

D6 GUIDELINES

- › EASE YOUR START IN THE DEPARTMENT OF ECOLOGICAL DYNAMICS
- › SECURE HIGH QUALITY STANDARDS FOR THE ANALYSIS OF YOUR DATA

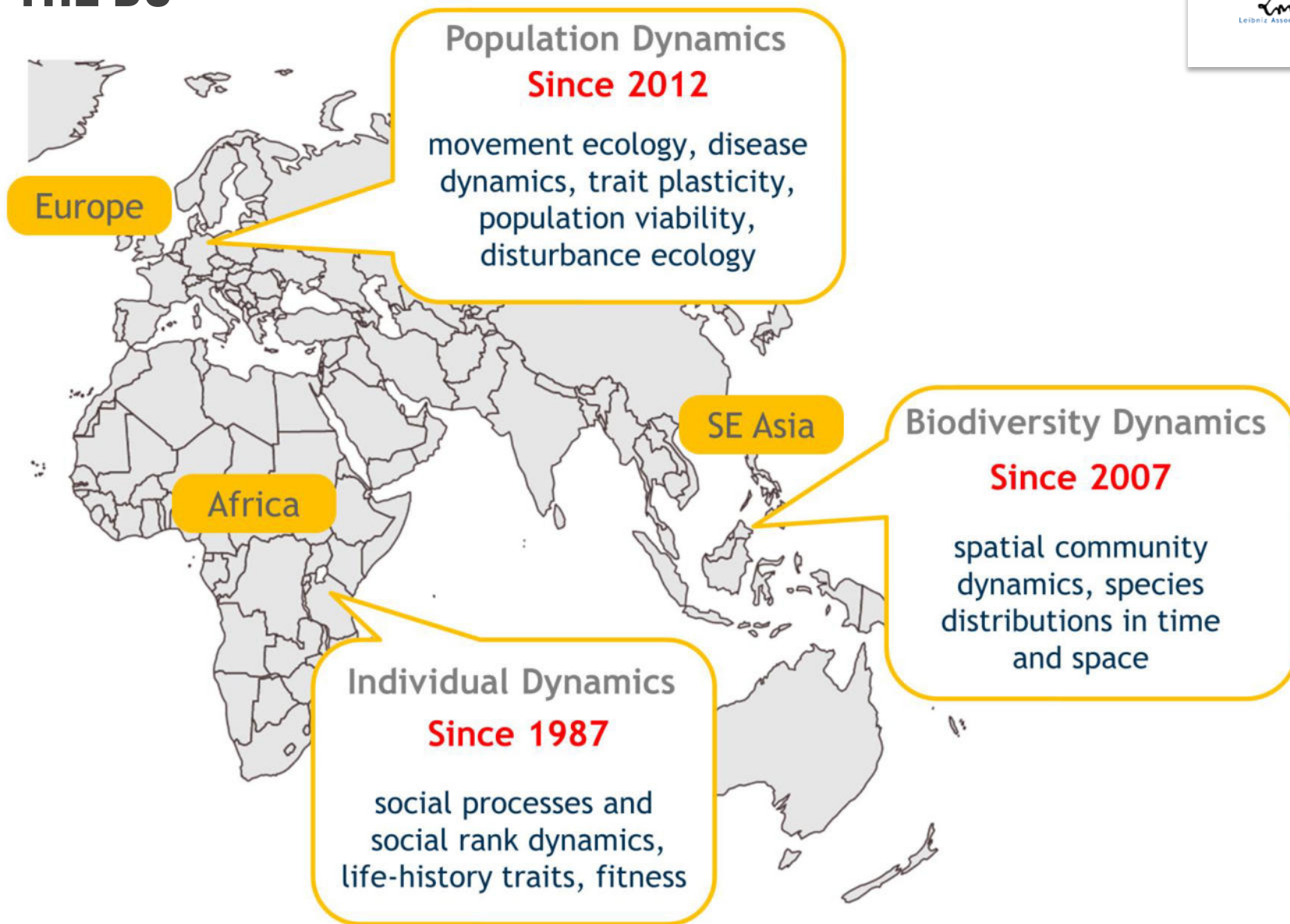


Guidelines for Studies in the Department of Ecological Dynamics of the IZW

Last Update: July 15, 2021



TEAMS OF THE D6



— TEAMS OF THE D6

- **Individual Dynamics**

lead by Dr. Sarah Benhaïem

- **Population Dynamics**

lead by Prof. Dr. Stephanie Kramer-Schadt & Dr. Viktoriia Radchuk

- **Biodiversity Dynamics**

lead by Dr. Andreas Wilting

SUPPORT OF THE D6

- **Administrative Support**

Dr. Conny Landgraf

- **Data Management**

Dr. Jan Axtner

Moritz Wenzler-Meya

- **In-House Experts & Responsible Persons**

U:\GUEST\Abteilung6\GeneralInfo

— BSC, MSC AND PHD PROJECTS

- **Monthly PhD Seminar** (PhD students only)
 - participation is mandatory
 - lead by Dr. Gábor Czirják & Dr. Sarah Benhaïem
- **Introductory Talk** (PhD students only)
 - presentation of the main chapters, workflow and timeline
 - mandatory within the first 3 months of your project



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BSC, MSC AND PHD PROJECTS

- **Meetings**

- students schedule regular meetings
- arrange either as fixed dates or at least 2 weeks ahead
- schedule via Outlook (if you have access)

BSC, MSC AND PHD PROJECTS

- **Before the Meeting**

- prepare the meetings:

- (a) agenda
 - (b) current problems and questions
 - (c) suggested solutions

- **After the Meeting**

- write a protocol:

- (a) date + name of participants
 - (b) discussed questions + suggested solutions
 - (c) next steps + results to prepare
 - (d) agreement on responsibilities

BSC, MSC AND PHD PROJECTS

- **Thesis Writing**

- start early
- write simple and concise sentences
- join a pub club (writeNOW → Dr. Aimara Planillo)
- get feedback early
- plan for sufficient time of feedback (~1-3 weeks)

For PhD students:

1st paper ready after ~1 year

final thesis ~4 weeks before submission

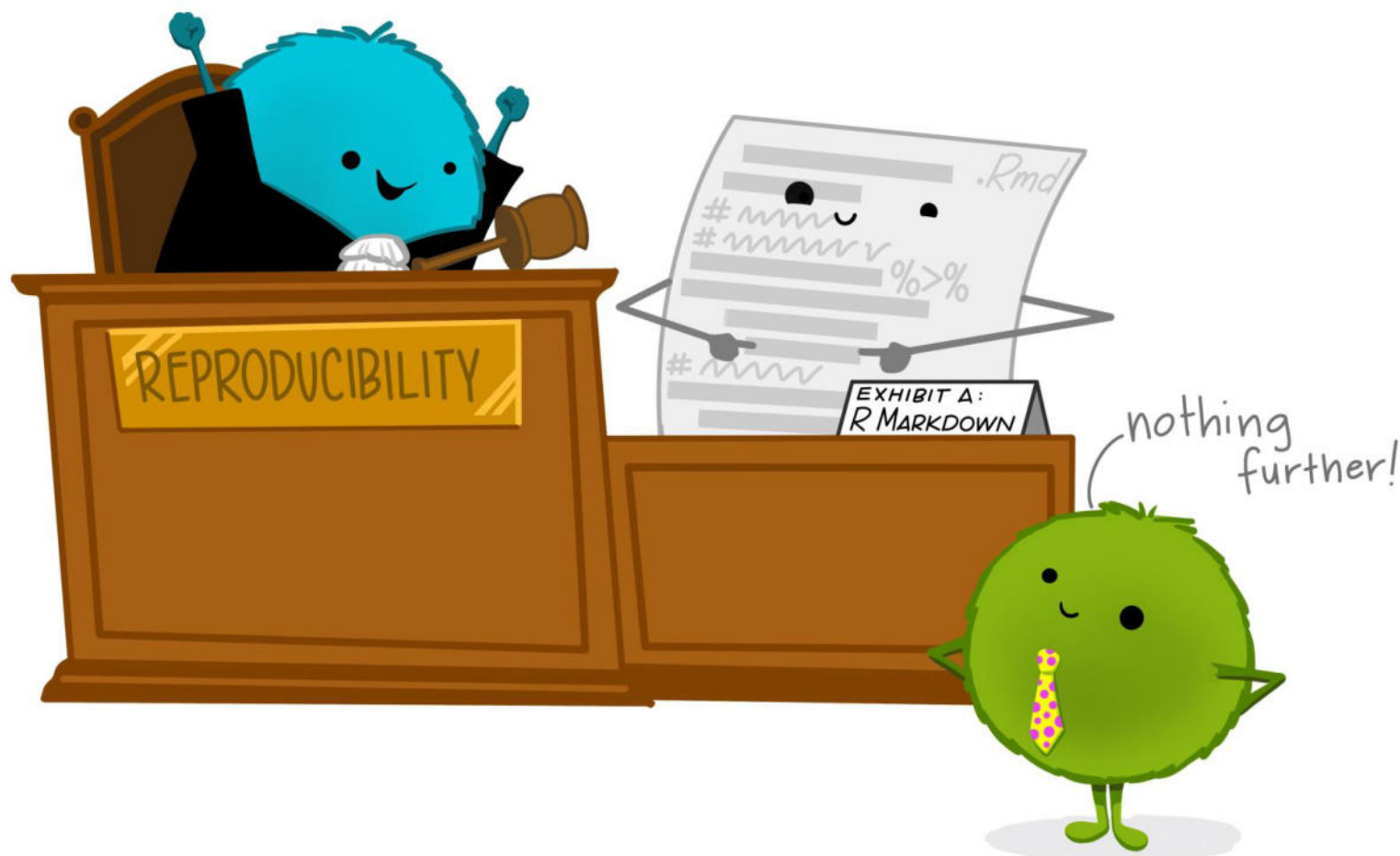


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ORGANIZING WORKFLOWS:

