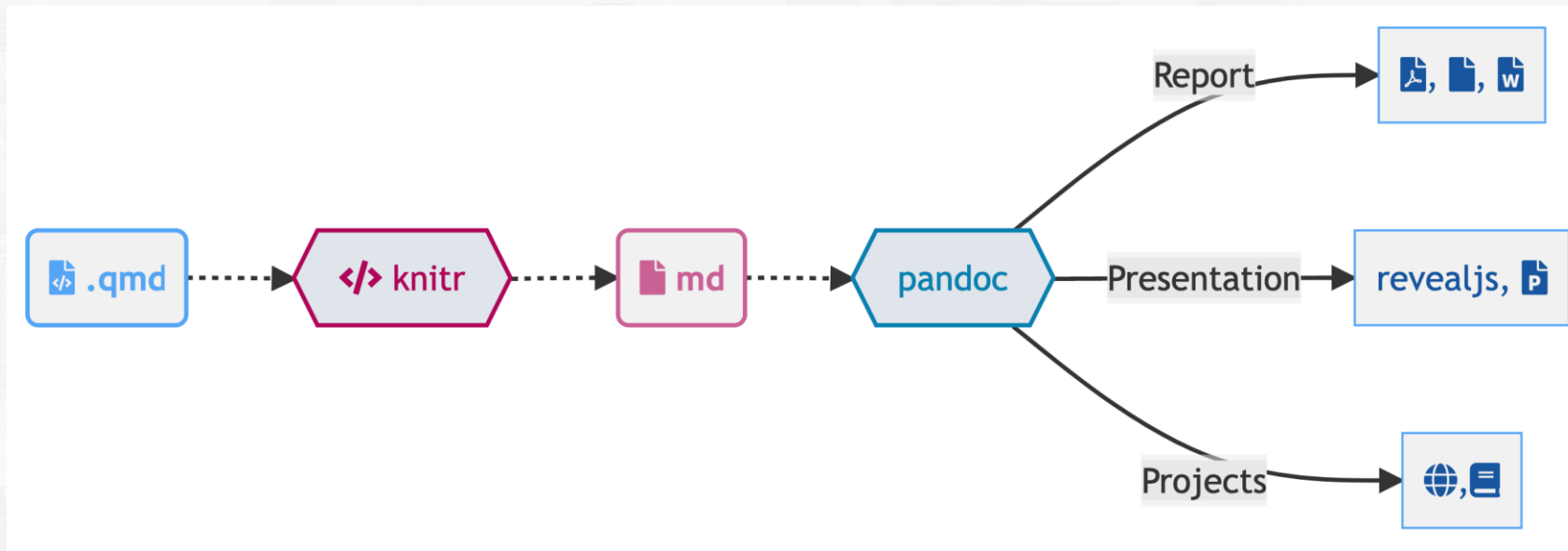


# So what is Quarto?

- Quarto is a command line interface (CLI) that renders plain text formats (.qmd, .rmd, .md) OR mixed formats (.ipynb/Jupyter notebook) into static PDF/Word/HTML reports, books, websites, presentations and more

