

Decoding the Ancients

better practices and processes using R

R Exchange - Wellington May 27, 2022

Introduction

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Presentation overview



- Improvements MfE is making in data collection and management
- Challenges to implementing change
- Contaminated Site Remediation Fund (CSRF) Example

Desired improvements



- Analysis, research, and reporting
- Reproducibility and
 - transparency



Issues



- "Data" isn't always data (if any exists)
- Building the plane as we fly
- Short attention spans
- Inherited products

Who are the Ancients?

- anyone no longer working at the organisation
- but we still use their product



What are we doing about it?



- Upskilling in R (MfE)
- Converting old information sources to proper datasets
- Migrating to the cloud
- Building apps for teams to interact with the data
- Committing to Git

What are we doing about it?

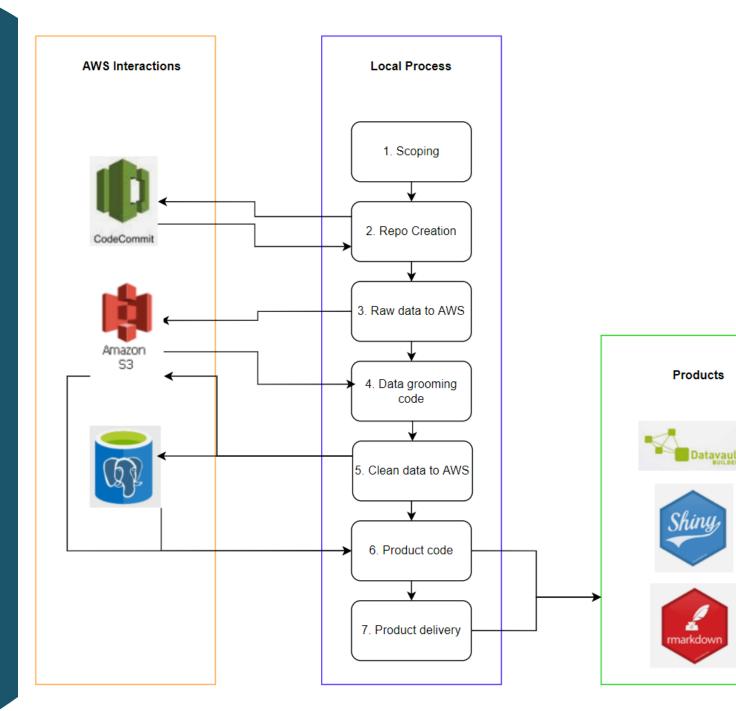
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Still growing but have some firm

ground rules:

- Always use Git
- Codecommit for internal projects, GitHub for external partnering/sharing
- Shiny Server for internal Apps, IO for public
- Repos are for code, S3 and RDS are for data
- No personal credential files in code or repo

Normal project progression





The CSRF Program

- 10 contaminated sites receive government funding every year for remediation
- Sites prioritised by highest risk
- MfE content
- Envirolink content

10



CSRF Tool



- Procured project, 2011
 - Last meaningful update 2013
- Macro heavy excel 2007

workbook

- Uses Monte Carlo simulations to score and rank risks
- Data entry, storage, reporting,

and simulation all in one

more than one version

CSRF Challenges

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CSRF Model





Combined Human Health and Ecological = Average Human Health and Ecological Risk

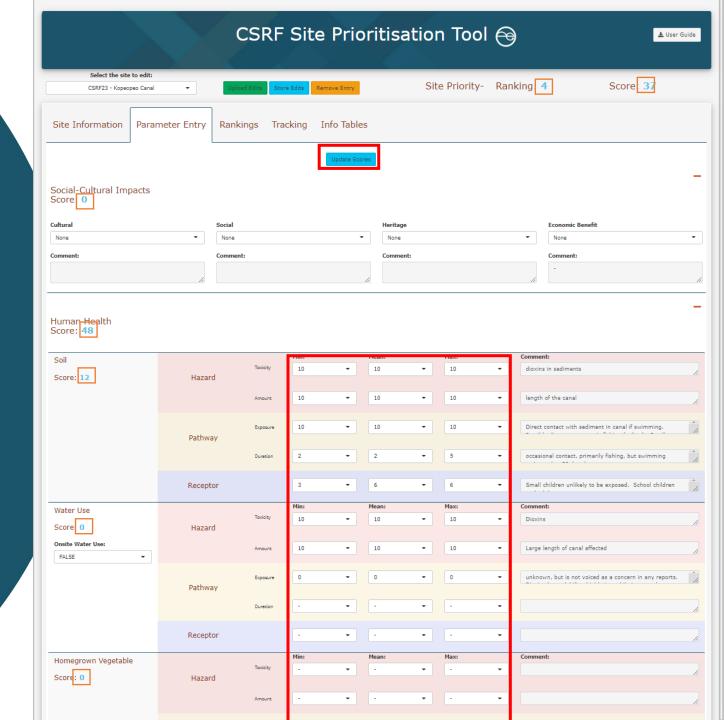
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Shiny App



- Replicated style and language of the spreadsheets
 - ease transition for users
- Leveraged Apply family and custom functions to generate repetitive UI elements and reactives
- Created additional data set to store historic edits

Shiny App



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Shiny App



	CSRF Site Prioritisation Tool 😁												
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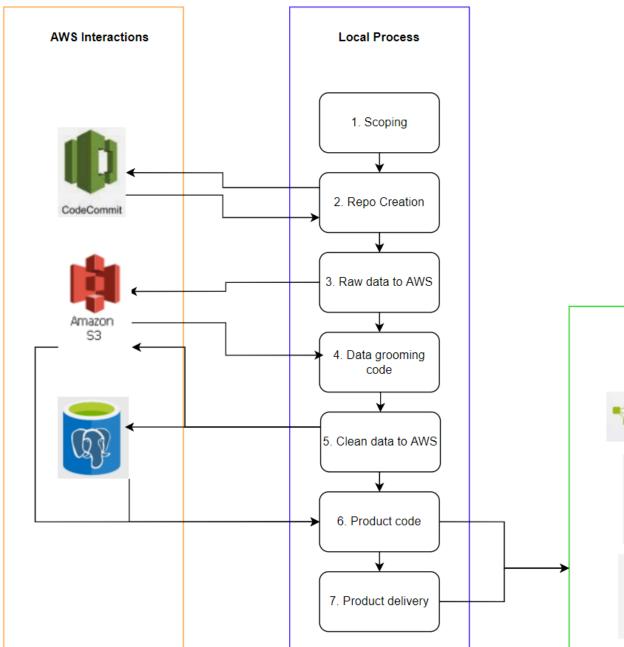
User Guide



- Produced using Rmarkdown
- Word output, reference MfE template
- Time cost upfront,
 - but easier to update in future
 - Cleaning/processing scripts, app, and guide all in one repo

User Guide







Questions?



