

Using Quarto to Generate Custom Soil Reports

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Quarto Showcase

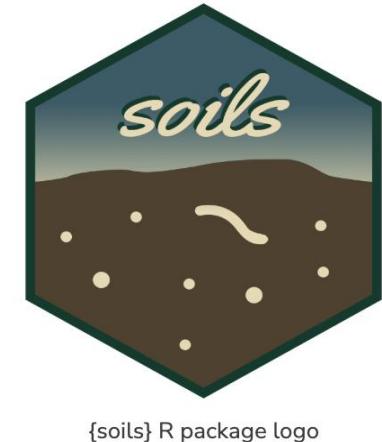


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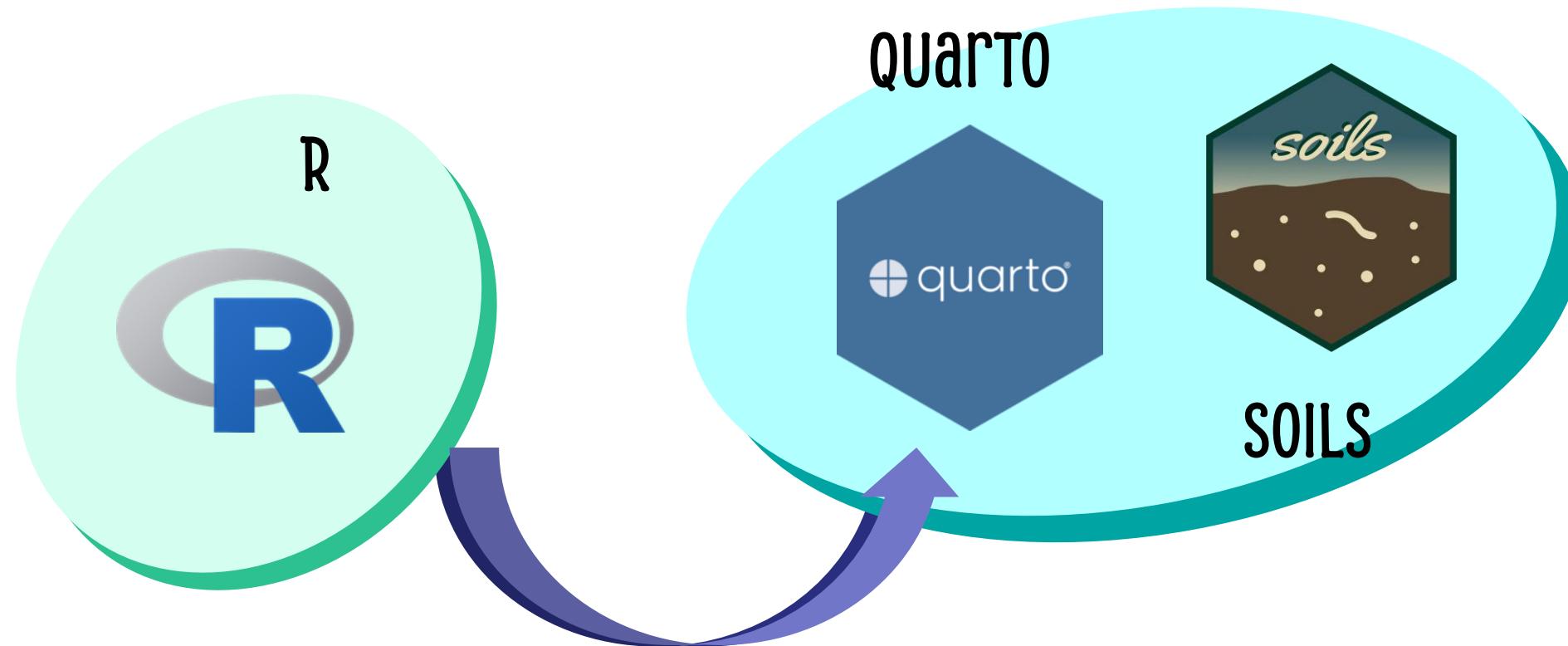
Cooperative Extension