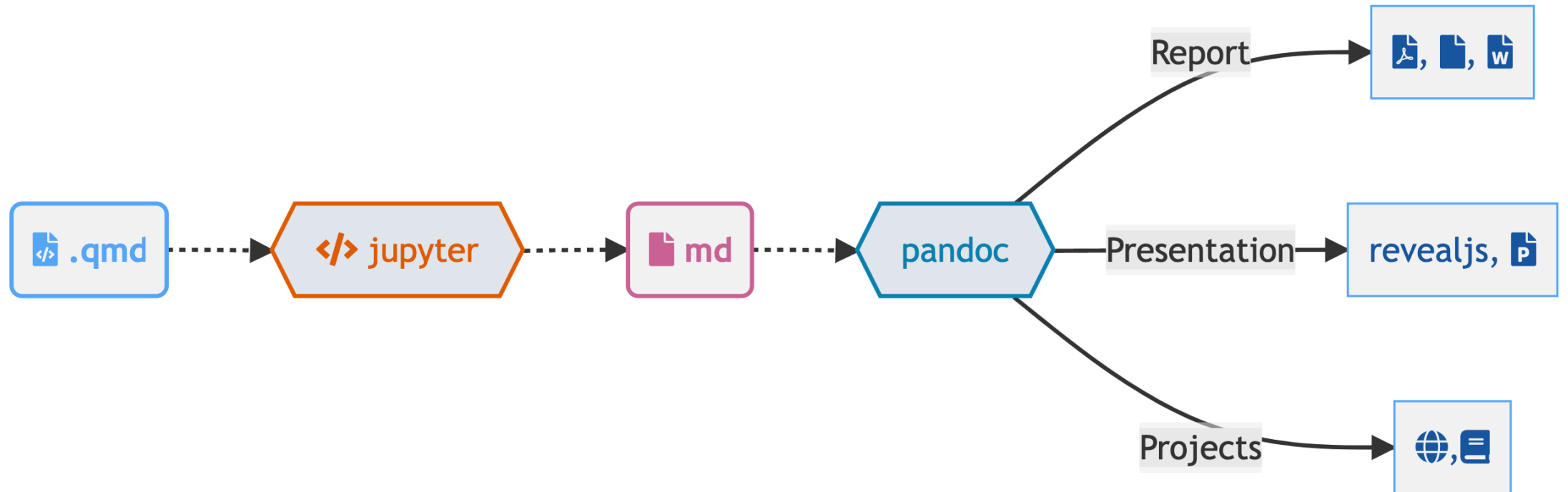
# Quarto, more than just knitr

- We learned from 10 years of literate programming with knitr + rmarkdown

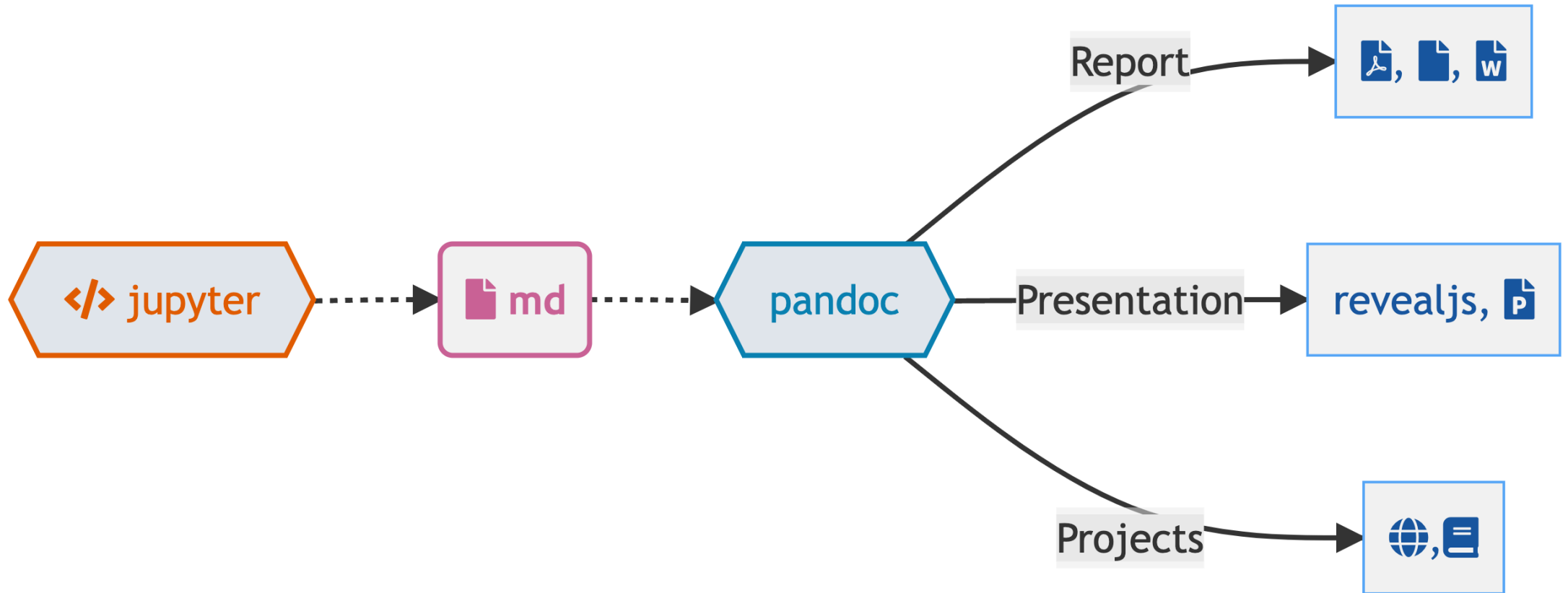