FOLDER STRUCTURE, PROJECTS & VERSION CONTROL



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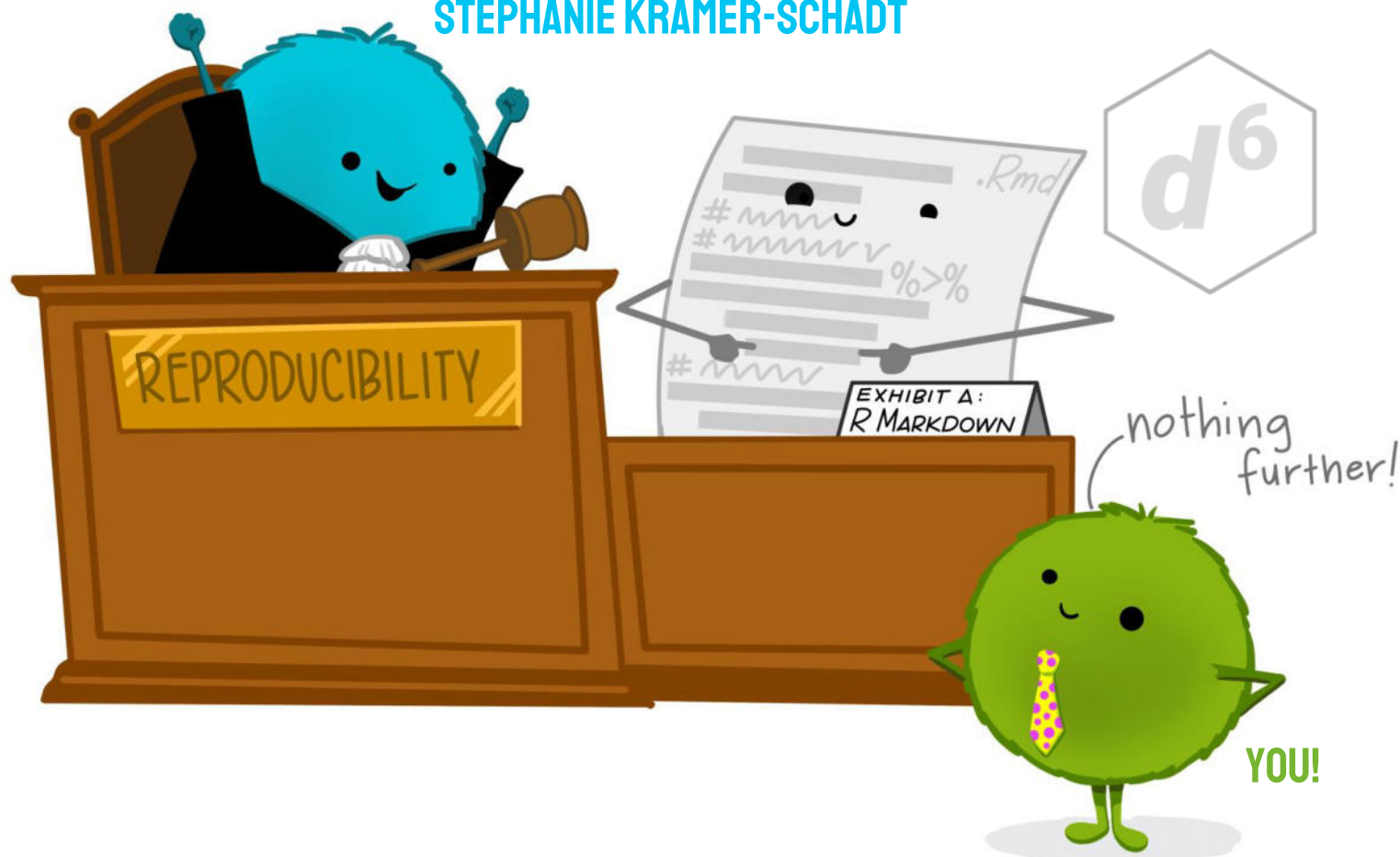
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Leibniz Association

ORGANIZING WORKFLOWS:

FOLDER STRUCTURE, PROJECTS & VERSION CONTROL

STEPHANIE KRAMER-SCHADT

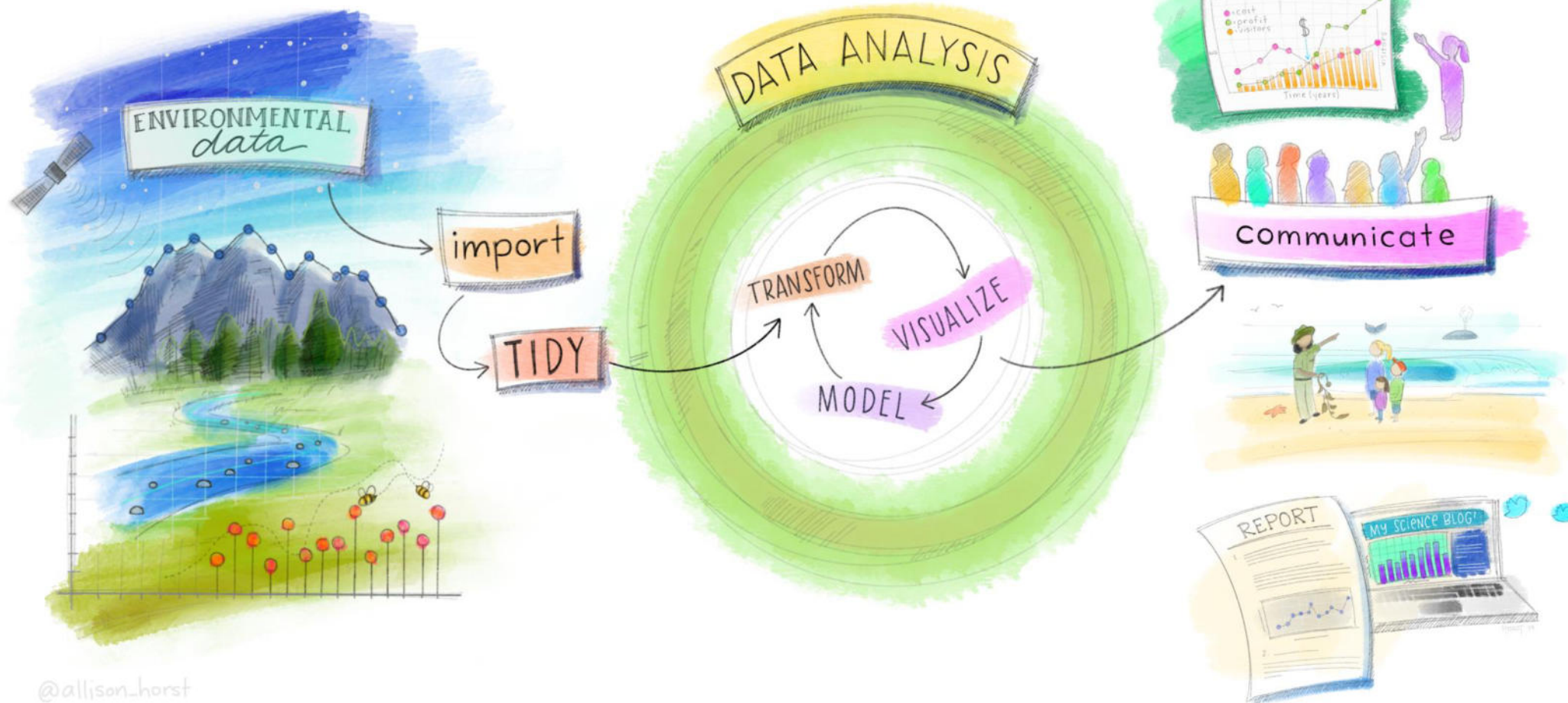


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Why should I care about workflows?



