

rOpenSci - Empowering through community, software, and Peer Review

Nicholas Tierney (rOpenSci)

발표 자료 웹 버전 보기

rOpenSci: Empowering people with community, software, and peer review

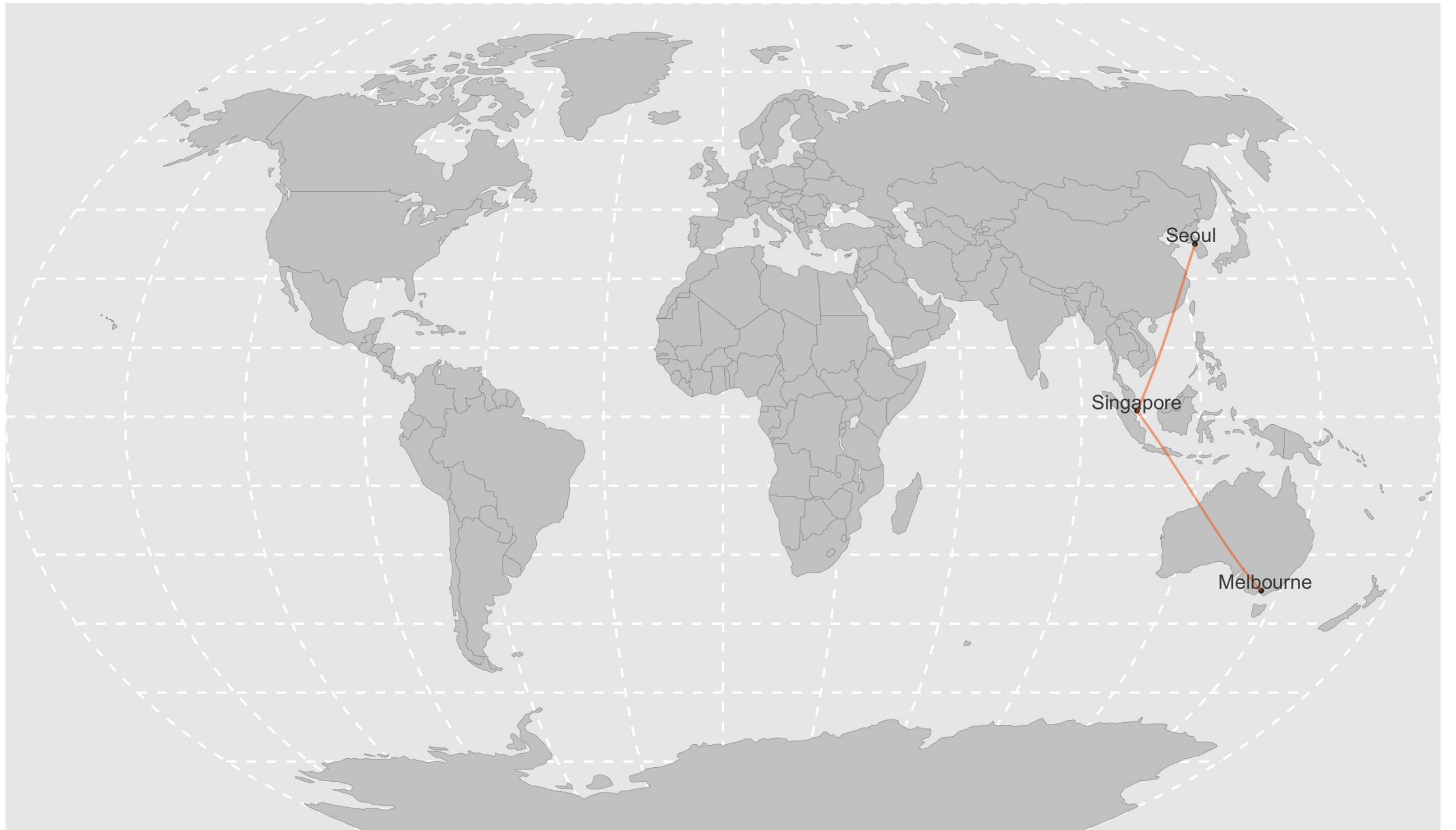
Nicholas Tierney, Monash University

R User Conference, Korea

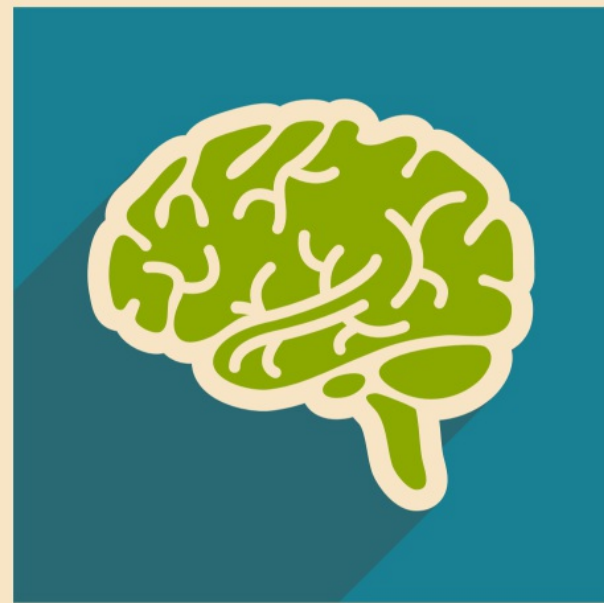
Friday 26th October, 2018

 bit.ly/ruck-njt

 [nj_tierney](https://twitter.com/nj_tierney)