Introduction

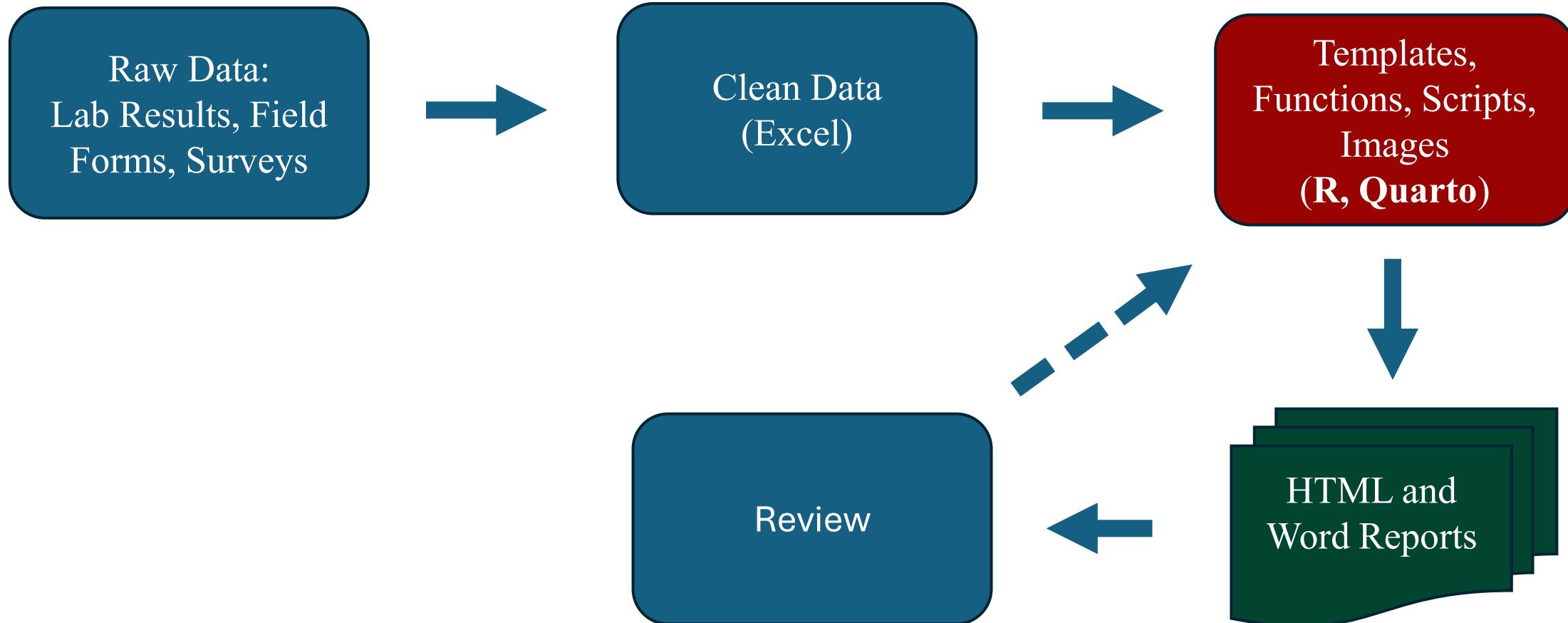
- **{soils}**: An R Package for Soil Health Reporting
- Developed by **Washington State Department of Agriculture** (WSDA) and **Washington State University** (WSU)
- Help growers:
 - **Access** their soil health data
 - **Interpret** within their crop and region context
 - **Translate** into informed management decisions