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From: editor@sciencepubl.org
To: mess@stanford.edu
Date: 2029-01-01

Dear Prof. Dr. Mess,

With reference to your article published in August 2020,
we would like to know how you've estimated the survival
rates. There were some questionable patterns in your
publication so we are forced to ask you.

All the best,
Edith Editor




```

└─ unicorn analysis
    └─ GIS
        ├── wonderland-tcd.geojson
        ├── wonderland-tcd-clean.geojson
        └── wonderland-tcd-temp.geojson
    └─ ms
        ├── 20200713_draft_unicorns.docx
        ├── 20200713_draft_unicorns_correction.docx
        ├── 20200713_draft_unicorns_20200821_CS_VG.docx
        ├── draft_v2.docx
        ├── lit.bib
        ├── literature_vik.pdf
        └── notes.odt
    └─ plots
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        ├── pva_ind.png
        ├── pva_rerun.png
        ├── pva_rerun_v2_presentation.png
        └── talk_2020-02-07_corr.ppt
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    └─ Analysis_PVA_210320_final_v2.R
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    └─ plot_pva.Rmd
    └─ shapefile_wonderland.zip
    └─ unicorn-2015.xls
    └─ unicorn-2016.xls
    └─ unicorn-merged.csv
  
```



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```

```

├── unicorn_wonderland_pva_scherer_c
│   ├── data-raw
│   │   ├── unicorn_2015.csv
│   │   ├── unicorn_2016.csv
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│   │   ├── wonderland_borders.gpkg
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│   ├── docs
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│   │   │   └── literature_vik.pdf
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│   │   └── lab_book.Rmd
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│   │   ├── geo-proc
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│   ├── R
│   │   ├── 01_data_import.Rmd
│   │   └── 02_analysis_pva.Rmd
│   ├── .gitignore
│   ├── README.md
│   └── unicorn_wonderland_pva_scherer_c.Rproj

```



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Leibniz Association

PROJECT FOLDER STRUCTURE

```
i└─ unicorn analysis
   └─ GIS
      └─ wonderland-tcd.geojson
```

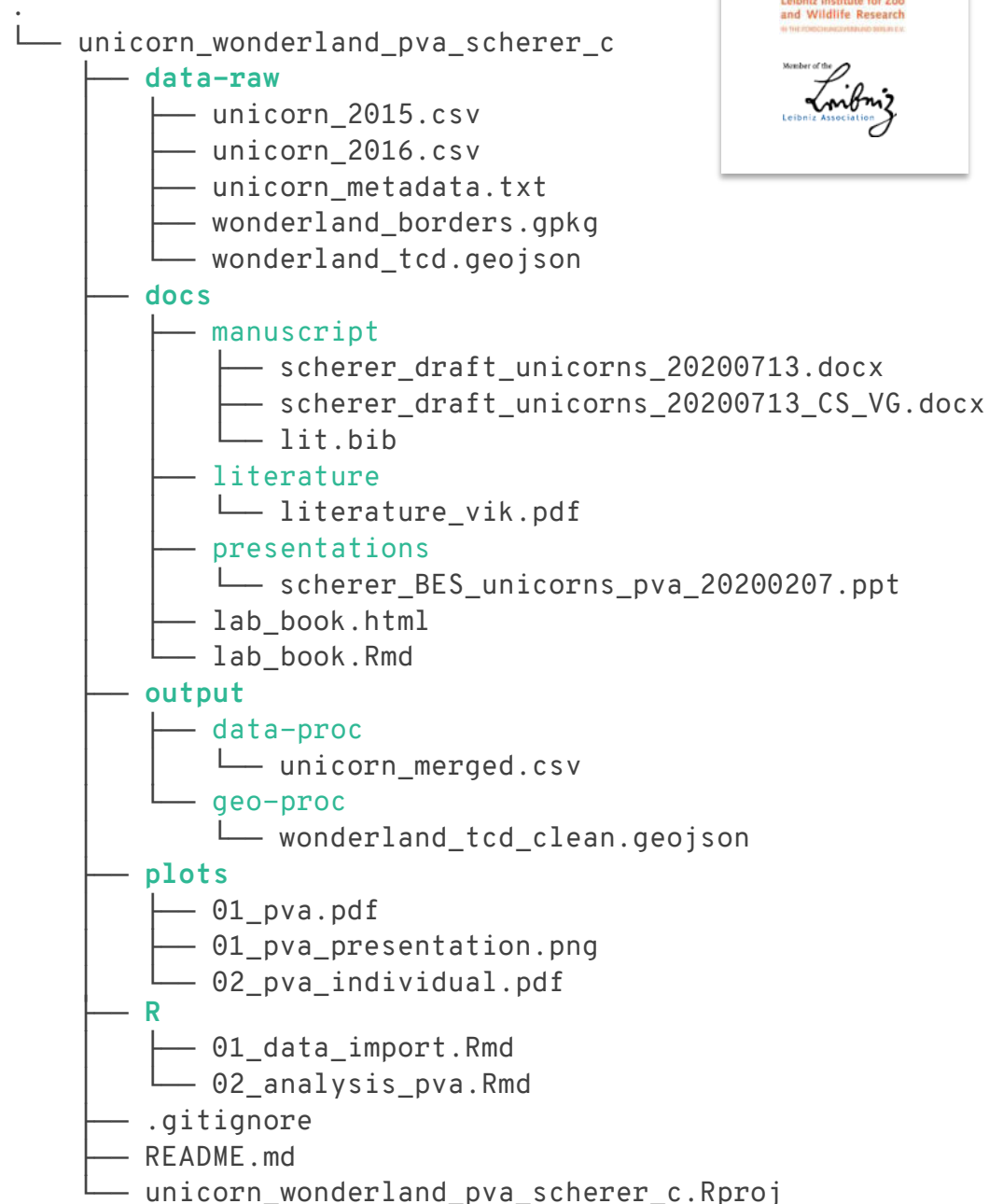
```
i└─ unicorn_wonderland_pvs_scherer_c
   └─ data
      └─ borders_wonderland.geojson
```

USE UNIQUE & DESCRIPTIVE PROJECT NAMES:

species/topic_country/simu_method/approach_surname_firstnameletterofgivenname

Standardized folder structure:

- **DATA** (data-raw)
only raw data (untouched!) + copy to data manager
- **DOCUMENTS** (docs)
e.g. manuscripts, presentations, **lab book**, ...
- **OUTPUT** (output)
processed data
- **PLOTS** (plots)
figures (preferably as pdf + png), animations, ...
- **SOURCE SCRIPTS** (R)
.R, .Rmd, .py, .py, .ipynb, .netlogo, .cpp, ... + source files



```

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        └─ wonderland-tcd.geojson
        └─ wonderland-tcd-clean.geojson
        └─ wonderland-tcd-temp.geojson
    └─ ms
        └─ 20200713_draft_unicorns.docx

```

```

└─ unicorn_wonderland_pva_scherer_c
    └─ data-raw
        └─ unicorn_2015.csv
        └─ unicorn_2016.csv
        └─ unicorn_metadata.txt
        └─ wonderland_borders.gpkg
        └─ wonderland_tcd.geojson

