PHS R SHINY TRAINING COURSE – NOTES FOR TRAINERS

INTRODUCTION

- The course is currently split into a "day 1" and "day 2" format, however the length of the course is currently unknown and people have been asked to save 2.5 days. The planned format is 2.5 days over three weeks (eg. three Mondays in a row) but this can be negotiable with the team/people who book it.
- We are recommending that two trainers run the course together, one doing the bulk of the instruction and one available for inevitable error handling.
- The course will probably have 4-6 attendees.
- Day 1 of the course (in particular) is aimed at ABSOLUTE BEGINNERS. We are trying to reiterate that this course is for people who have never seen R Shiny before, but who are proficient in R and GitHub usage. Day 2 contains more in depth R Shiny coding but it is **not recommended** to only attend day 2.

DAY 1

- The learning outcomes for day 1 of the course can be viewed on the slides/pdf version.
- The first day contains some background information on R Shiny and its uses, R packages associated, how an app is broken down into UI, server, global scripts etc. and what you would expect to find in each of these. It is anticipated that this brief introduction will take < 30 minutes, but there is time for questions after this part.
- Day 1 makes use of simple, clean, sample open source data which is used in many external R training courses. This negates the need for any cleaning and analysis as this is not the aim of the course.
- On this day, attendees will make a simple **single-script R Shiny app** with a table and some basic bar charts (ggplot2), towards the end of the day they will split this data across multiple tabs and have the opportunity to look at Shiny themes which allow their dashboard to stand out.

DAY 2

- The learning outcomes for day 2 of the course can be viewed on the slides/pdf version.
- Day 2 will make use of pre-prepared PHS data (borrowed from the ScotPHO website) – there should be minimal to no issues with this dataset in terms of data cleaning etc.
- Attendees will be creating a PHS style **multi-script R Shiny app** (with separate UI, server and global scripts) which contains multiple tabs of data and the option for data downloads.
- There will be deeper exploration into different types of drop-down menus, filters, pop-up info boxes etc. on this day of the course.
- Most attendees are likely to be comfortable with ggplot2 (used in day 1) however for day 2 we are using the less common (but more interactive/dashboard friendly) package Plotly.
- Plotly code is somewhat complex (similar yet different to ggplot2) but to avoid having to instruct on how to use Plotly, these blocks of code will be made available to attendees and all they will need to do is uncomment the code as we build the app around it. We can provide a brief explanation of the Plotly code but do not spend too much time worrying about this.

FURTHER NOTES

- You will be able to see from the RShiny-training github that the folders contain the code for a final app for each day (for your/attendees reference) but also include an empty app for each day. This “empty” app is what we will be starting attendees with (it contains the aforementioned commented out Plotly code etc. along with some other things which they will build the app around).
- Most basic R Shiny errors come from a rogue bracket, a missing comma, or an incorrect (or reused) inputID/label for a function (eg. a drop down menu). You will probably have noticed that R Shiny errors are not as forgiving as regular R errors, so these are things to look out for when running the course, if people run into issues.
- The power point version of the slides contains (hopefully) all of the information you need to run the course, there are extra notes underneath some of the slides as well.
- Code is copy and paste-able from the power point or PDF version of the slides if required.
- The final half day of the course may end up being used to catch up (if other days run over) or it can be used for Q&A.