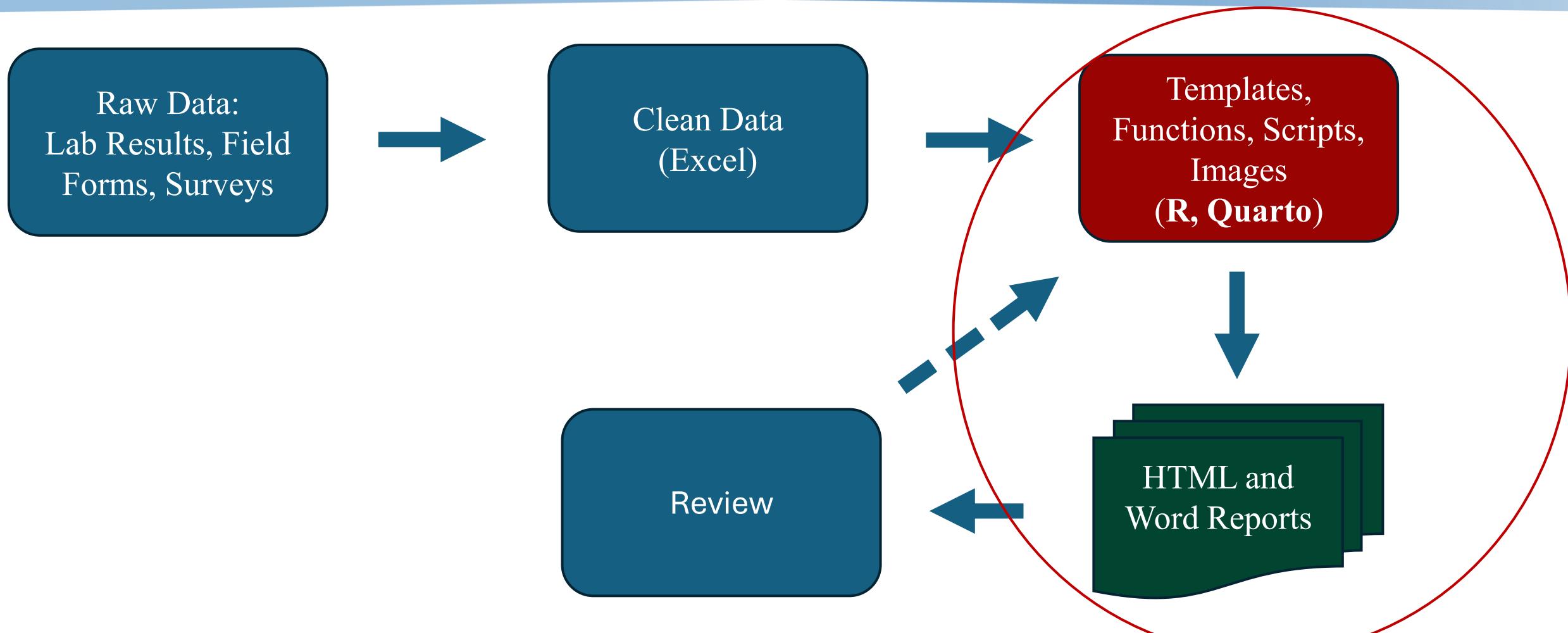
Painstakingly by Hand in Excel and Word



From Raw Data to Final Reports



From Raw Data to Final Reports

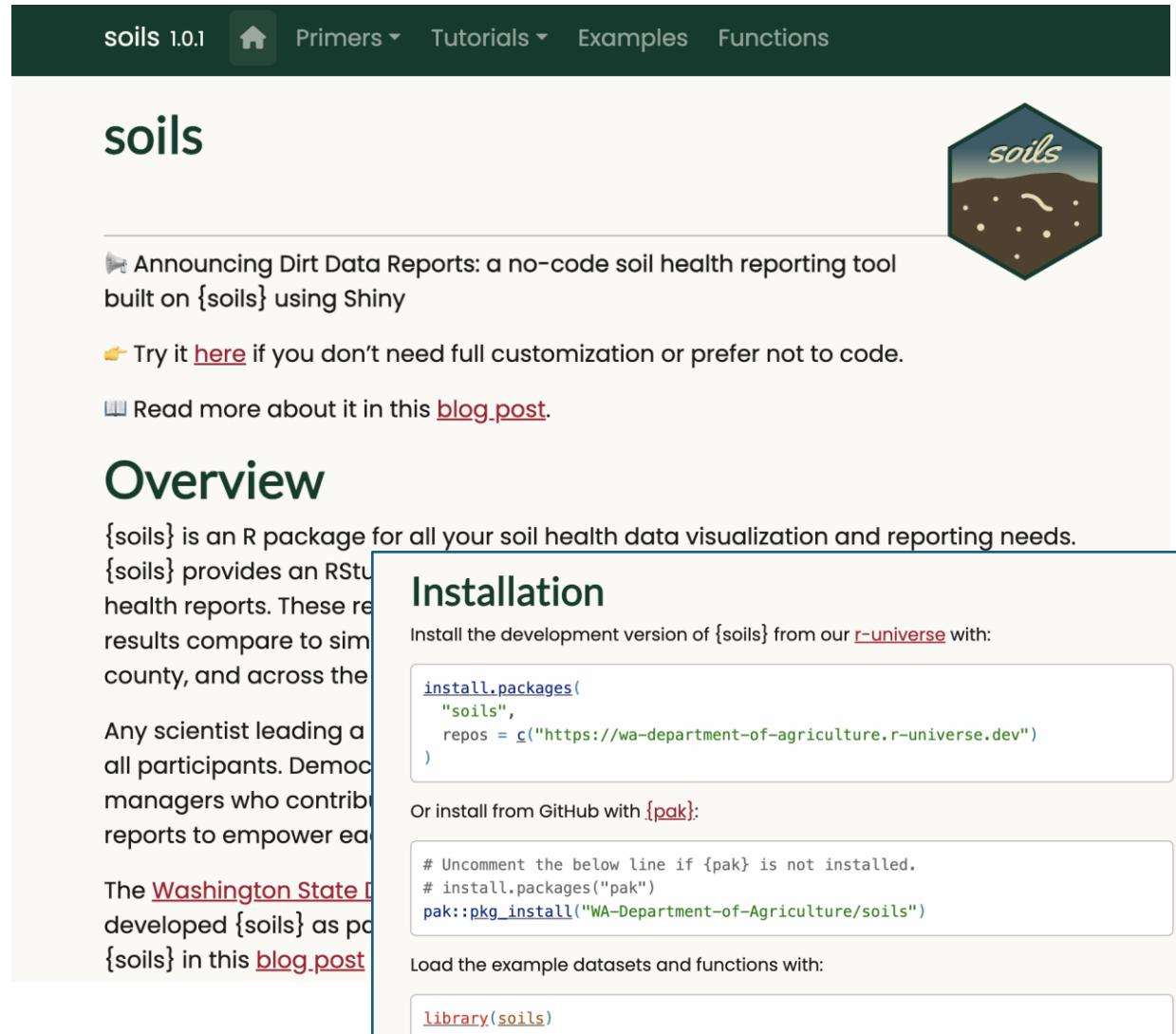


How do you get started?

{soils} package website



<https://wa-department-of-agriculture.github.io/soils/>



The screenshot shows the homepage of the {soils} package website. The header includes a navigation bar with 'soils 1.0.1' and links for 'Primers', 'Tutorials', 'Examples', and 'Functions'. The main content area features a large title 'soils' and a hexagonal logo on the right. Below the title, there are three bullet points: 1. Announcing Dirt Data Reports: a no-code soil health reporting tool built on {soils} using Shiny. 2. Try it [here](#) if you don't need full customization or prefer not to code. 3. Read more about it in this [blog post](#). The 'Overview' section is visible, along with an 'Installation' section containing R code for installation and a note about GitHub installation. The bottom of the page includes a note about example datasets and a 'library(soils)' command.

soils 1.0.1  Primers ▾ Tutorials ▾ Examples Functions

soils



- Announcing Dirt Data Reports: a no-code soil health reporting tool built on {soils} using Shiny
- Try it [here](#) if you don't need full customization or prefer not to code.
- Read more about it in this [blog post](#).

Overview

{soils} is an R package for all your soil health data visualization and reporting needs. {soils} provides an RStudio extension for generating soil health reports. These reports compare to similar sites, county, and across the state.

Any scientist leading a soil health demonstration can use {soils} to engage all participants. Demonstration managers who contribute to the reports can use {soils} to empower each other.