```

EVERYTHING SHOULD BE WRITTEN IN LOWER CASE LETTERS
USE UNDERSCORES FOR FILE NAMES, NO HYPHENS OR SPACES

```

└─ 1_data.R
└─ Analysis.R
└─ Analysis_PVA_050320.R
└─ Analysis_PVA_210320_final.R
└─ Analysis_PVA_210320_final_final.R
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└─ plot_glmm.Rmd
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└─ unicorn-merged.csv

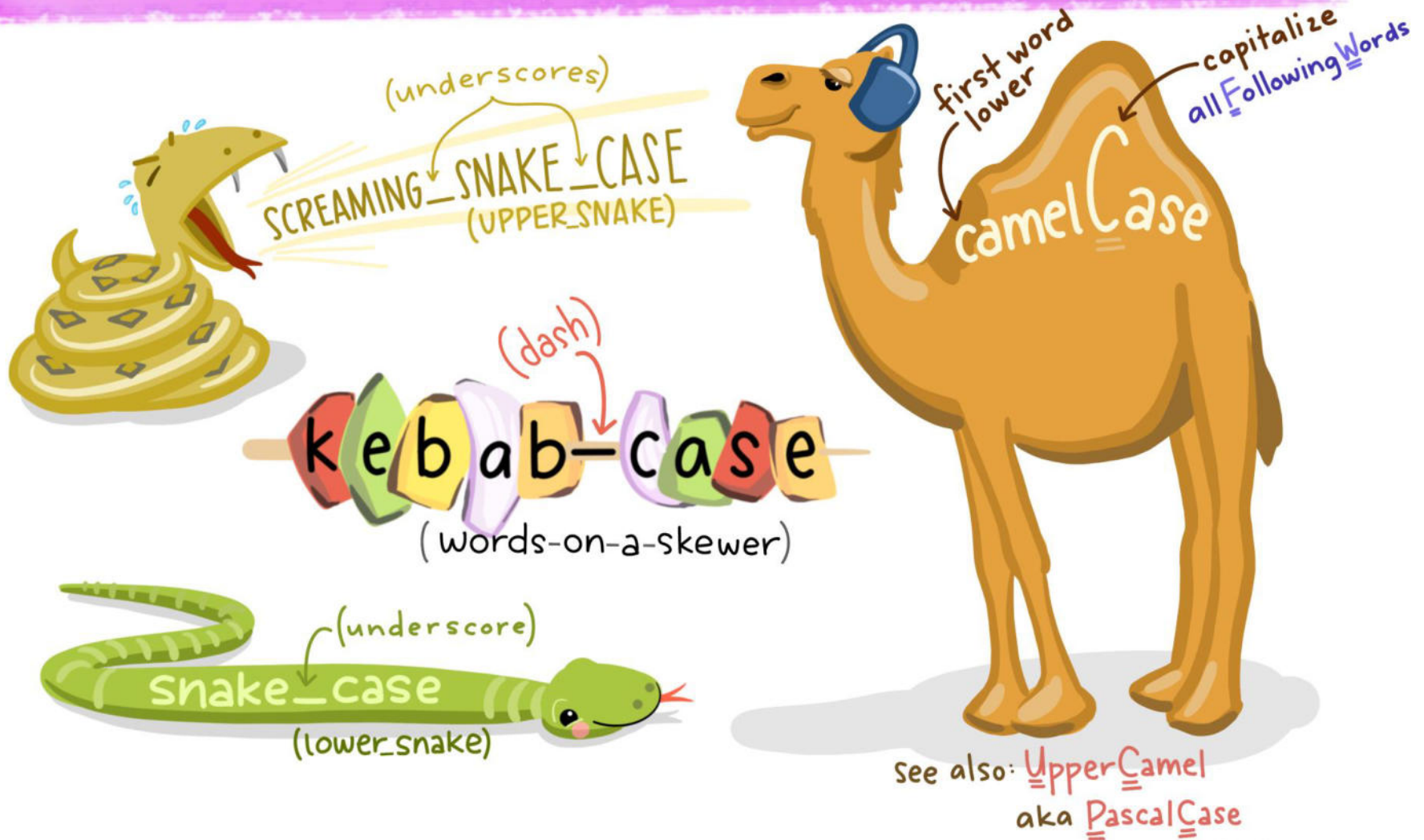
```

```

└─ data-proc
    └─ unicorn_merged.csv
└─ geo-proc
    └─ wonderland_tcd_clean.geojson
└─ plots
    └─ 01_pva.pdf
    └─ 01_pva_presentation.png
    └─ 02_pva_individual.pdf
└─ R
    └─ 01_data_import.Rmd
    └─ 02_analysis_pva.Rmd
└─ .gitignore
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└─ unicorn_wonderland_pva_scherer_c.Rproj

```

in that case...



```

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   |   |--- literature
   |   |   |--- literature_vik.pdf
   |   |--- presentations
   |   |   |--- 20200207_BES_unicorn_wonderland.ppt
   |   |--- lab_book.html
   |   |--- lab_book.Rmd

```

USE AN ELECTRONIC LAB-BOOK TO DOCUMENT YOUR WORKFLOW AND DECISIONS.



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        ├── lab_book.html
        └── lab_book.Rmd
```

USE AN ELECTRONIC LAB-BOOK TO DOCUMENT YOUR WORKFLOW AND DECISIONS.

IT IS OF MAJOR IMPORTANCE THAT YOU KEEP THIS LAB-BOOK UPDATED.

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        └── lab_book.Rmd
```

USE AN ELECTRONIC LAB-BOOK TO DOCUMENT YOUR WORKFLOW AND DECISIONS.

IT IS OF MAJOR IMPORTANCE THAT YOU KEEP THIS LAB-BOOK UPDATED.

PREFERABLY IT'S AN RNOTEBOOK THAT CAN EASILY BE CONVERTED TO .HTML, .PDF & .DOCX

USE CONSISTENT LABELLING OF FILES

ADD DATE TO THE END OF DOCUMENTS (NOT SCRIPTS)

```

ms
├── 20200713_draft_unicorns.docx
├── 20200713_draft_unicorns_correction.docx
├── 20200713_draft_unicorns_20200821_CS_VG.docx
├── draft_v2.docx
├── lit.bib
├── literature_vik.pdf
├── notes.odt
├── plots
│   ├── pva.png
│   ├── pva_ind.png
│   ├── pva_rerun.png
│   ├── pva_rerun_v2_presentation.png
│   ├── talk_2020-02-07_corr.ppt
│   └── zebra.finch.img.bmp
├── 1_data.R
├── Analysis.R
├── Analysis_PVA__050320.R
├── Analysis_PVA_210320_final.R
├── Analysis_PVA_210320_final_final.R
├── Analysis_PVA_210320_final_v2.R
├── Copy mail metadaten Steph.txt
├── plot_pva.Rmd
├── shapefile_wonderland.zip
├── unicorn-2015.xls
├── unicorn-2016.xls
└── unicorn-merged.csv
  
```

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├── wonderland_borders.gpkg
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    └─ unicorn_2016.csv
    └─ unicorn_metadata.txt
    └─ wonderland_borders.gpkg
    └─ wonderland_tcd.geojson
  └─ docs

```

**USE .TXT OR .CSV FOR TEXT DATA,
PREFERABLY .GPKG OR .GEOJSON AND .TIF FOR GEOSPATIAL DATA**

```

└─ zebra.finch.img.bmp
└─ 1_data.R
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└─ Analysis_PVA_210320_final.R
└─ Analysis_PVA_210320_final_final.R
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└─ output
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        └─ wonderland_tcd.geojson
    └─ docs

```

USE .TXT OR .CSV FOR TEXT DATA, PREFERABLY .GPKG OR .GEOJSON AND .TIF FOR GEOSPATIAL DATA

Shapefile format:

- wonderland_tcd.ain
- wonderland_tcd.aih
- wonderland_tcd-atx
- wonderland_tcd.cpg
- wonderland_tcd.dbf**
- wonderland_tcd.fbn | fbx
- wonderland_tcd.ixs
- wonderland_tcd.mxs
- wonderland_tcd.prj
- wonderland_tcd.qix
- wonderland_tcd.sbn | sbx
- wonderland_tcd.shp**
- wonderland_tcd.shp.xml
- wonderland_tcd.shx**

GeoPackage format: **wonderland_tcd.gpkg**

GeoJSON format: **wonderland_tcd.geojson**

GeoTIFF format: **wonderland_hfi.tif | .tiff | .ovr**

```
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      └── wonderland-tcd-temp.geojson
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      ├── unicorn_metadata.txt
      ├── wonderland_borders.gpkg
      └── wonderland_tcd.geojson
```

USE README AND METADATA FILES TO PROVIDE ADDITIONAL INFORMATION ON YOUR PROJECT AND DATA

```
└─ shapefile_wonderland.zip
└─ unicorn-2015.xls
└─ unicorn-2016.xls
└─ unicorn-merged.csv
```

```
└─ R
   ├── 01_data_import.Rmd
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```

```

└─ unicorn_wonderland_pva_scherer_c
   └─ data-raw
      ├── unicorn_2015.csv
      ├── unicorn_2016.csv
      ├── unicorn_metadata.txt
      ├── wonderland_borders.gpkg
      └── wonderland_tcd.geojson

```

USE VERSION CONTROL SUCH AS GITHUB

A REPOSITORY IS USUALLY USED TO HOLD A SINGLE PROJECT

```

└─ shapefile_wonderland.zip
└─ unicorn-2015.xls
└─ unicorn-2016.xls
└─ unicorn-merged.csv

```

```

└─ R
   ├── 01_data_import.Rmd
   └── 02_analysis_pva.Rmd
└─ .gitignore
└─ README.md
└─ unicorn_wonderland_pva_scherer_c.Rproj

```



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An R package with the aim to

SIMPLIFY WORKFLOWS OF D6 RESEARCH PROJECTS

4 MAIN FUNCTIONALITIES (SO FAR)

- Create standardized project directories
- Provide standardized Rmarkdown templates
- Rendering of all Rmarkdown reports
- Install a set of common packages

INSTALLATION

The package is not on CRAN and needs to be installed from GitHub:

```
install.packages("devtools")  
devtools::install_github("EcoDynIZW/d6")
```


STANDARDIZED PROJECT DIRECTORIES

To start a new project in the current working directory, simply run:

```
d6::new_project("project")
```

STANDARDIZED PROJECT DIRECTORIES

To start a new project in the current working directory, simply run:

```
?d6::new_project
```

STANDARDIZED PROJECT DIRECTORIES

new_project {d6}

R Documentation

Create new project scaffolding.