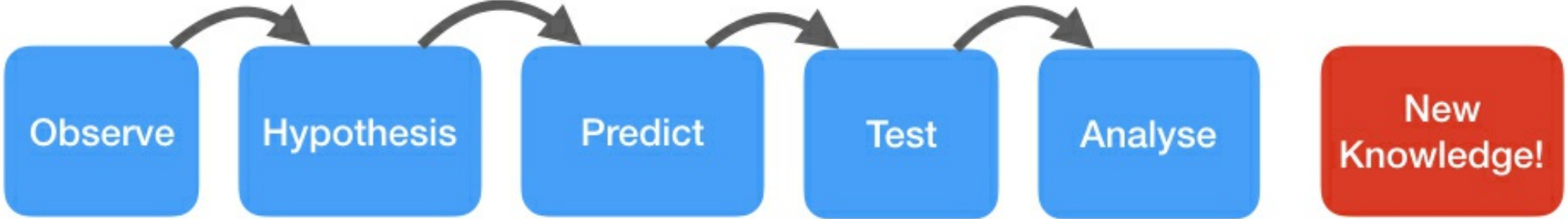


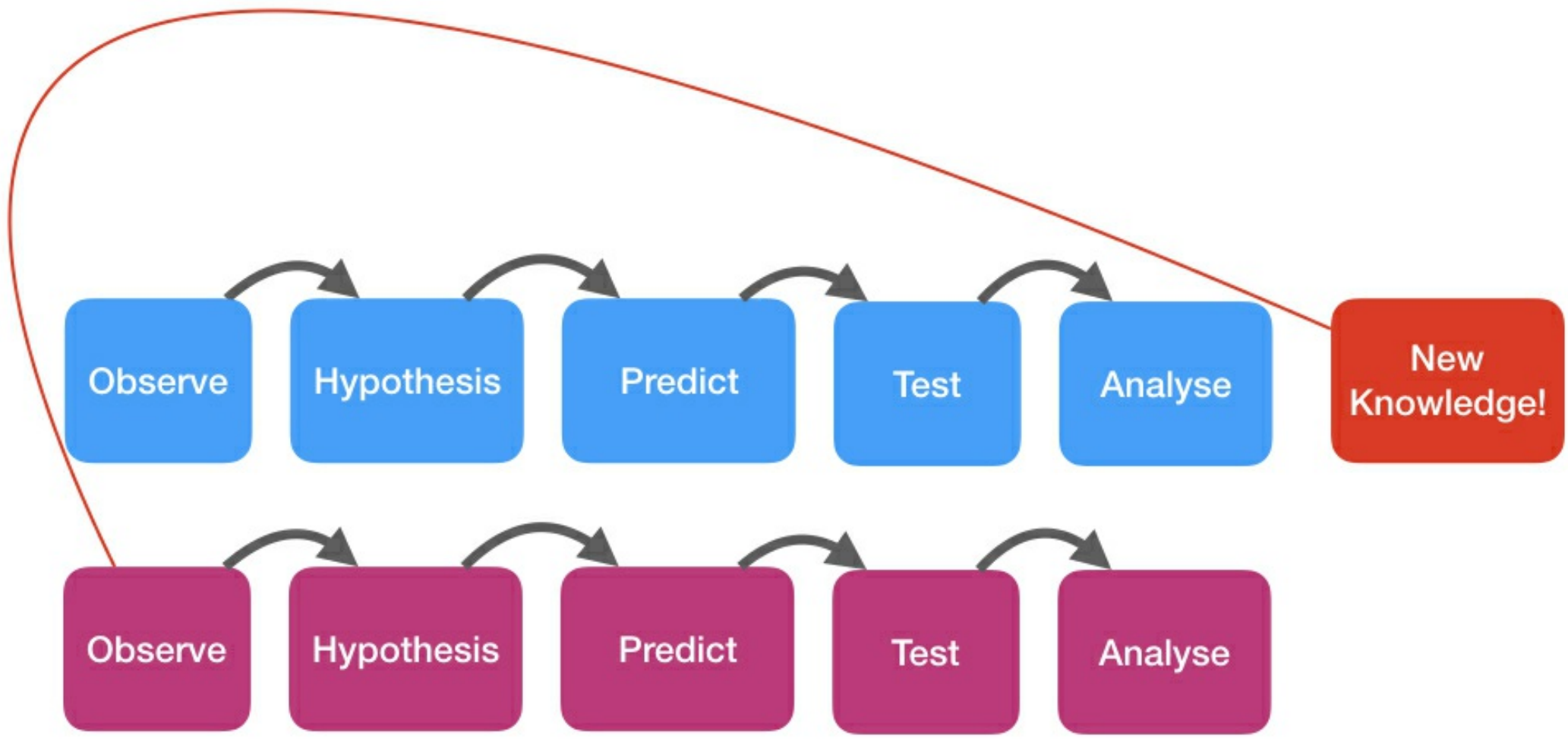


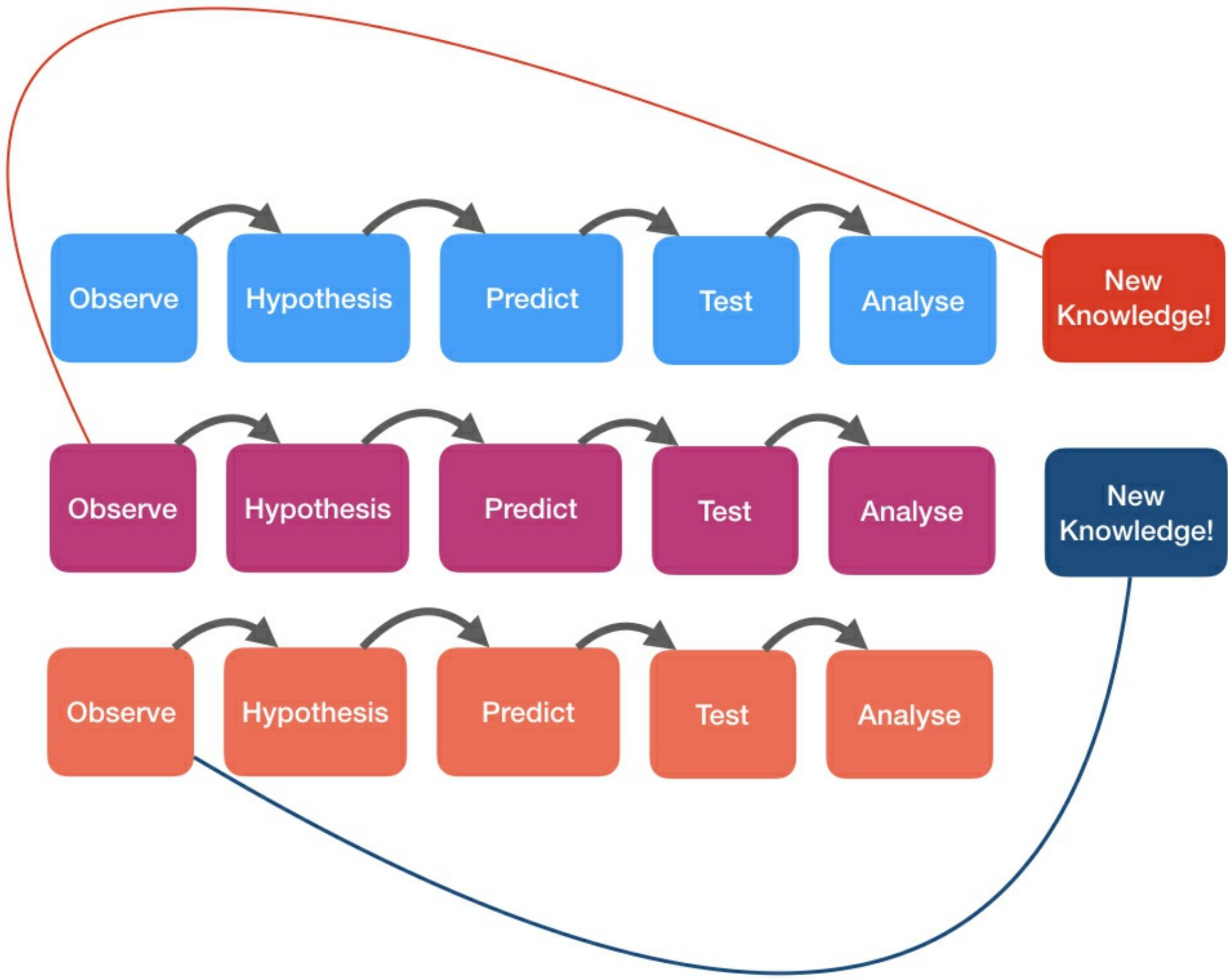


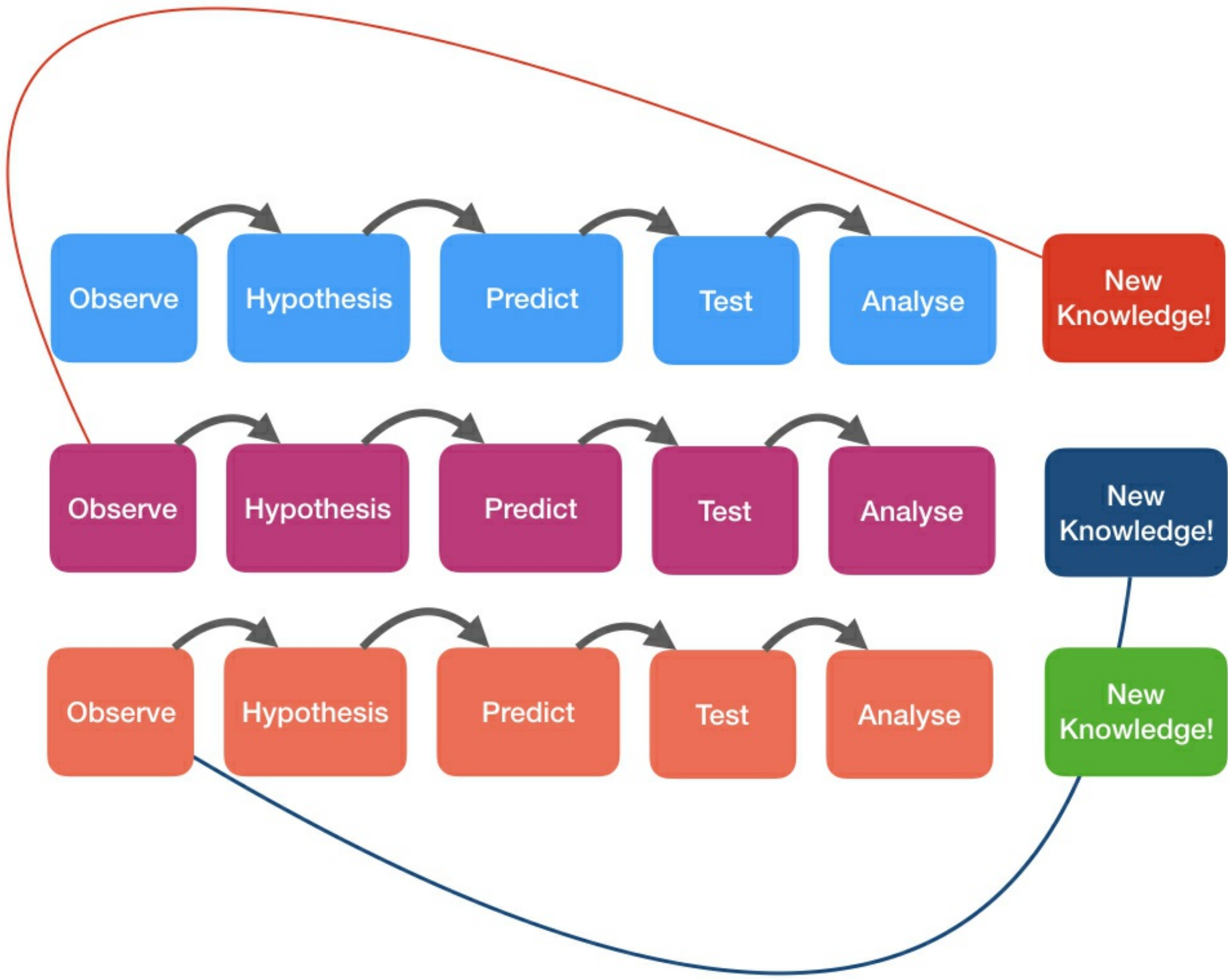


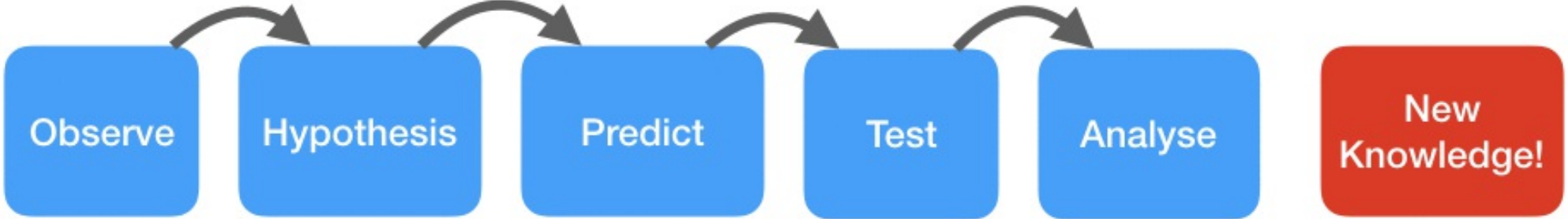




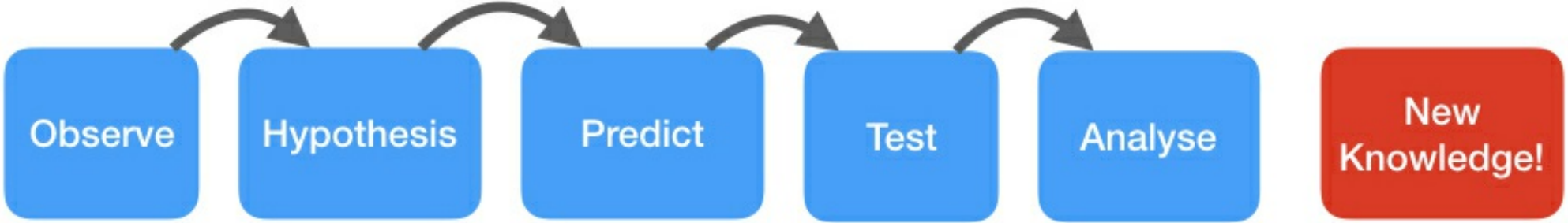


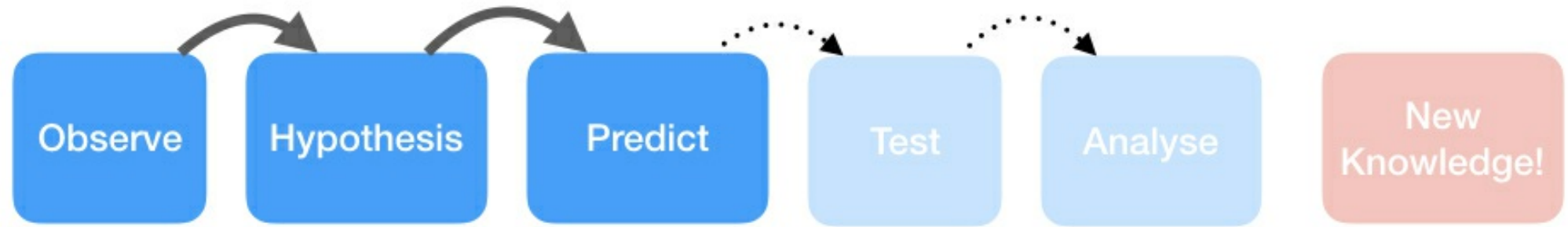


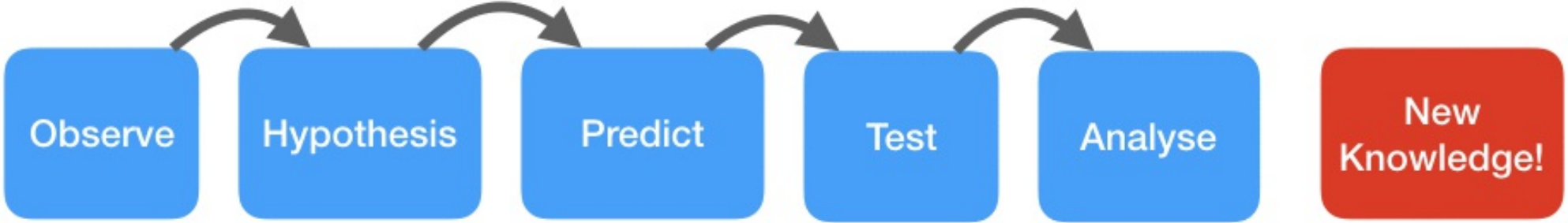