The [Washington State Department of Agriculture](#) developed {soils} as part of the Washington State Soil Health Demonstration. You can learn more about the demonstration and the development of {soils} in this [blog post](#).

Installation

Install the development version of {soils} from our [r-universe](#) with:

```
install.packages(  
  "soils",  
  repos = c("https://wa-department-of-agriculture.r-universe.dev")  
)
```

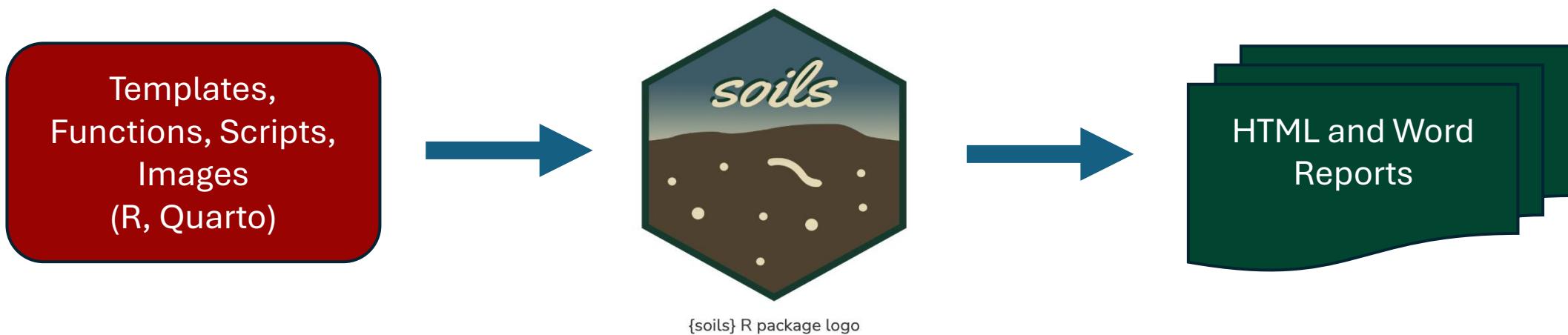
Or install from GitHub with [{pak}](#):

```
# Uncomment the below line if {pak} is not installed.  
# install.packages("pak")  
pak::pkg_install("WA-Department-of-Agriculture/soils")
```

Load the example datasets and functions with:

```
library(soils)
```

Using Soils Package in Quarto



Render about 100 Reports

01_producer-report.qmd x render-reports.R x

```
43
44
45 ## Bind HTML and docx report dfs together
46 reports <- dplyr::bind_rows(reports_html, reports_docx)
47
48 # Render all reports to the project directory =====
49 reports |>
50   purrr::pwalk(
51     quarto::quarto_render,
52     input = "01_producer-report.qmd",
53     .progress = TRUE
54   )
55
56 # Move rendered reports to a different directory =====
57
38:1 # Create a df with inputs for quarto::quarto_render()
```

Console Terminal x Background Jobs x

```
R 4.5.0 · ~/Desktop/workshop testing/ ↵
document-cs: false
link-citations: true
date-format: long
lang: en
title: ' Results from PROJECT NAME'
subtitle: Fall 2023
knitr:
  opts_chunk:
    dev: ragg_png
    tbl.cap: null
    ft.align: left
  toc-location: left

Output created: 2023_WUY05_Report.html
```

Environment History Connections Tutorial

Global Environment

data	100 obs. of 42 variables	
reports_ht...	83 obs. of 3 variables	

Files Plots Packages Help Viewer Pres

Home > Desktop > workshop testing

	Name	Size
	08_looking-forward.qmd	512 B
	09_acknowledgement.qmd	655 B
	data	
	figure	
	figure-output	
	images	
	R	
	resources	
	workshop testing.Rproj	276 B
	01_producer-report.docx	6.4 MB
	2023_WUY05_Report.html	0 B
	2022_RHM05_Report.html	6.4 MB
	01_producer-report_files	
	2022_ENR07_Report.html	1.2 MB

1% | ETA: 2h

Questions?

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