Description

Create all the scaffolding for a new project in a new directory. The scaffolding includes a `DESCRIPTION` and `NAMESPACE` file, `.gitignore`, different folders to hold raw data, outputs, documents, figures, and scripts, as well as `RProject` infrastructure. Also, optionally, set a GitHub repo and exclude geo data directories.

Usage

```
new_project(name, path = getwd(), github = FALSE, private.repo = TRUE, geo = TRUE)
```

Arguments

<code>name</code>	Name of the new project. A new folder will be created with that name.
<code>path</code>	Path of the new project where the folder is created. If empty then the current working directory is used.
<code>github</code>	Logical. Create GitHub repo? Note this requires a <code>GITHUB_PAT</code> . See instructions here https://gist.github.com/Z3tt/3dab3535007acf108391649766409421 .
<code>private_repo</code>	Logical. Should the repo be private or public? Default is <code>TRUE</code> which equals to private.
<code>geo</code>	Logical. Create directories for spatial data? Default is <code>TRUE</code> .

Value

A new directory with R package structure, slightly modified.

STANDARDIZED PROJECT DIRECTORIES

To start a new project in a particular directory add path:

```
d6::new_project(  
  name = "project",  
  path = "C:/Users/Mustermann/R"  
)
```

STANDARDIZED PROJECT DIRECTORIES

If you are not using any spatial data, you can omit those folders:

```
d6::new_project(  
  name = "project",  
  path = "C:/Users/Mustermann/R",  
  geo = FALSE  
)
```

STANDARDIZED PROJECT DIRECTORIES



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```
i_ project
  | data-raw
  | docs
  | output
  | plots
  | R
```

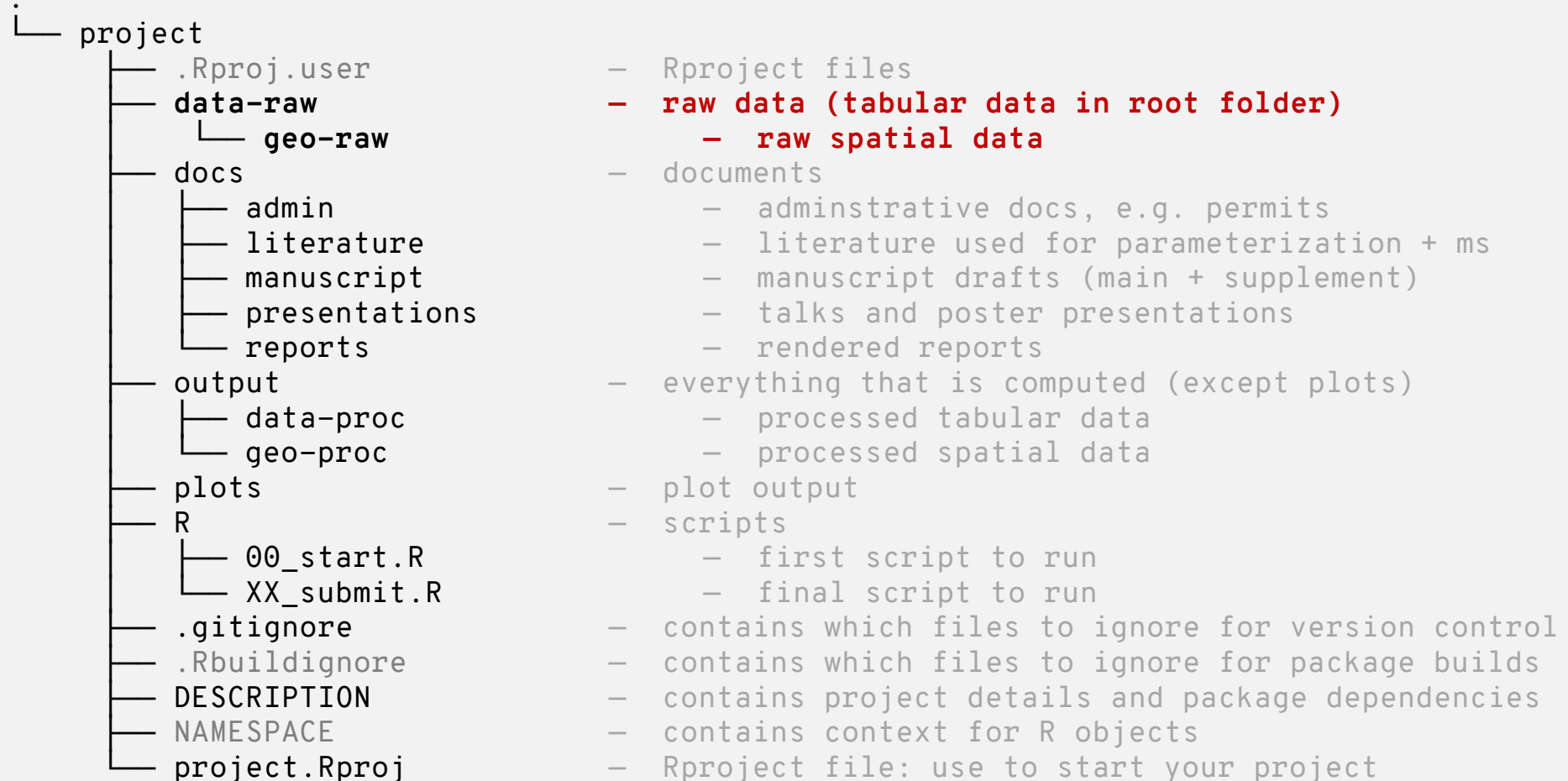
STANDARDIZED PROJECT DIRECTORIES

```
├── project
│   ├── .Rproj.user
│   ├── data-raw
│   │   └── geo-raw
│   ├── docs
│   │   ├── admin
│   │   ├── literature
│   │   ├── manuscript
│   │   ├── presentations
│   │   └── reports
│   ├── output
│   │   ├── data-proc
│   │   └── geo-proc
│   ├── plots
│   ├── R
│   │   ├── 00_start.R
│   │   └── XX_submit.R
│   ├── .gitignore
│   ├── .Rbuildignore
│   ├── DESCRIPTION
│   ├── NAMESPACE
│   └── project.Rproj
```

STANDARDIZED PROJECT DIRECTORIES

i	project	
├──	.Rproj.user	– Rproject files
├──	data-raw	– raw data (tabular data in root folder)
│ ├──	geo-raw	– raw spatial data
├──	docs	– documents
│ ├──	admin	– administrative docs, e.g. permits
│ ├──	literature	– literature used for parameterization + ms
│ ├──	manuscript	– manuscript drafts (main + supplement)
│ ├──	presentations	– talks and poster presentations
│ └──	reports	– rendered reports
├──	output	– everything that is computed (except plots)
│ ├──	data-proc	– processed tabular data
│ └──	geo-proc	– processed spatial data
├──	plots	– plot output
├──	R	– scripts
│ ├──	00_start.R	– first script to run
│ └──	XX_submit.R	– final script to run
├──	.gitignore	– contains which files to ignore for version control
├──	.Rbuildignore	– contains which files to ignore for package builds
├──	DESCRIPTION	– contains project details and package dependencies
├──	NAMESPACE	– contains context for R objects
└──	project.Rproj	– Rproject file: use to start your project

STANDARDIZED PROJECT DIRECTORIES



STANDARDIZED PROJECT DIRECTORIES

i	project	
	├── .Rproj.user	– Rproject files
	├── data-raw	– raw data (tabular data in root folder)
	│ ├── geo-raw	– raw spatial data
	├── docs	– documents
	│ ├── admin	– administrative docs, e.g. permits
	│ ├── literature	– literature used for parameterization + ms
	│ ├── manuscript	– manuscript drafts (main + supplement)
	│ ├── presentations	– talks and poster presentations
	│ └── reports	– rendered reports
	├── output	– everything that is computed (except plots)
	│ ├── data-proc	– processed tabular data
	│ └── geo-proc	– processed spatial data
	├── plots	– plot output
	├── R	– scripts
	│ ├── 00_start.R	– start script to run
	│ └── XX_submit.R	– final script to run
	├── .gitignore	– contains which files to ignore for version control
	├── .Rbuildignore	– contains which files to ignore for package builds
	├── DESCRIPTION	– contains project details and package dependencies
	├── NAMESPACE	– contains context for R objects
	└── project.Rproj	– Rproject file: use to start your project

00_START.R