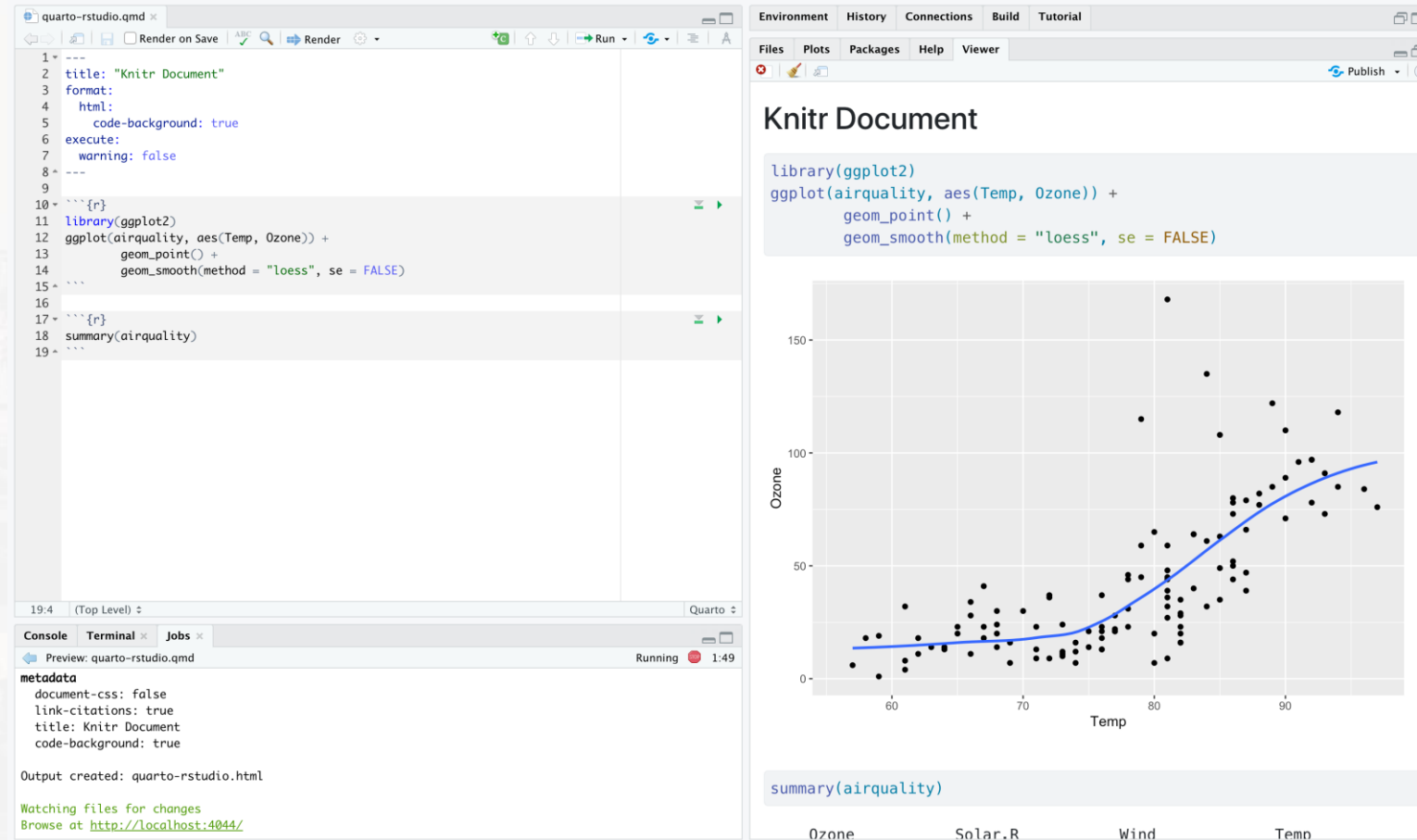
# Quarto, more than just knitr



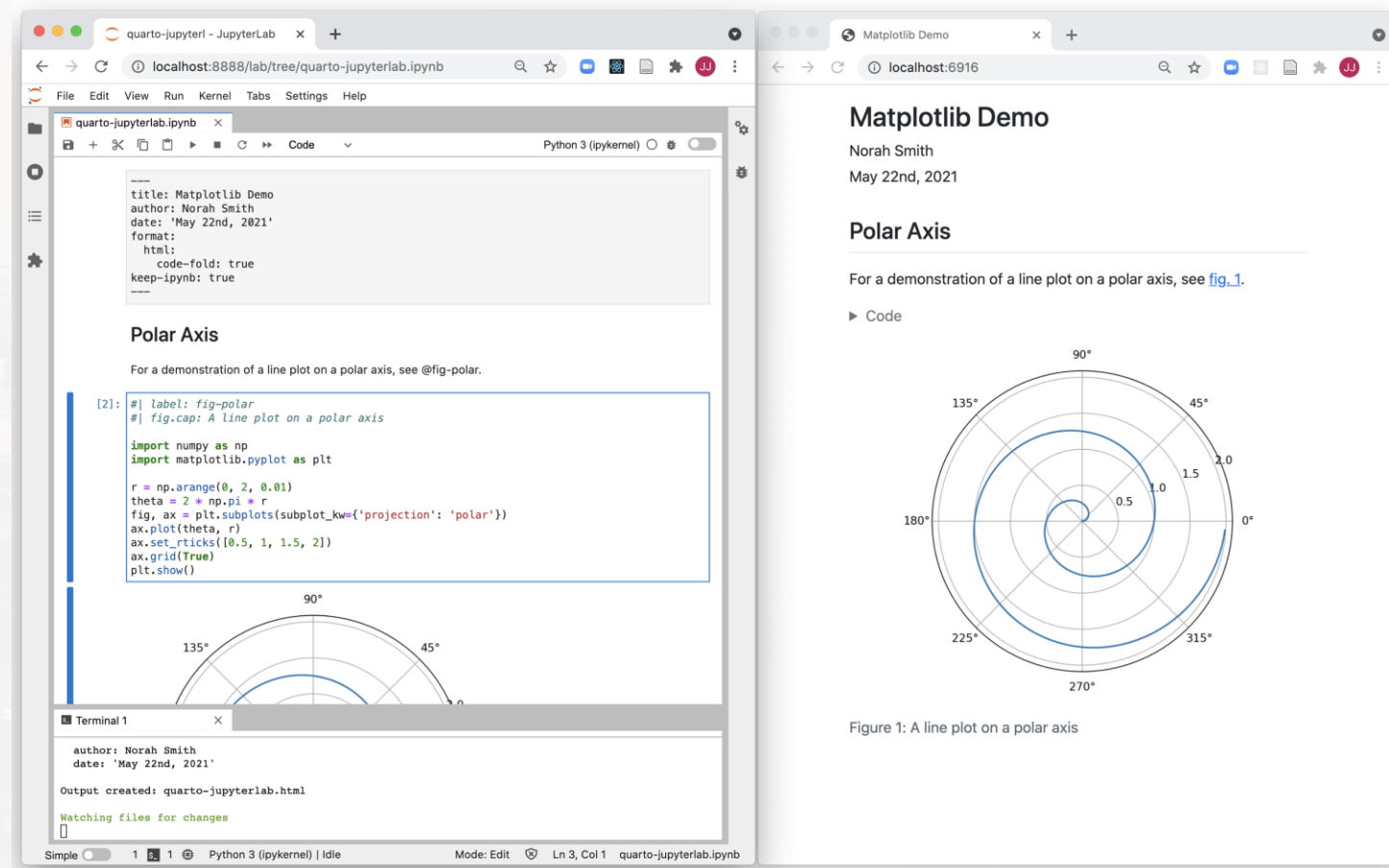
# Quarto, more than just knitr



# Comfort of your own workspace



# Comfort of your own workspace



# Comfort of your own workspace

The screenshot displays the Quarto workspace interface, which is divided into three main sections:

- EXPLORER:** Shows the file structure of the workspace. Under "QUARTO-WEB", files include `execution-options.qmd`, `julia.qmd`, `jupyter-kernels.qmd`, `ojs.qmd`, `palmer-penguins.csv`, `parameters.qmd`, and `python.qmd`. The "OUTLINE" and "TIMELINE" sections are currently empty. The "QUARTO: HELP" section provides documentation for the `plot` function, including its signature and usage examples.
- python.qmd:** The active code file. It contains a Jupyter-style cell with Python code for a polar plot. The code includes comments, imports for `numpy` and `matplotlib.pyplot`, and a plot of a spiral. The code is as follows:

```
1 ---
2 title: "matplotlib demo"
3 format:
4   html:
5     code-fold: true
6 jupyter: python3
7 ---
8
9 For a demonstration of a line plot on a
10 polar axis, see @fig-polar.
11
12 Run Cell
13 ```{python}
14 #| label: fig-polar
15 #| fig-cap: "A line plot on a polar axis"
16
17 import numpy as np
18 import matplotlib.pyplot as plt
19
20 r = np.arange(0, 2, 0.01)
21 theta = 2 * np.pi * r
22 fig, ax = plt.subplots(
23     subplot_kw = {'projection': 'polar'}
24 )
25 ax.plot(theta, r)
26 ax.set_rticks([0.5, 1, 1.5, 2])
27 ax.grid(True)
28 plt.show()
29 ```
```
- Interactive-1:** The output view. It shows the Python 3.9.5 64-bit environment. The output includes the version information and a polar plot of a spiral. The plot has a radial axis from 0 to 2 and an angular axis from 0 to 360 degrees. The spiral starts at the origin and winds outwards.

# So what is Quarto?

- Quarto® is an open-source scientific and technical publishing system built on Pandoc



# Resources

- Getting Started with Quarto by Tom Mock ~ rstudio::conf 2022 Workshop
  - <https://rstudio-conf-2022.github.io/get-started-quarto/>



# Quick Demo

Basics of Quarto



# Johannesburg R User Group Website

<https://www.rusergroup.co.za>

# GitHub repo

- <https://github.com/rusergroupcoza/website>

The screenshot shows the GitHub repository page for `rusergroupcoza/website`. The repository is public and has 0 stars, 3 watchers, and 0 forks. The main branch is `main` with 1 branch and 0 tags. The repository contains a list of files and folders, including `.github/workflows`, `.Rbuildignore`, `.gitignore`, `CNAME`, `DESCRIPTION`, `README.md`, `_quarto.yml`, `deploy.yml`, `favicon.ico`, `index.qmd`, `johannesburg-r-usergroup-logo.png`, and `our-r-events.qmd`. The repository is described as "Website for the South African R User Groups" and has a link to `www.rusergroup.co.za`. The repository also has a README, 0 stars, 3 watching, and 0 forks. The repository is categorized under `r`, `meeting`, `rstats`, and `user-group`. The repository also has a section for Releases, which states "No releases published" and a link to "Create a new release". The repository also has a section for Packages, which states "No packages published".

Repository: `rusergroupcoza/website` (Public)

Buttons: Edit Pins, Unwatch (3), Fork (0), Star (0)

Navigation: Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, Settings

Branches: main (1 branch), 0 tags

Actions: Go to file, Add file, Code

Commit: `0aef753` 6 hours ago, 78 commits

Files:

| File   | Commit Message                           | Time         |
|--|--|--------------|
| <code>.github/workflows</code>                 | Update main.yml                          | 22 hours ago |
| <code>.Rbuildignore</code>                     | Change build type to none                | 3 days ago   |
| <code>.gitignore</code>                        | Change build type to none                | 3 days ago   |
| <code>CNAME</code>                             | Create CNAME                             | 22 hours ago |
| <code>DESCRIPTION</code>                       | Rename columns and move version to 4.2.0 | 6 hours ago  |
| <code>README.md</code>                         | Update README.md                         | 4 days ago   |
| <code>_quarto.yml</code>                       | Move to quarto                           | 4 days ago   |
| <code>deploy.yml</code>                        | Create deploy.yml                        | 23 hours ago |
| <code>favicon.ico</code>                       | Move to quarto                           | 4 days ago   |
| <code>index.qmd</code>                         | Move images to the top of the page       | 6 hours ago  |
| <code>johannesburg-r-usergroup-logo.png</code> | Move to quarto                           | 4 days ago   |
| <code>our-r-events.qmd</code>                  | Remove token generation                  | 6 hours ago  |