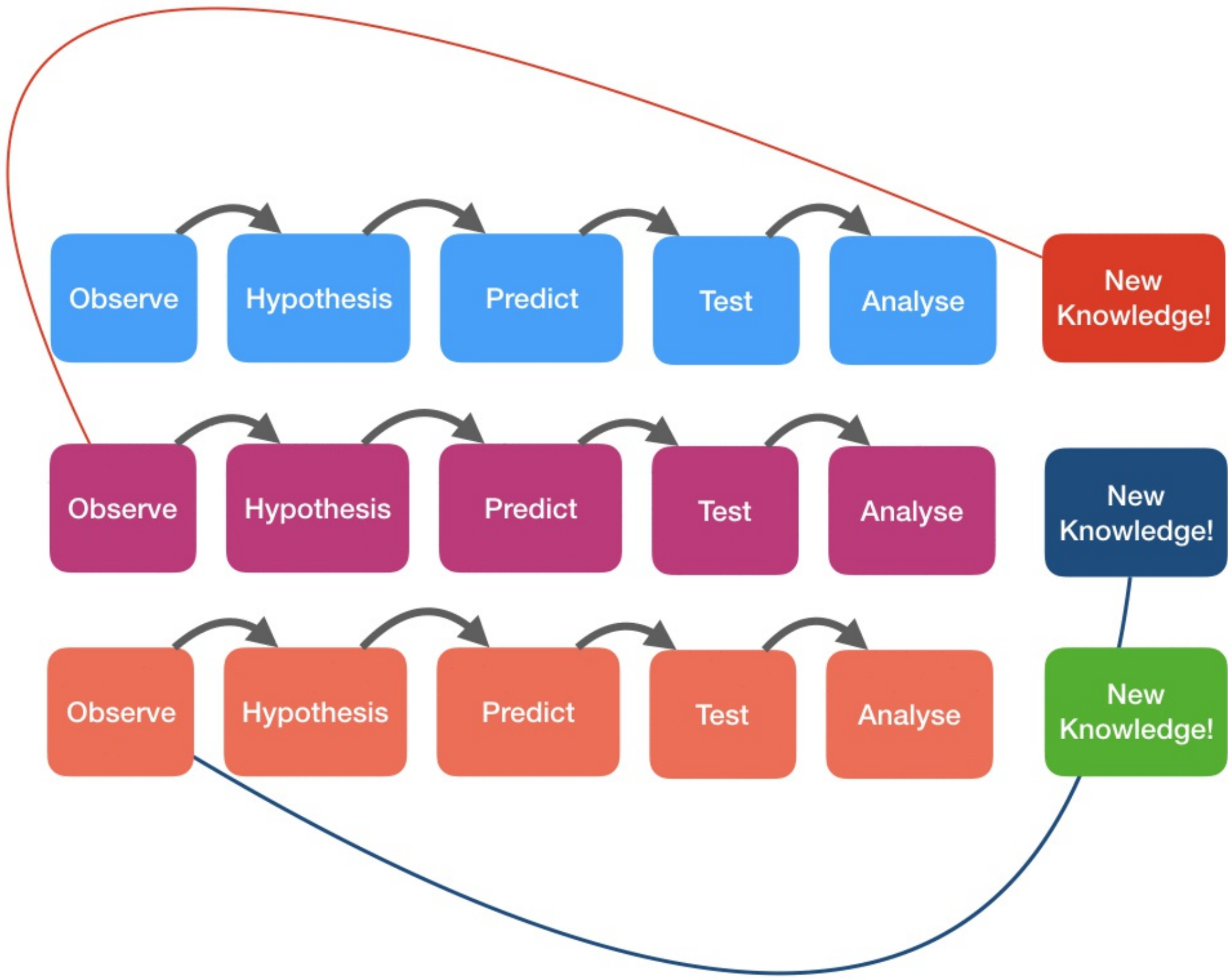














Oh, this is bad.

Heard via Garret Grolemond's great talk

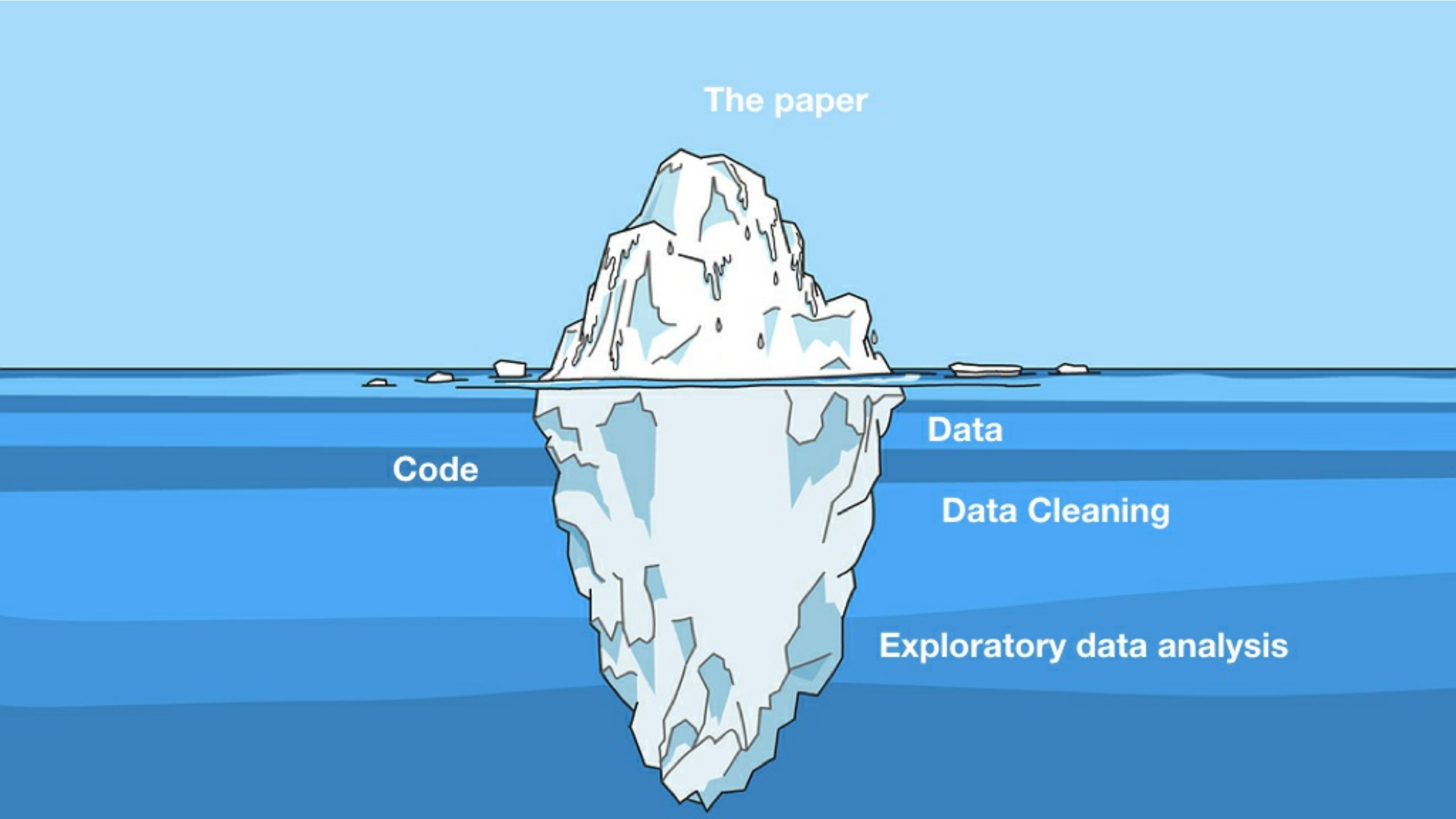
bit.ly/ruck-njt · @nj_tierney

Heard via Garret Grolemond's great talk

bit.ly/ruck-njt · @nj_tierney







Implicit assumptions

Implicit assumptions

Replication

Can we repeat the study and get the same results?