```
## ADD DOCUMENTATION TO YOUR PROJECT ----
```

```
## Add meta data about your project to DESCRIPTION
```

```
d6::fill_desc(  
  pkg_title = "",          ## The Full Title of the Project  
  pkg_description = "",    ## The Description of Your Project  
  author_first_name = "",  ## Your First Name  
  author_last_name = "",   ## Your Last Name  
  author_email = "",       ## Your Email  
  repo_url = NULL         ## The URL of the GitHub Repo (optional)  
)
```

```
## Add and fill the readme
```

```
usethis::use_readme_md()
```

```
## Add license if needed
```

```
## See ?usethis::use_mit_license for more information
```

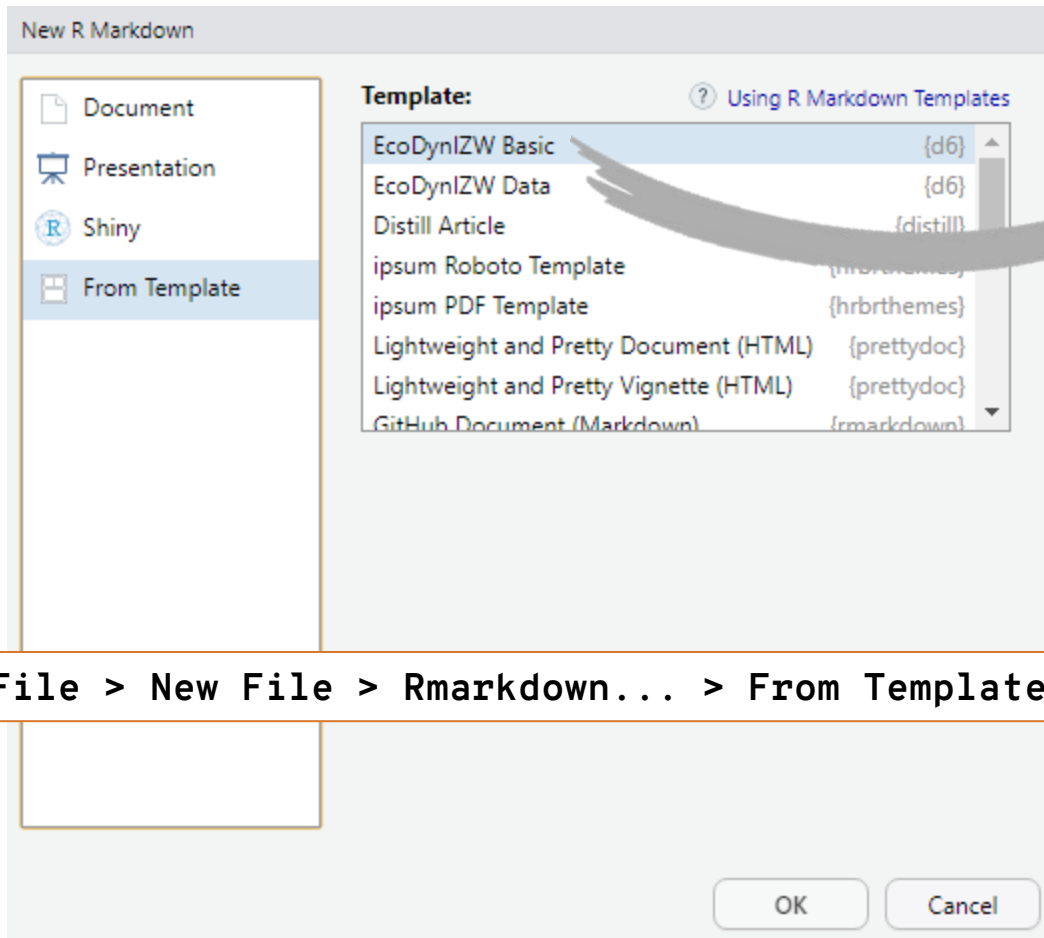
```
usethis::use_mit_license( name = "Your Name" )
```

```
## ADD PACKAGE DEPENDENCIES ----
```

```
## Add one line by package you want to add as dependency
```

```
usethis::use_package("tidyverse")
```

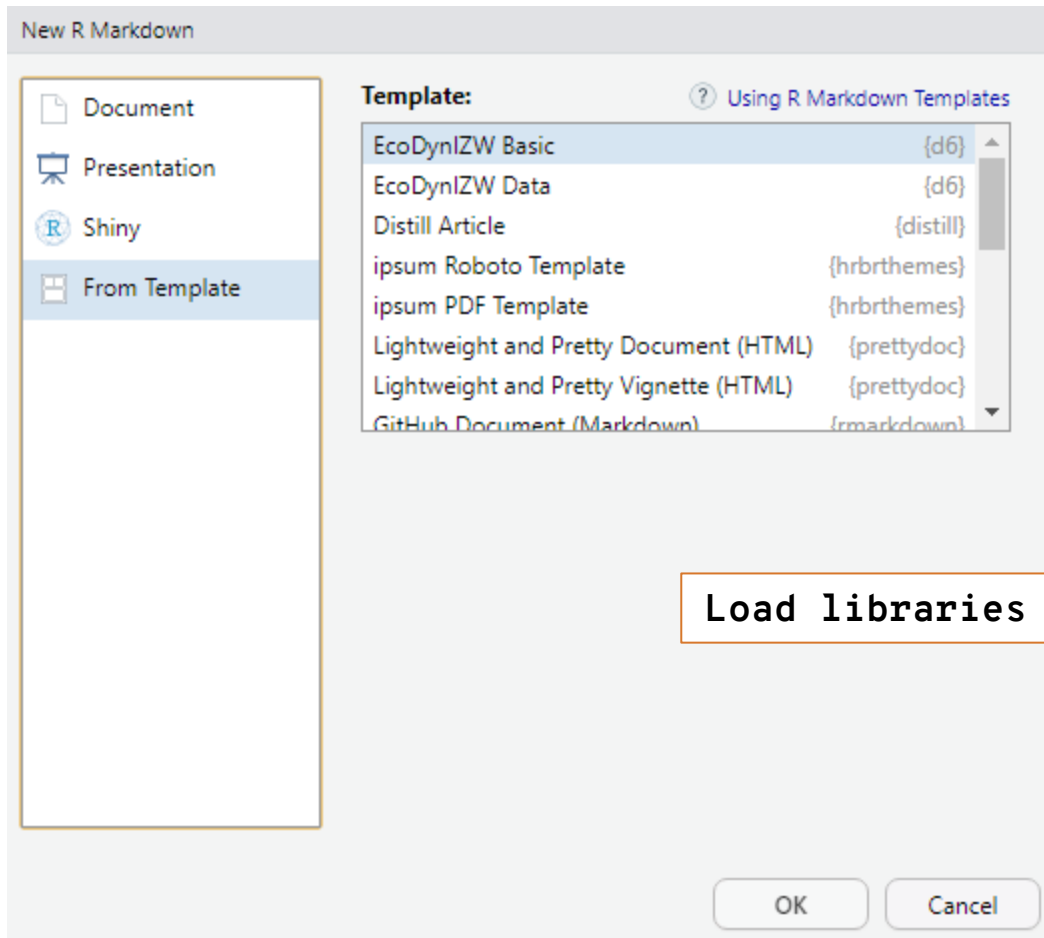
STANDARDIZED RMARKDOWN TEMPLATES



File > New File > Rmarkdown... > From Template