About: Website for the South African R User Groups

Link: `www.rusergroup.co.za`

Tags: `r`, `meeting`, `rstats`, `user-group`

Readme

Stars: 0 stars

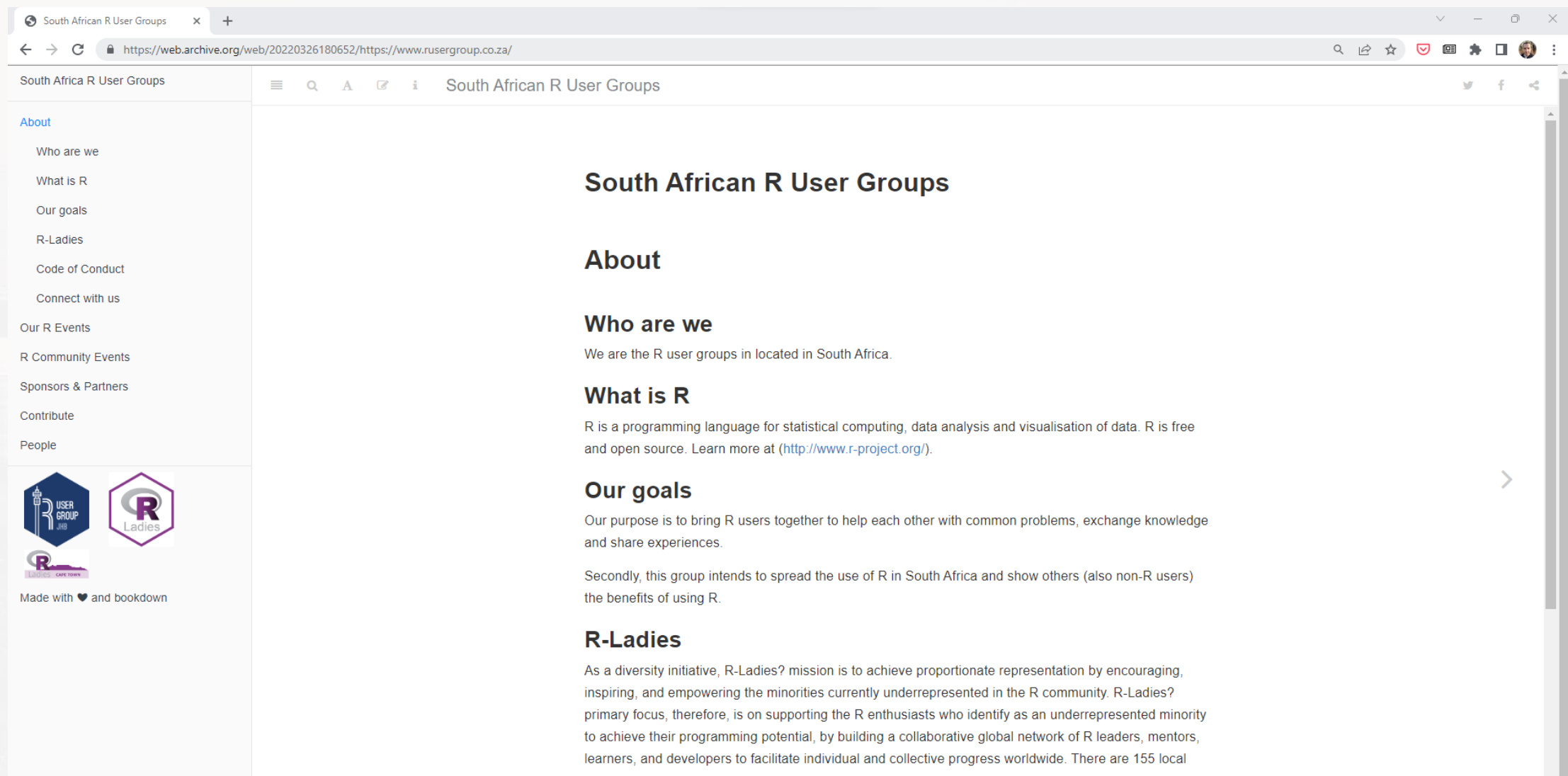
Watching: 3 watching

Forks: 0 forks

Releases: No releases published. [Create a new release](#)

Packages: No packages published

# Bookdown



# MeetupR Package

Our R Events | South African R User Groups

https://web.archive.org/web/20211206043354/https://www.rusergroup.co.za/our-r-events.html

South Africa R User Groups

About

[Our R Events](#)