Implicit assumptions

Replication

Can we repeat the study and get the same results?

Review

What did a peer think?

Implicit assumptions

Replication

Can we repeat the study and get the same results?

Review

What did a peer think?























Record

Are the data and code shared?

Open Science vs. ...?



Conducting open science

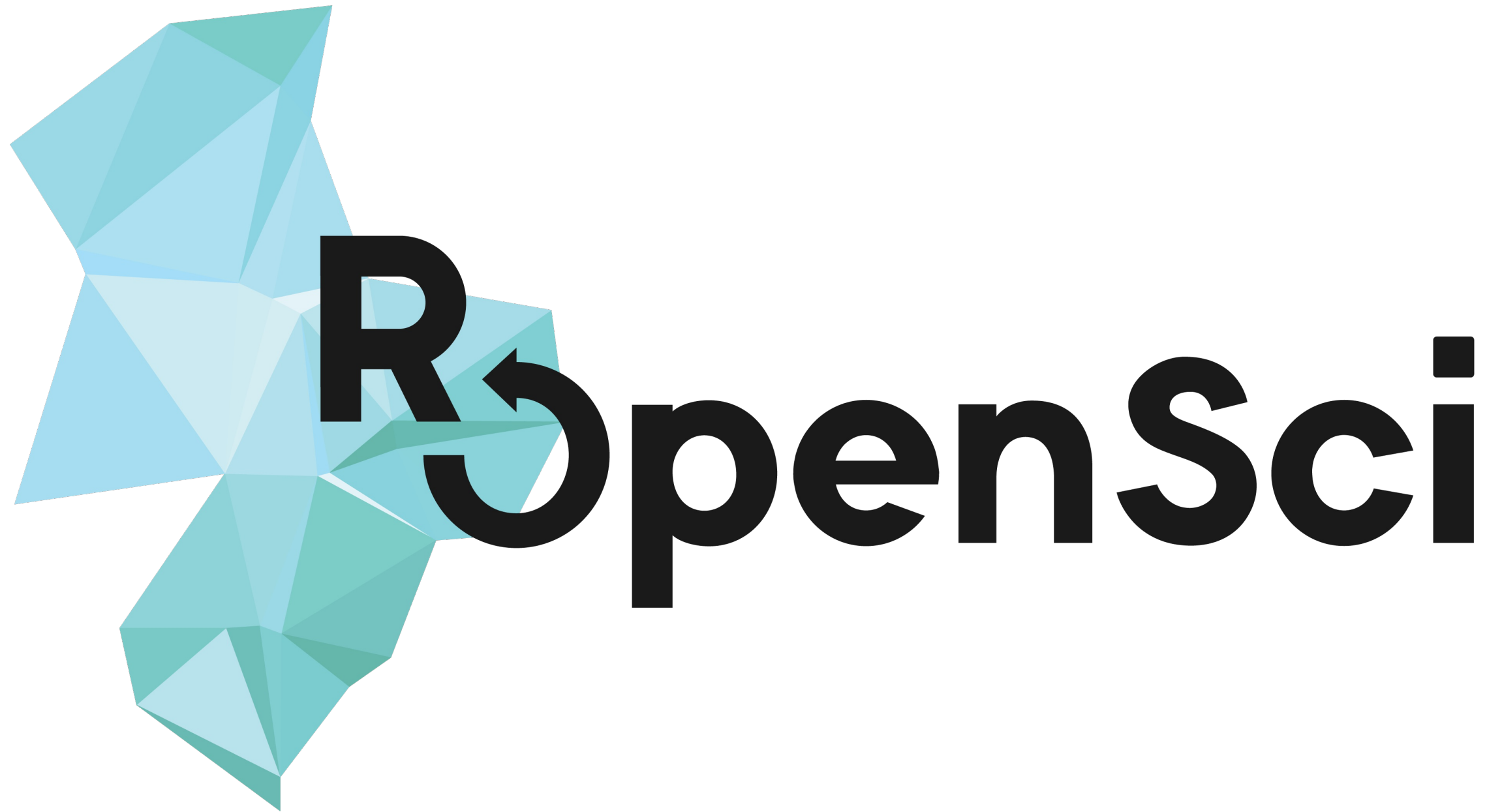
Language Rank	Types	Spectrum Ranking
1. Python	  	100.0
2. C++	  	99.7
3. Java	  	97.5
4. C	  	96.7
5. C#	  	89.4
6. PHP		84.9
7. R		82.9
8. JavaScript	 	82.6
9. Go	 	76.4
10. Assembly		74.1




```
~/Documents/rmarkdown - g
Go to file/function
Addins
1-example.Rmd x
Knit
Run
1 |---
2 title: "Viridis Demo"
3 output: html_document
4 ---
5
6 ```{r include = FALSE}
7 library(viridis)
8 ```
9
10 The code below demonstrates two color palettes in the
    [viridis](https://github.com/sjmgarnier/viridis) package. Each
    plot displays a contour map of the Maunga Whau volcano in
    Auckland, New Zealand.
11
12 ## Viridis colors
13
14 ```{r}
15 image(volcano, col = viridis(200))
16 ```
17
18 ## Magma colors
19
20 ```{r}
21 image(volcano, col = viridis(200, option = "A"))
22 ```
23
1:1 Viridis Demo R Markdown
```


It is not easy.

It is not easy.
Let's do it together.





Founded in 2011 by Karthik Ram,
Scott Chamberlain and Carl
Boettiger.



Founded in 2011 by Karthik Ram, Scott Chamberlain and Carl Boettiger.

Original motivation was to make data access easier and reproducible

By the numbers

5 staff

1 postdoc

2 Bioconductor pkgs

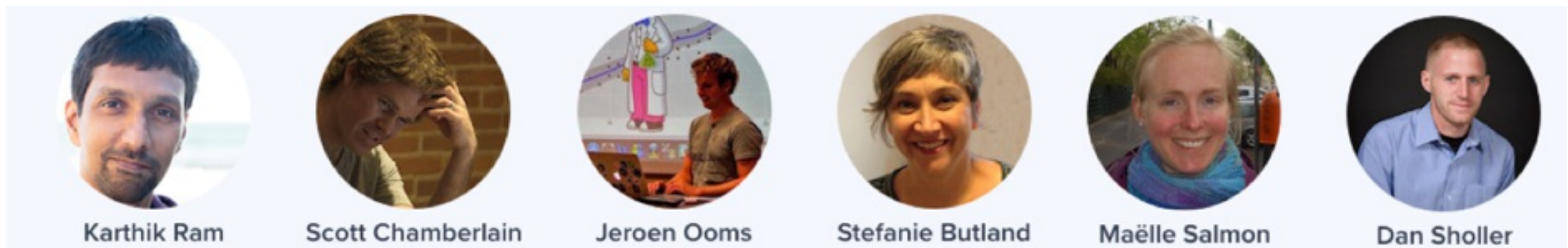
192 CRAN pkgs

287 total pkgs

~ 500 code contributors

citations

LOTS! of community members



(From Stefanie Butland)



 Software

 Peer Review

 Community



 Software

 Peer Review

 Community

Software

 Software

 Data retrieval and Access

 Software

 Data retrieval and Access

 Data visualisation

 Software

 Data retrieval and Access

 Data visualisation

 Data sharing

⌘ Software: magick



Software

FILTERS

- All Altmetrics Data Publication Tools Visualization Databases Geospatial Web Images Processing Literature Computing Infrastructure Security Taxonomy CRAN / BIOC available

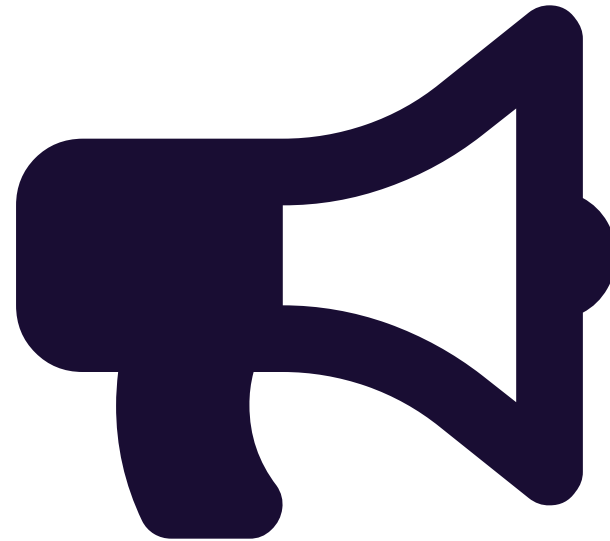
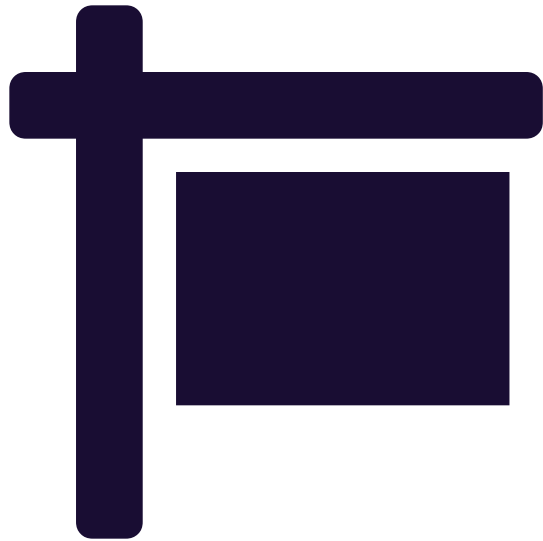
PACKAGE	MAINTAINER	DESCRIPTION
bomrang	Adam Sparks	Fetch Australian Government Bureau of Meteorology Data
charlatan	Scott Chamberlain	Make fake data
cleanEHR	Sinan Shi	The Critical Care Clinical Data Processing Tools

 ropensci.org/packages

 github.com/ropensci

 github.com/ropenscilabs

Software



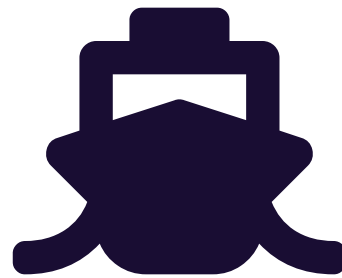


 Software

 Peer Review

 Community

Peer review for software?