```
1 ---
2 title: "Your Project: Data Preparation" ## name of your project
3 author: "Your Name" ## your name(s)
4 date: "`r Sys.Date()``" ## current date
5 output:
6   rmdformats::readthedown:
7     code_folding: hide ## hide or show code by default?
8     toc_depth: 3 ## 3-level TOC
9 ---
10
11 {r setup, include=FALSE}
12 ## You can ignore this chunk in most cases
13 ## If you want to modify chunk options, you can do it here for all chunks or
14 ## add the options in the respective chunk header, e.g. `{r, message = FALSE}`.
15 knitr::opts_chunk$set(echo = TRUE, warning = TRUE, message = TRUE,
16                       fig.width = 9, fig.height = 6, dpi = 500,
17                       retina = 1, fig.showtext = TRUE)
18
19
20 * **Research question:**
21 * **Study area:**
22 * **Data:**
23
24
25 # Setup
26
27 {r packages}
28 ## for non-CRAN packages please keep install instruction
29 ## but commented so it is not run each time, e.g.
30 # devtools::install_github("EcoDynIZW/template")
31
32 ## libraries used in this script
33 ## please add ALL LIBRARIES NEEDED HERE
34 ## please remove libraries from the list that are not needed anymore
35 ## at a later stage
36 library()
37
38
39
40 # Data
41
42 {r data}
43 df <- readr::read_csv("your-data.csv")
44 sf <- sf::read_sf("your-geo-data.shp")
45
46
47
48 ***
49
50 <details><summary>Session Info</summary>
51
52 {r sessionInfo}
53 ## DO NOT REMOVE!
54 ## We store the settings of your computer and the current versions of the
55 ## packages used to allow for reproducibility
56 Sys.time()
57 #git2r::repository() ## uncomment if you are using GitHub
58 sessionInfo()
59
60
61 </details>
62
```

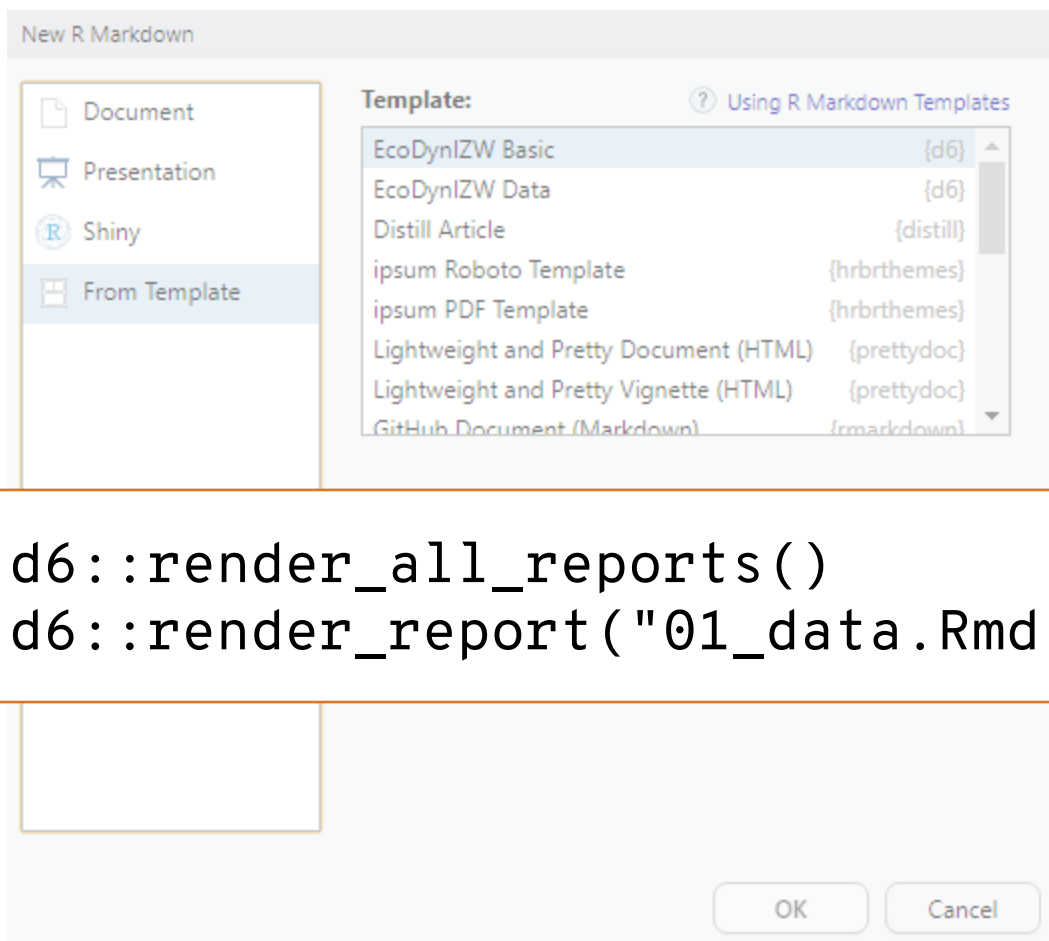
STANDARDIZED RMARKDOWN TEMPLATES



Load libraries and set variables at the begin of each script!

```
1- ---
2- title: "Your Project: Data Preparation" ## name of your project
3- author: "Your Name" ## your name(s)
4- date: "`r Sys.Date()``" ## current date
5- output:
6-   rmdformats::readthedown:
7-     code_folding: hide ## hide or show code by default?
8-     toc_depth: 3 ## 3-level TOC
9- ---
10-
11- ```{r setup, include=FALSE}
12- ## You can ignore this chunk in most cases
13- ## If you want to modify chunk options, you can do it here for all chunks or
14- ## add the options in the repsective chunk header, e.g. ```{r, message = FALSE}``.
15- knitr::opts_chunk$set(echo = TRUE, warning = TRUE, message = TRUE,
16-   fig.width = 9, fig.height = 6, dpi = 500,
17-   retina = 1, fig.showtext = TRUE)
18- ```
19-
20- * **Research question:**
21- * **Study area:**
22- * **Data:**
23-
24-
25- # Setup
26-
27- ```{r packages}
28- ## for non-CRAN packages please keep install instruction
29- ## but commented so it is not run each time, e.g.
30- # devtools::install_github("EcoDynIZW/template")
31-
32- ## libraries used in this script
33- ## please add ALL LIBRARIES NEEDED HERE
34- ## please remove libraries from the list that are not needed anymore
35- ## at a later stage
36- library()
37- ```
38-
39-
40-
41-
42- ```{r data}
43- #df <- readr::read_csv("your-data.csv")
44- #sf <- sf::read_sf("your-geo-data.shp")
45- ```
46-
47-
48- ***
49-
50- <details><summary>Session Info</summary>
51-
52- ```{r sessionInfo}
53- ## DO NOT REMOVE!
54- ## We store the settings of your computer and the current versions of the
55- ## packages used to allow for reproducibility
56- Sys.time()
57- #git2r::repository() ## uncomment if you are using GitHub
58- sessionInfo()
59- ```
60-
61- </details>
62-
```

STANDARDIZED RMARKDOWN TEMPLATES



```
d6::render_all_reports()
d6::render_report("01_data.Rmd")
```

```

└─ project
    ├── .Rproj.user
    ├── data-raw
    │   └── geo-raw
    ├── docs
    │   ├── admin
    │   ├── literature
    │   ├── manuscript
    │   ├── presentations
    │   └── reports
    │       └── 01_data.html
    ├── output
    │   ├── data-proc
    │   └── geo-proc
    ├── plots
    ├── R
    │   ├── 00_start.R
    │   ├── 01_data.Rmd
    │   └── XX_submit.R
    ├── .gitignore
    ├── .Rbuildignore
    ├── DESCRIPTION
    ├── NAMESPACE
    └── project.Rproj
  
```

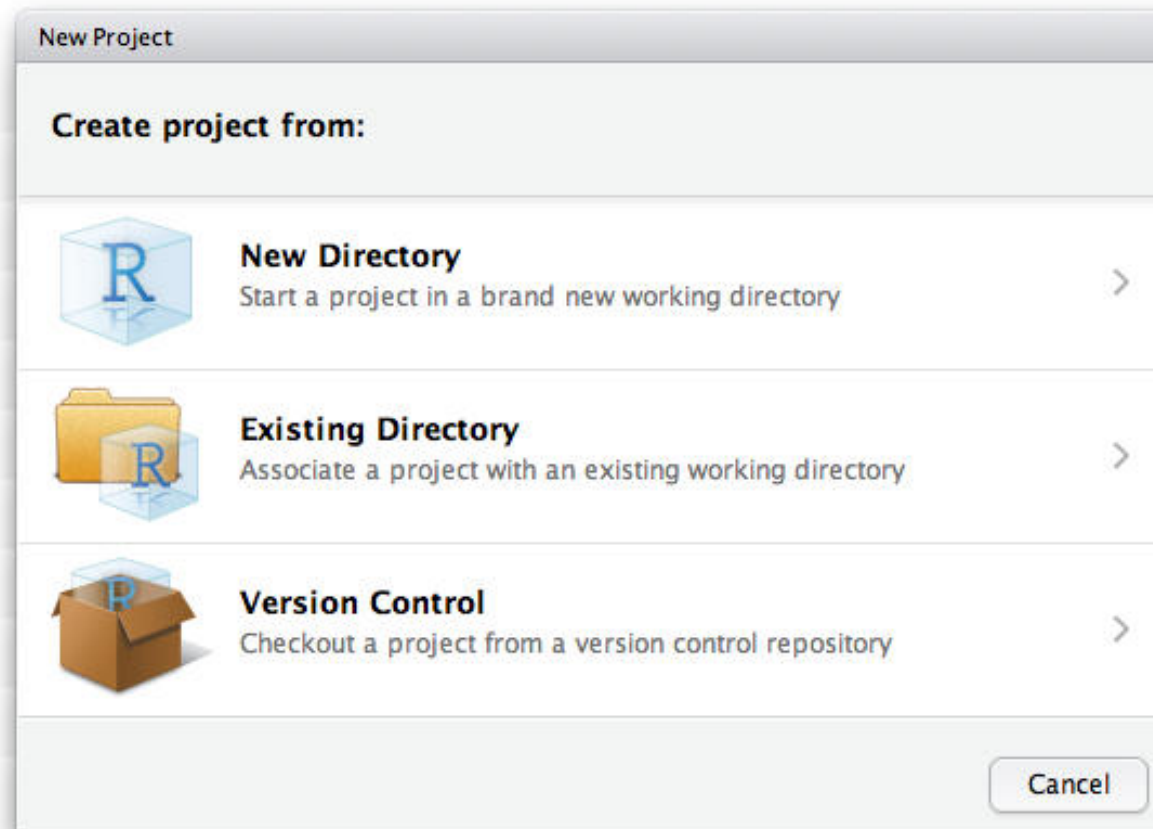
R PROJECTS

