Markdown versus Quarto

Megan Lewis

2025-05-15

Why This Talk?

- You've heard of Quarto but you're not sure what it is

- You're using R Markdown because it's what you started with

- You're asking: *Should I switch? Is it worth it?*

What's a Dynamic Document?

- Code + output + commentary in one file

- Renders into HTML, PDF, Word, slides, etc.

- Great for reproducibility, collaboration, and avoiding copy-paste chaos

Why They're Useful

- Improve reproducibility and transparency

- Update outputs automatically as data or code changes

- Support multiple audiences (technical and non-technical)

What's Markdown?

- Plain text formatting syntax — easy to write, easy to read

- A "step up" from a `.txt` file

- Add **rich text elements** (e.g., bold, italics, lists, etc.) to plain text

- Used widely in GitHub, documentation, and academic writing

Markdown Language

```
 1  # Quackston CV
 2
 3  My name is Quackston.
 4  I *like* debugging stats code.
 5
 6  ## Skills
 7
 8  - Debugging expertise
 9
10  ## Experience
11
12  [Hyperlink](https://c7091.github.io/website/)
```

```
 1  Heading 1
 2
 3  Normal text
 4  Italics
 5
 6  Heading 2
 7
 8  Bullet point
 9
10  Heading 2
11
12  Hyperlinked text
```

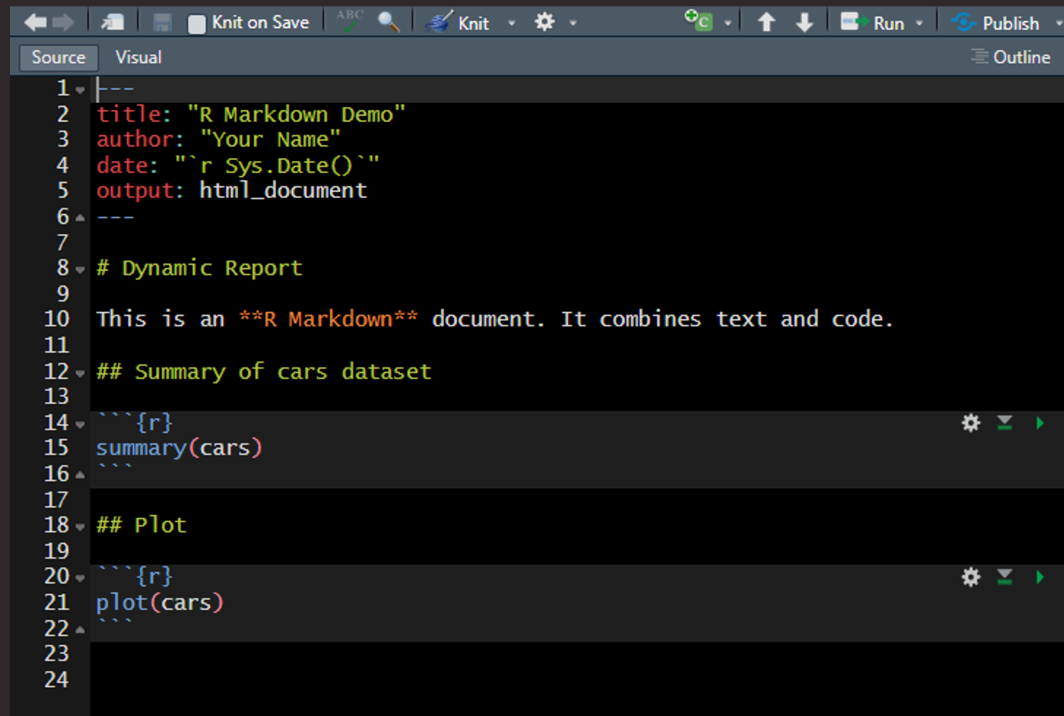Harper Adams R Users Group

What is R Markdown?

- *Literate programming* — code + prose in one place

- `.Rmd` files with:

  - Markdown text

  - Embedded R code chunks

R Markdown Workflow

- When you **Knit**, it:
    - Runs the code
    - Renders results alongside narrative
    - Exports to HTML, Word, PDF, etc.
- Great for teaching, reproducible reporting, and sharing analyses

Typical R Markdown

Typical R Markdown

Why R Markdown is Great

- Simple and intuitive

- Works well in RStudio

- Big ecosystem: `bookdown`, `blogdown`, `xaringan`

Where It Struggles

- Only really supports R

- Needs extensions for slides, books, blogs

- YAML config differs by format

- Harder to manage bigger projects

Meet Quarto

- Released in 2022 by the same folks behind R Markdown

- An open-source scientific and technical publishing system

- Next generation of R Markdown

  - Unifies and improves the R markdown ecosystem

  - Extends it for people who don't know R markdown

Why Quarto?

- Computational docs and scientific markdown made easy for single source publishing

- Designed from the start as a multi-engine system

- An attempt to bring together 10+ years experience of R markdown to everyone

How Quarto Works

- Not tied to specific language like R Markdown

- Command line interface

- Renders plain text or mixed text formats into static outputs

Built-In Output Options

- Reports (HTML, PDF, Word)

- Dashboards

- Slides (Reveal.js, Beamer)

- Books

- Websites & blogs

- Quarto Gallery

Quarto Projects

- General Project

- Website

- Blog

- Book

- Manuscript

- Pre-loads with files/folders to help get started

Demo

Harper Adams R Users Group

What's Better About Quarto?

- No more YAML guessing games — format config is consistent across outputs

- Multi-language by design (no Python hacks)

- Slides, blogs, books — all native, no bolt-on packages

- `_quarto.yml` makes multi-file projects way easier

- Works in more places: RStudio, VS Code, or terminal

R Markdown vs Quarto

Feature	R Markdown	Quarto
R Support	Yes	Yes
Python/Julia	Workarounds	Native
Slides/Books/Websites	Add-ons needed	Built-in
Multi-file Projects	Manual	`_quarto.yml`
Editor Support	RStudio only	RStudio + VS Code

Should You Move?

- Move if:
  - You're starting fresh
  - You want cleaner multi-format publishing
  - You use more than just R
  - You want better config control
- Stick with R Markdown if:
  - Your workflow is small and stable
  - You're solo and R-only

Round up

- R Markdown still works — but Quarto does more

- Same mindset, better tools

- Switch when you're ready, or start with your next new thing

Questions?

Harper Adams R Users Group

Handy Links

Quarto Quickstart

Quarto User Guide

Markdown Syntax