Onboarding



Pre-submission enquiry



Peer-Review



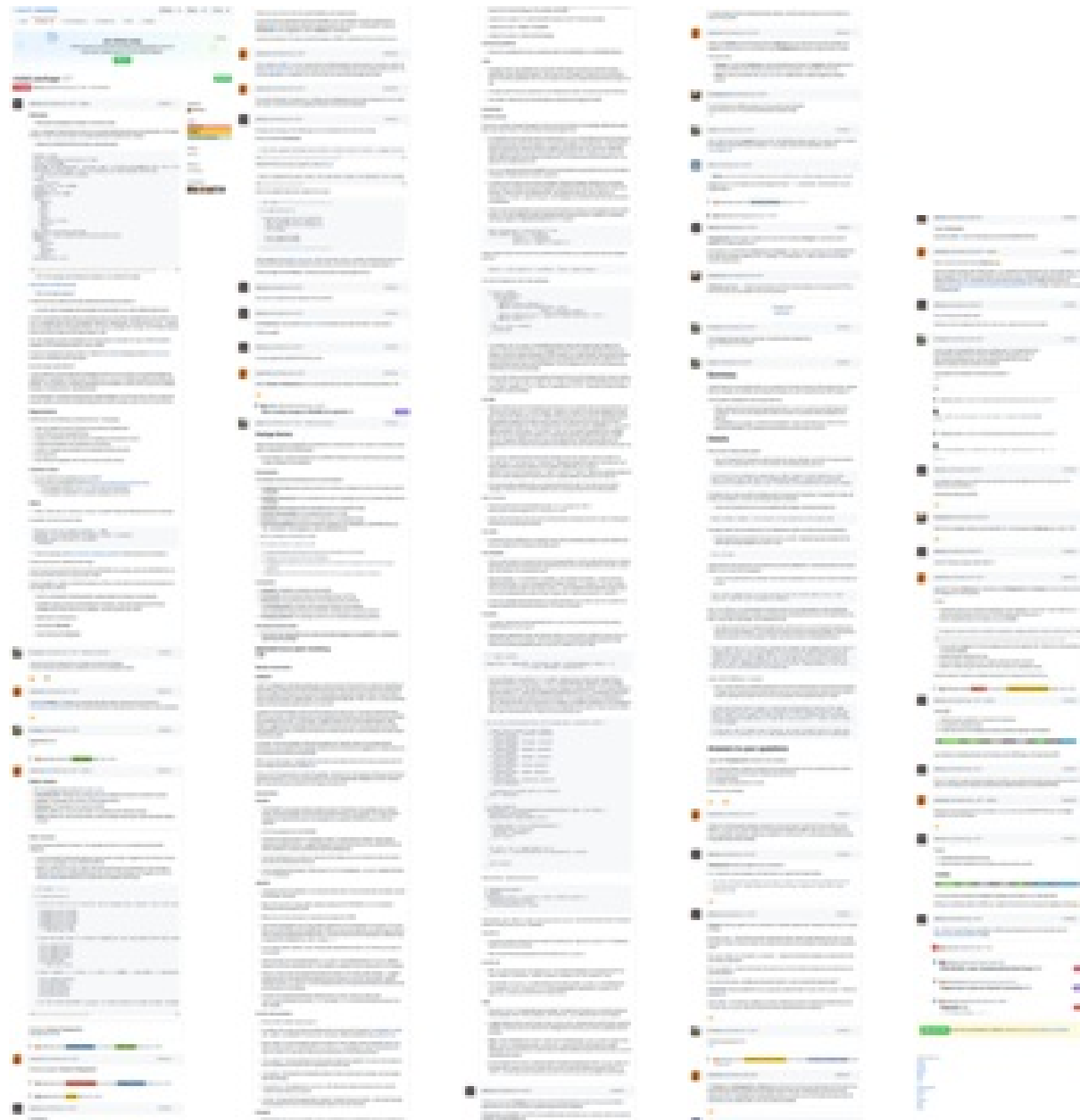
Acceptance



Open and Non-Adversarial

No Rejections

Example peer review thread



Example peer review thread



batpigandme (Mara Averick) on 28 Jul 2017 <>



Other than a renegade missing s (just submitted [PR](#)), it all looks great. [@njtierney](#) and [visdat](#) FTW!



njtierney on 28 Jul 2017 <>

Original Poster

Member



woohoo! Changes merged, thanks Mara! :D



noamross (Noam Ross) on 31 Jul 2017 <>

Member



Approved! Thanks [@njtierney](#) for submitting and [@batpigandme](#) and [@seaaan](#) for your reviews and all of you hanging on for the long haul!

Package promotion



rOpenSci
@rOpenSci

Following

[blog] Onboarding `visdat`, a tool for preliminary visualisation of whole dataframes, by @nj_tierney ropensci.org/blog/blog/2017/08/22/onboarding-visdat #rstats



12:55 AM - 24 Aug 2017

11 Retweets 35 Likes



1 11 35

rOpenSci

ABOUT BLOG PACKAGES COMMUNITY DISCUSS

Onboarding visdat, a tool for preliminary visualisation of whole dataframes

Nicholas Tierney

August 22, 2017

[Take a look at the data](#)

This is a phrase that comes up when you first get a dataset.

It is also ambiguous. Does it mean to do some exploratory modelling? Or make some histograms, scatterplots, and boxplots? Is it both?