Past and Upcoming Events



Gallery

R Community Events

Sponsors & Partners

Contribute

People

Made with ♥ and bookdown

## Our R Events

### Past and Upcoming Events

#### Johannesburg R User Group

| name                            | time                | venue_name        |
|---------------------------------|---------------------|-------------------|
| <a href="#">Year-end meetup</a> | 2018-12-11 15:30:00 | Braamfontein Gate |

#### R-Ladies Johannesburg


| name  | time                | venue_name                  |
|---|---------------------|-----------------------------|
| <a href="#">May meetup: Intro to Spatial Statistics</a> | 2019-05-28 15:30:00 | The Main Straight - Campari |
| <a href="#">satRday lunch meetup</a>                    | 2019-04-06 10:15:00 | Discovery Place             |
| <a href="#">March meetup: Ethics in Data Science</a>    | 2019-03-12 15:30:00 | Wits University             |
| <a href="#">February Meetup</a>                         | 2019-02-21 15:30:00 | Wits University             |
| <a href="#">Year-end meetup</a>                         | 2018-12-11 15:30:00 | Braamfontein Gate           |
| <a href="#">November Meetup</a>                         | 2018-11-27 15:30:00 | Wits University             |

#### R-Ladies Cape Town

| name  | time                | venue_name                                    |
|---|---------------------|---|
| <a href="#">Applications of R: From detecting marine heatwaves to mapping out school data</a> | 2019-04-25 15:30:00 | 3rd Floor, Bandwidth Barn, Woodstock Exchange |
|   | 2019-03-14          | 3rd Floor, Bandwidth Barn                     |



# The Problem

|   |  |   |                           |              |
|---|--|---|---------------------------|--------------|
|  | luisdza Update 01-our_r_events.Rmd ... |   | ✓ 3b6d1ea on May 25, 2019 | 🕒 38 commits |
| 📁   | _css                                   | Add _ to folder name                              |                           | 4 years ago  |
| 📁   | _img                                   | added changed proposed by @MeganBeckett           |                           | 3 years ago  |
| 📄   | .Rbuildignore                          | Initial Commit                                    |                           | 4 years ago  |
| 📄   | .gitignore                             | Initial Commit                                    |                           | 4 years ago  |
| 📄   | .travis.yml                            | Update .travis.yml                                |                           | 4 years ago  |
| 📄   | 01-our_r_events.Rmd                    | Update 01-our_r_events.Rmd                        |                           | 3 years ago  |
| 📄   | 02-r_community_events.Rmd              | added changed proposed by @MeganBeckett           |                           | 3 years ago  |
| 📄   | 03-sponsors_and_partners.Rmd           | Update descriptions to R User Groups South Africa |                           | 4 years ago  |
| 📄   | 04-contribute.Rmd                      | Initial Commit                                    |                           | 4 years ago  |
| 📄   | 05-people.Rmd                          | added changed proposed by @MeganBeckett           |                           | 3 years ago  |
| 📄   | DESCRIPTION                            | Update descriptions to R User Groups South Africa |                           | 4 years ago  |
| 📄   | Makefile                               | Makefile ref directory not created                |                           | 4 years ago  |
| 📄   | README.md                              | Update README.md                                  |                           | 3 years ago  |
| 📄   | _output.yml                            | added changed proposed by @MeganBeckett           |                           | 3 years ago  |
| 📄   | google_analytics.html                  | Initial Commit                                    |                           | 4 years ago  |
| 📄   | index.Rmd                              | added changed proposed by @MeganBeckett           |                           | 3 years ago  |
| 📄   | rusergroup.Rproj                       | Update descriptions to R User Groups South Africa |                           | 4 years ago  |

# The Solution

- Move Rmd to Qmd - Quarto
- Update MeetupR Package
  - Move to OAuth2
- Move to GitHub Actions
- Move from Google Analytics to Plausible

# Questions

The background of the slide is a faded, high-angle photograph of a city. In the foreground, a large bridge with multiple tall, white, A-frame pylons and a dense network of cables is visible. Beyond the bridge, a dense urban landscape with numerous skyscrapers and buildings stretches towards the horizon. The overall tone is light and hazy, with the city details softened to serve as a backdrop for the text.

The background is a faded, grayscale image of a city skyline. In the foreground, a large bridge with multiple tall, white pylons and a complex network of cables is visible. The city skyline in the background consists of numerous skyscrapers and buildings of varying heights. The overall image has a soft, hazy quality, with the text 'EOF' prominently displayed in the center.

EOF