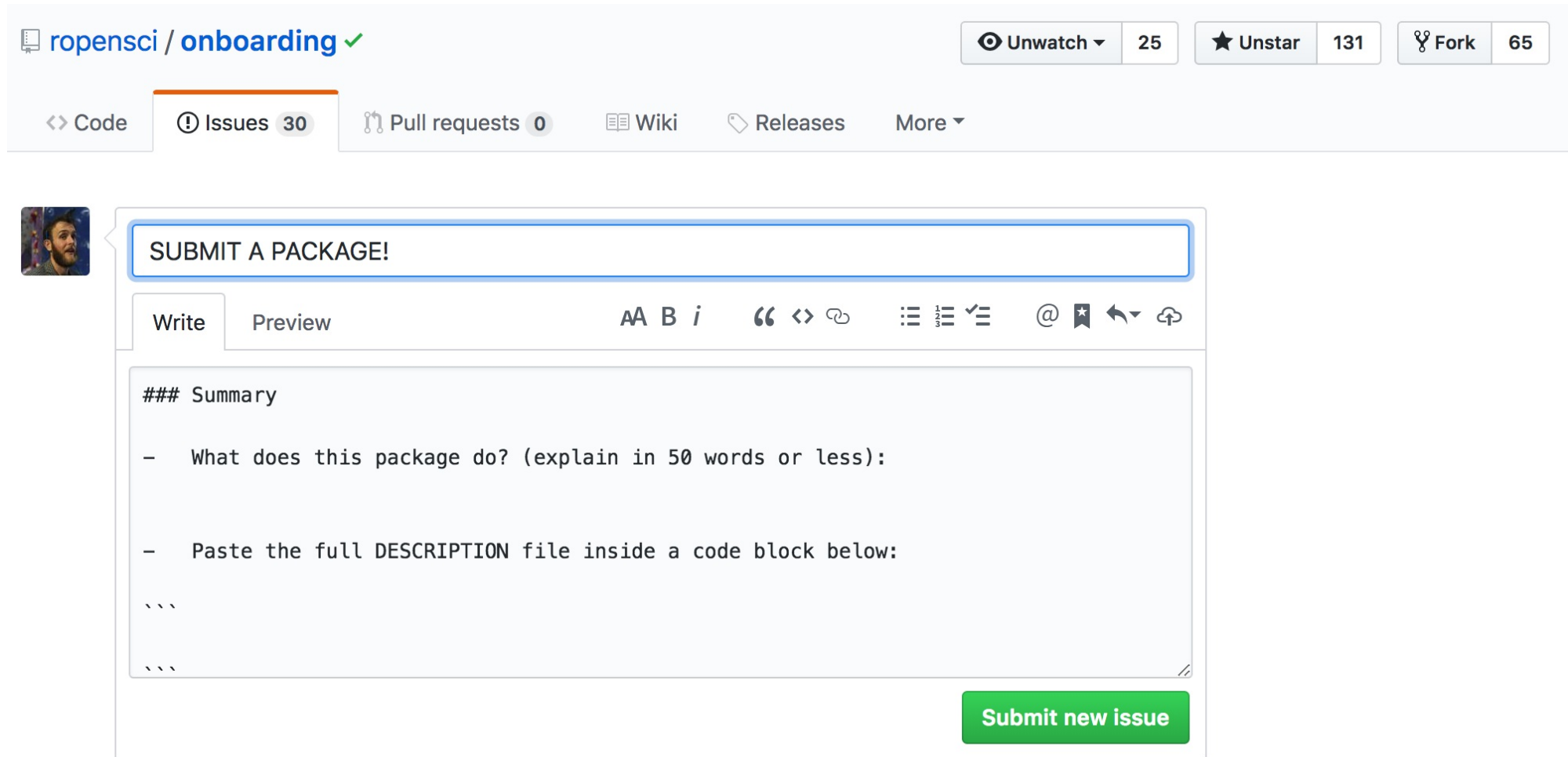
Onboarding → JOSS, MEE

Sign up to review

Toph Allen · Brooke Anderson · Alison Appling · Zebulun Arendsee · Taylor Arnold · Dean Attali · Mara Averick · Suzan Baert · James Balamuta · David Bapst · Joëlle Barido-Sottani · Cale Basaraba · John Baumgartner · Marcus Beck · Gabe Becker · Jason Becker · Dom Bennett · Kenneth Benoit · Aaron Berdanier · Carl Boettiger · Ben Bond-Lamberty · Alison Boyer · Jenny Bryan · Lorenzo Busetto · Jorge Cimentada · Jon Clayden · Will Cornwell · Ildiko Czeller · Laura DeCicco · Christophe Dervieux · Amanda Dobbyn · Jasmine Dumas · Remko Duursma · Mark Edmondson · Paul Egeler · Evan Eskew · Manuel Fernandez · Rich FitzJohn · Robert Flight · Zachary Foster · Auriel Fournier · Carl Ganz · Duncan Garmonsway · Sharla Gelfand · David Gohel · Laura Graham · Charles Gray · Corinna Gries · Julia Gustavsen · W Kyle Hamilton · Ivan Hanigan · Jeff Hanson · Ted Hart · Nujcharee Haswell · Verena Haunschmid · Rafael Pilliard Hellwig · Bea Hernandez · Jim Hester · Peter Hickey · Roel M. Hogervorst · Jeff Hollister · Sean Hughes · Najko Jahn · Tamora D James · Max Joseph · Soumya Kalra · Michael Kane · Andee Kaplan · Hazel Kavılı · Os Keyes · Michael Koontz · Anna Krystalli · Will Landau · Erin LeDell · Thomas Leeper · Stephanie Locke · Robin Lovelace · Julia Stewart Lowndes · Tim Lucas · Andrew MacDonald · Jesse Maegan · Tristan Mahr · Ben Marwick · Miles McBain · Lucy D'Agostino McGowan · Amelia McNamara · Elaine McVey · Bryce Mecum · Francois Michonneau · Jessica Minnier · Priscilla Minotti · Paula Moraga · Ross Mounce · Lincoln Mullen · Matt Mulvahill · Dillon Niederhut · Jakub Nowosad · Paul Oldham · Jeroen Ooms · Philipp Ottolinger · Mark Padgham · Edzer Pebesma · Nistara Randhawa · Neal Richardson · tyler rinker · Emily Robinson · Bob Rudis · Kent Russel · Francisco Rodriguez Sanchez · Alicia Schep · Marco Sciaini · Julia Silge · Margaret Siple · Peter Slaughter · Mike Smith · Tuija Sonkkila · Gaurav Sood · Adam Sparks · Joseph Stachelek · Irene Steves · Michael Sumner · Sarah Supp · Filipe Teixeira · Andy Teucher · Jennifer Thompson · Joe Thorley · Tiffany Timbers · Tim Trice · Ted Underwood · Kevin Ushey · Josef Uyeda · Frans van Dunné · Remi Vergnon · Claudia Vitolo · Ben Ward · Elin Waring · Rachel Warnock · Leah Wasser · Stefan Widgren · Luke Winslow · David Winter · Kara Woo · Lauren Yamane · Taras Zakharko · Hao Zhu · Naupaka Zimmerman

 ropensci.org/onboarding

Submit a package for review



ropensci / onboarding ✓

Unwatch 25 Unstar 131 Fork 65

Code Issues 30 Pull requests 0 Wiki Releases More

SUBMIT A PACKAGE!

Write Preview

AA B i “ <> 🔗 ☰ 1/3 ☑ @ 🌟 ↶ ↷

Summary

- What does this package do? (explain in 50 words or less):
- Paste the full DESCRIPTION file inside a code block below:
...
...

Submit new issue

  ropensci/onboarding

Learn more about `review`



The screenshot shows a web page with a navigation sidebar on the left and a main content area on the right. The sidebar contains a list of links: Preface, Building Your Package, 1 Packaging Guide, 1.1 Package name and metadata, 1.2 Package API, 1.3 Function and argument naming, 1.4 Code Style, 1.5 README, 1.6 Documentation, and 1.7 Documentation website. The main content area features a large heading, a list of authors, and a date.

Preface

I Building Your Package

1 Packaging Guide

- 1.1 Package name and metadata
- 1.2 Package API
- 1.3 Function and argument naming
- 1.4 Code Style
- 1.5 README
- 1.6 Documentation
- 1.7 Documentation website

rOpenSci Packages: Development, Maintenance, and Peer Review

rOpenSci onboarding editorial team: Scott Chamberlain, Anna Krystalli, Lincoln Mullen, Karthik Ram, Noam Ross, Maëlle Salmon

2018-09-28

 ropensci.github.io/dev_guide/

Now sure if you should review?

So you (don't) think you can review a package

[Mara Averick](#)

August 22, 2017

Contributing to an open-source community *without* contributing code is an oft-vaunted idea that can seem nebulous. Luckily, putting vague ideas into action is one of the strengths of the [rOpenSci Community](#), and their package onboarding system offers a chance to do just that.

This was my first time reviewing a package, and, as with so many things in life, I went into it worried that I'd somehow ruin the package-reviewing process— not just the package itself, but the actual onboarding infrastructure...maybe even rOpenSci on the whole.

[1] Where is the value in package peer review?

[2] Waterslides vs Ivory Towers



 Software

 Peer Review

 Community



The rOpenSci unconference

The rOpenSci unconference

What it isn't

Not a conference

Not a conference

No prearranged talks

Not a hackathon

Not a hackathon

No prizes

Doesn't go all night

A place for people to:

A place for people to:

Work on ideas

A place for people to:

Work on ideas

Connect with others

A place for people to:

Work on ideas

Connect with others

Build community

A place for people to:

Work on ideas

Connect with others

Build community

Learn from others

Who comes along

Diverse people from academia, industry, government, non-profits

Who comes along

Diverse people from academia, industry, government, non-profits

Novices, nexperts, and experts

<p>! Efficiencies for WebGL middling visualisation</p> <p>#43 opened on 25 Oct 2017 by mdsummer</p>	
<p>! Incompatibility between HTML Widgets middling visualisation</p> <p>#42 opened on 25 Oct 2017 by holtzy</p>	
<p>! Check list procedures for R-related tasks documentation education reproducibility</p> <p>#41 opened on 24 Oct 2017 by rdpeng</p>	1
<p>! text2vec models for navigating the R package universe cloud crackerjack documentation</p> <p>middling</p> <p>#40 opened on 24 Oct 2017 by timchurches</p>	10
<p>! Provide an R interface to AARNet CloudStor cloud crackerjack middling</p> <p>#39 opened on 24 Oct 2017 by timchurches</p>	9
<p>! Enhance datastorr package for distributing versioned data cloud crackerjack data middling</p> <p>#38 opened on 24 Oct 2017 by dfalster</p>	
<p>! documentation worker bee? documentation fledgling middling</p> <p>#37 opened on 23 Oct 2017 by ellisp</p>	16
<p>! R based REST API with zero coding data middling</p> <p>#36 opened on 21 Oct 2017 by stefanbache</p>	7
<p>! ozunconf17 tweetstorm dashboard data middling</p> <p>#34 opened on 21 Oct 2017 by adam-gruer</p>	
<p>! More css themes for xaringan middling writing tools</p> <p>#33 opened on 20 Oct 2017 by earowang</p>	
<p>! R package provides access to Github REST API data middling</p> <p>#32 opened on 20 Oct 2017 by earowang</p>	2
<p>! Easily insert font awesome icons into rmarkdown middling writing tools</p> <p>#31 opened on 20 Oct 2017 by earowang</p>	1
<p>! How do you pitch R to new users? education fledgling</p> <p>#30 opened on 20 Oct 2017 by rdpeng</p>	9
<p>! API to emerging women's sports data data middling</p> <p>#29 opened on 20 Oct 2017 by dicook</p>	2
<p>! Australian colour palette for plots middling visualisation</p> <p>#28 opened on 20 Oct 2017 by dicook</p>	4

How does it work?

 Arrive at a venue, laptop in hand

 Establish a culture of acceptance

 Discuss issues again

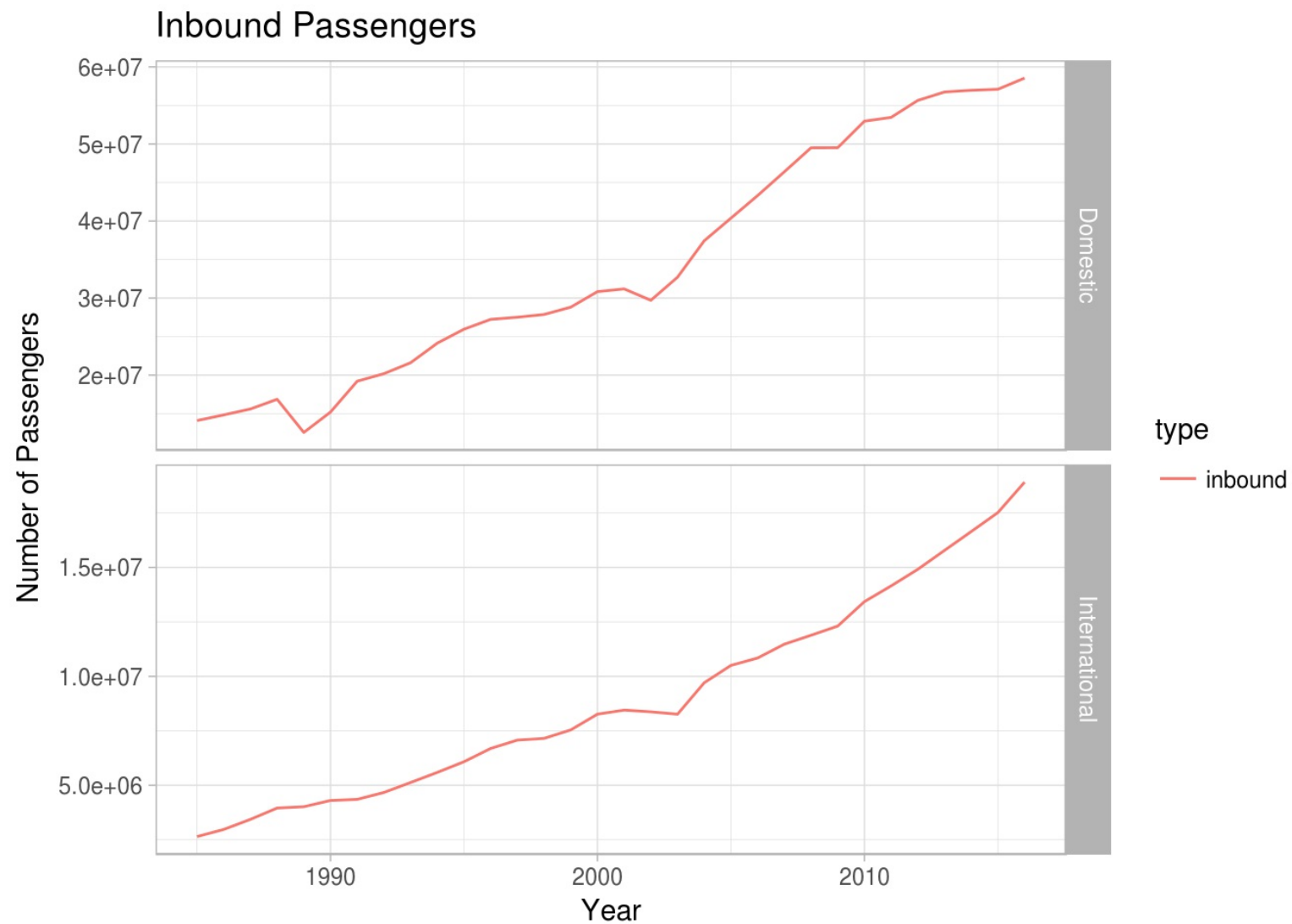
 Form groups

 Work on literally anything

 Discuss projects at the end

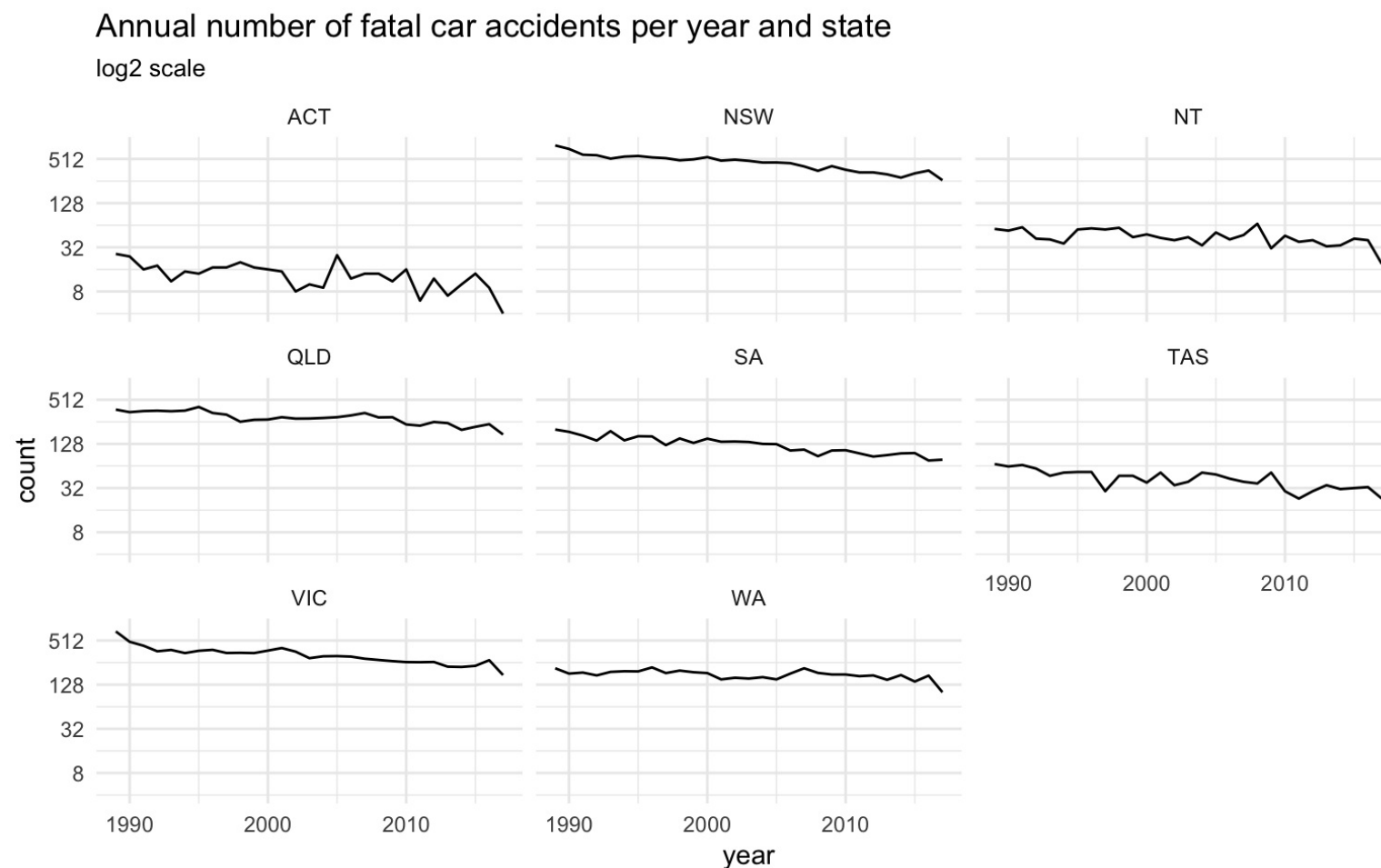
Data packages

: Australian Flight information



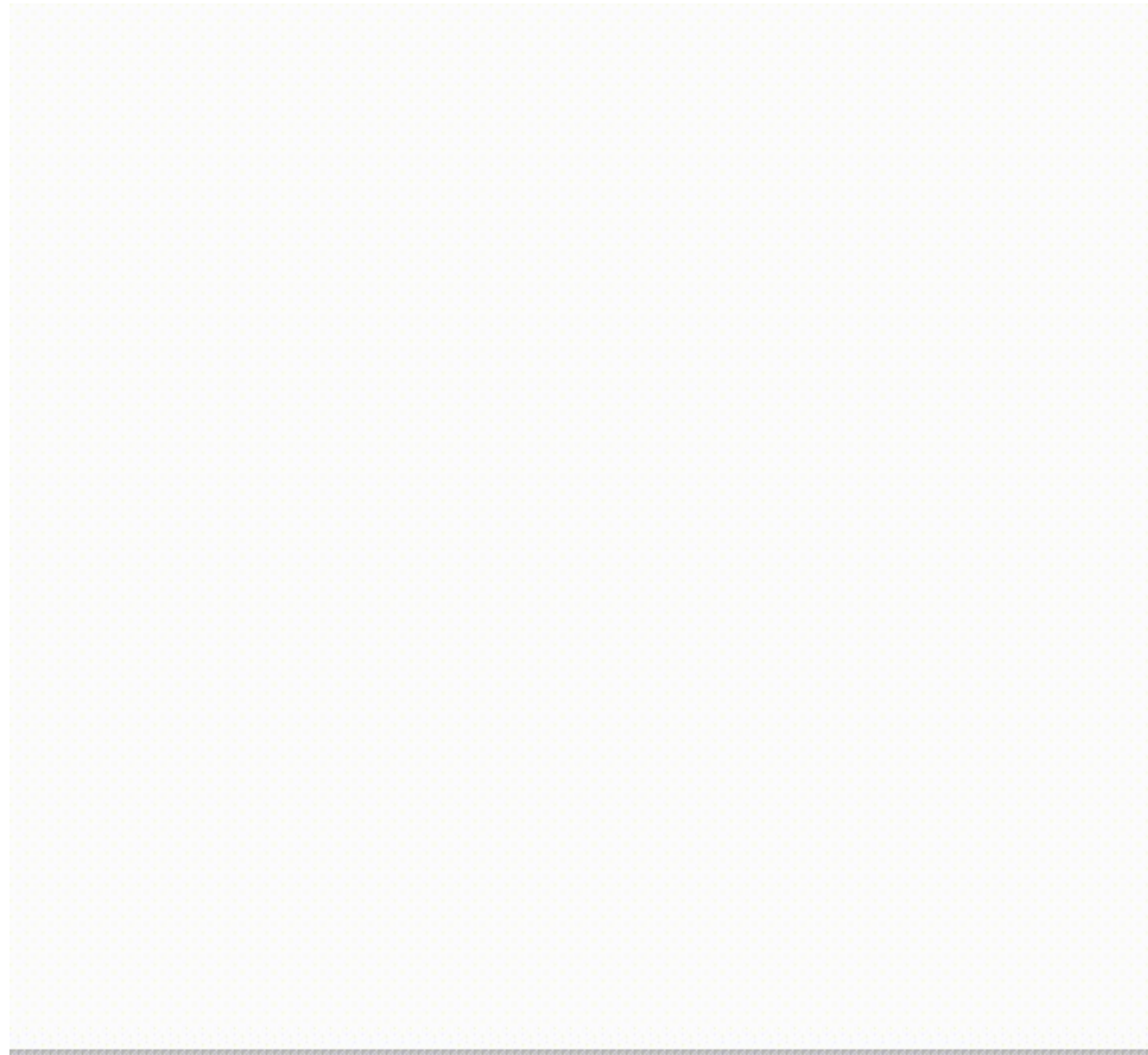
Data packages

: Access information about road deaths in Australia from 1989 to 2017



Data visualisation

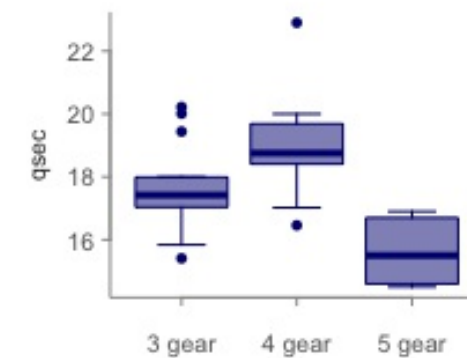
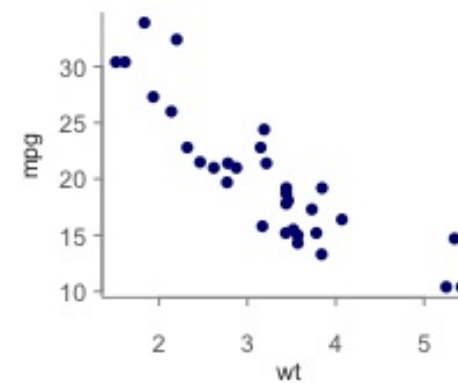
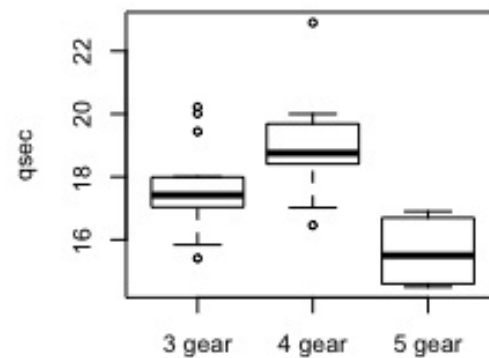
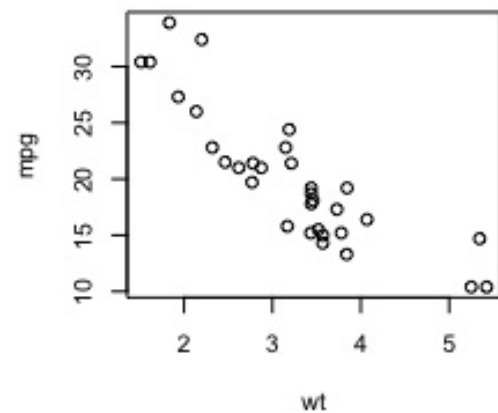
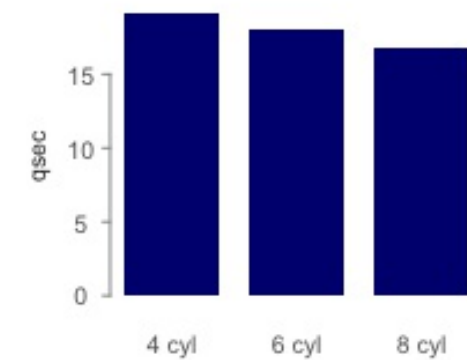
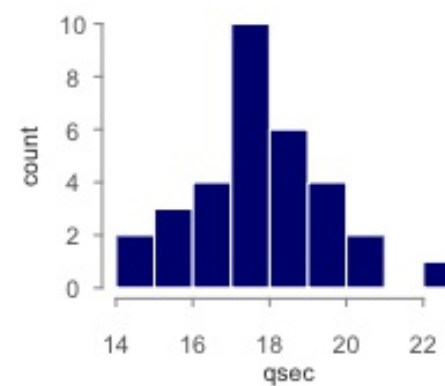
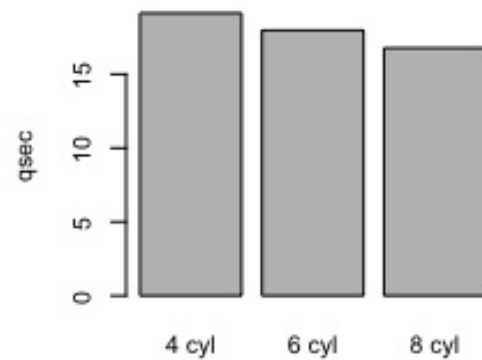
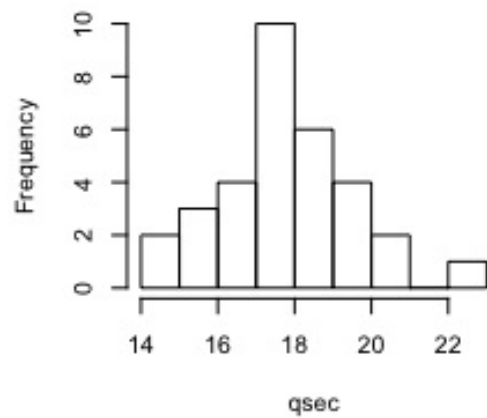
: plot streaming data



Data visualisation

: create and apply themes to base plots

Histogram of qsec

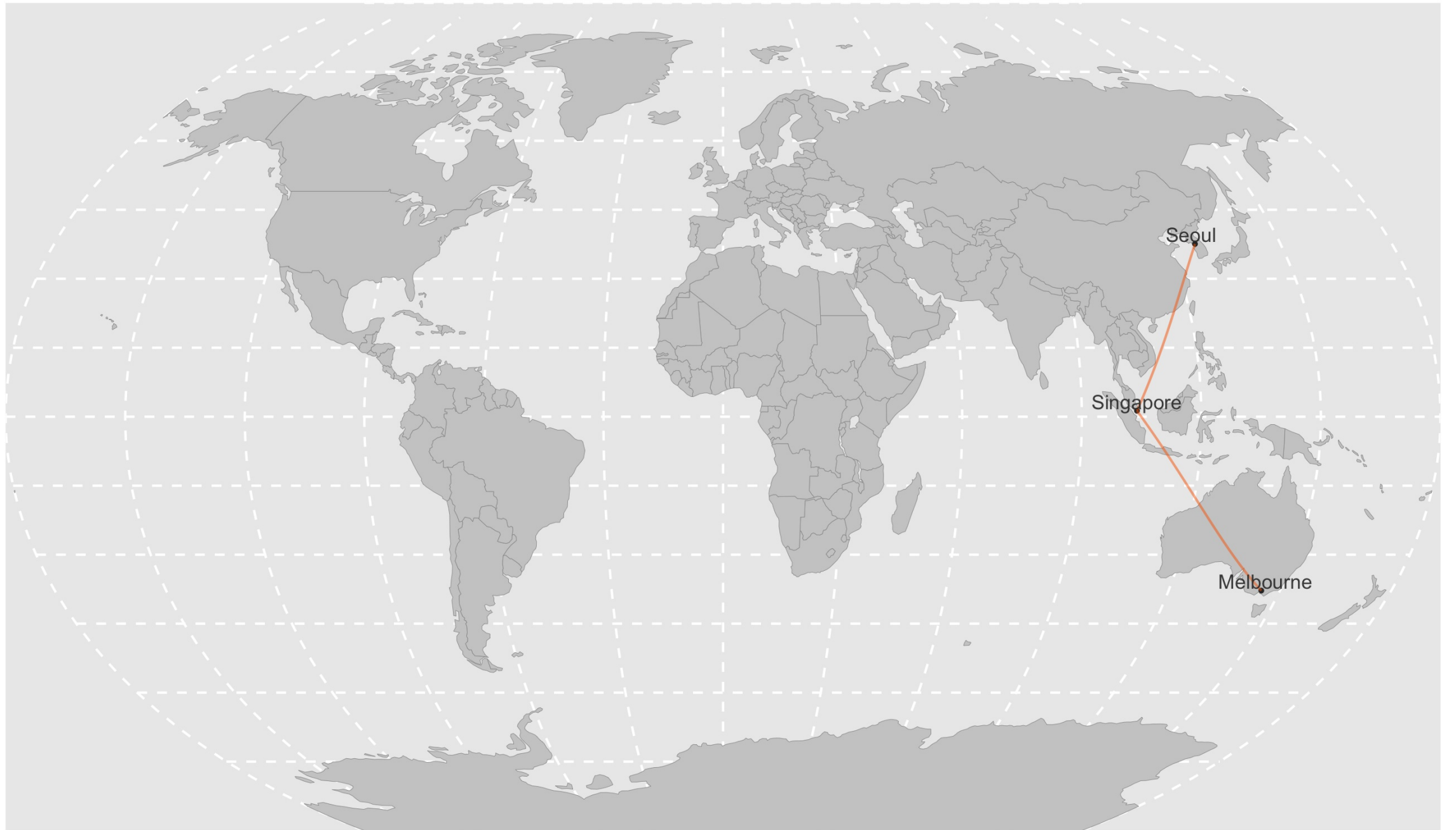


Fun tools

[EmojiPicker](#): easily insert web icons into markdown documents

(used extensively throughout this talk!!!)







Thank yous



Thank yous



MONASH
University



 discuss.ropensci.org

 onboarding.ropensci.org

 ropensci.org/community

 [@ropensci](https://twitter.com/ropensci)

References

Garret Grolemond's Keynote slides video

Karthik Ram's keynote

Amgen, 2014

Begley, 2015

Freedman, 2015

So you don't think you can review a package?

References

ropensci.org/packages

ropensci.org/onboarding

ropensci.github.io/dev_guide/

Where is the value in package peer review?

Waterslides vs Ivory Towers

References

JOSS journal

MEE Journal