```
i└─ project
    ├── .Rproj.user
    ├── data-raw
    │   └── geo-raw
    ├── docs
    │   ├── admin
    │   ├── literature
    │   ├── manuscript
    │   ├── presentations
    │   └── reports
    ├── output
    │   ├── data-proc
    │   └── geo-proc
    ├── plots
    ├── R
    │   ├── 00_start.R
    │   └── XX_submit.R
    ├── .gitignore
    ├── .Rbuildignore
    ├── DESCRIPTION
    ├── NAMESPACE
    └── project.Rproj
```

- Rproject files
- raw data (tabular data in root folder)
 - raw spatial data
- documents
 - administrative docs, e.g. permits
 - literature used for parameterization + ms
 - manuscript drafts (main + supplement)
 - talks and poster presentations
 - rendered reports
- everything that is computed (except plots)
 - processed tabular data
 - processed spatial data
- plot output
- scripts
 - start script to run
 - final script to run
- contains which files to ignore for version control
- contains which files to ignore for package builds
- contains project details and package dependencies
- contains context for R objects
- **Rproject file: use to start your project**

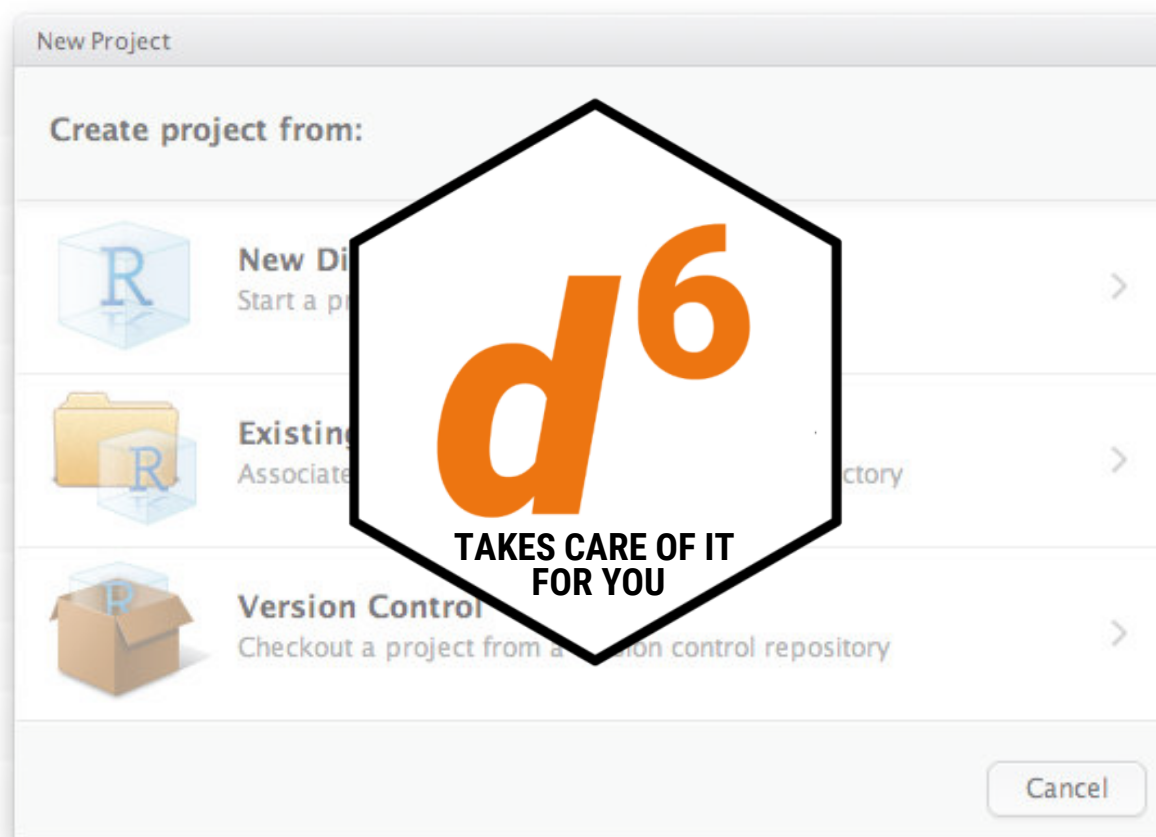
R PROJECTS

R projects make it straightforward to divide your work into multiple contexts, each with their own working directory, workspace, history, and source documents.



R PROJECTS

R projects make it straightforward to divide your work into multiple contexts, each with their own working directory, workspace, history, and source documents.



R PROJECTS

By double-clicking on the .Rproj file, a new R session with an empty environment is loaded.



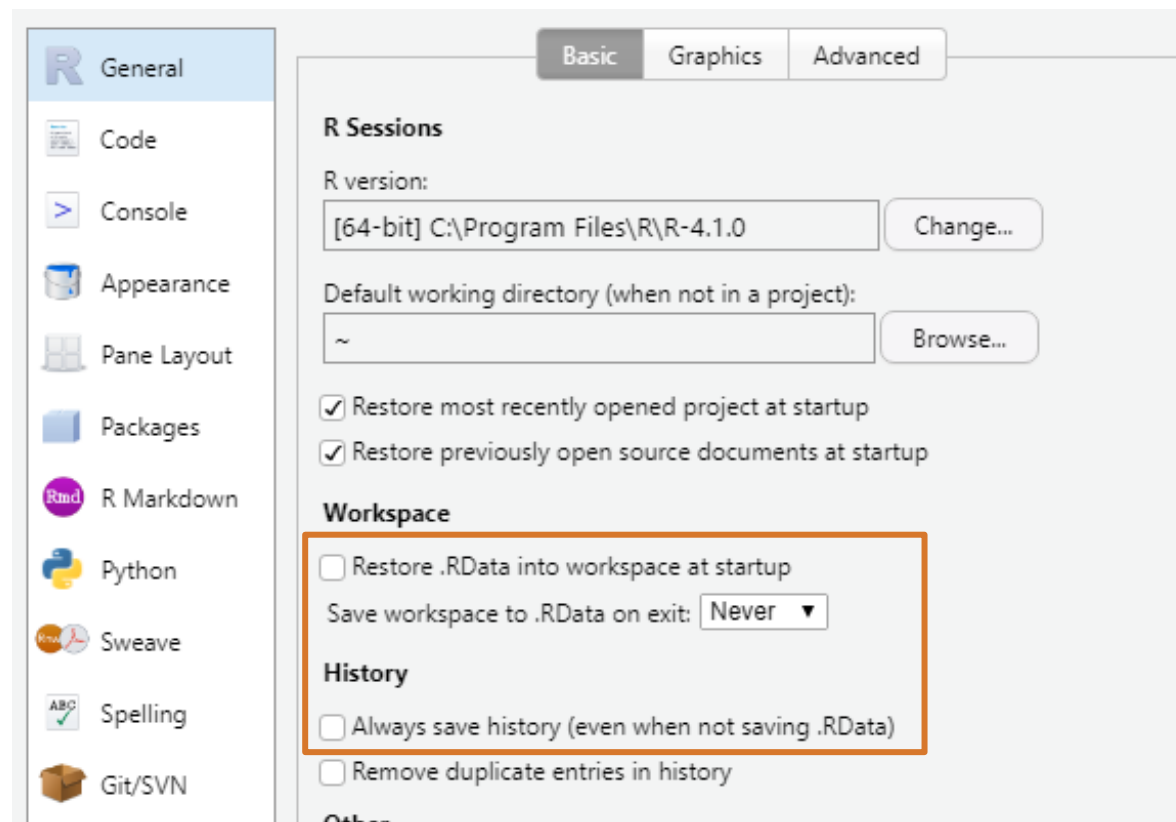
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R PROJECTS

By double-clicking on the .Rproj file, a new R session with an empty environment is loaded.

Btw: **Never** save the R history or the R environment!



here: find your
PATH!



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R PROJECTS

`here::here()` works like `file.path()`

but the path root is implicitly set to
“the path to the top-level of my current project”

R PROJECTS

here::here() works like **file.path()**

but the path root is implicitly set to

“the path to the top-level of my current project”

project.Rproj

R PROJECTS

here::here() works like **file.path()**

but the path root is implicitly set to
“the path to the top-level of my current project”

```
> setwd("C:/Users/Mustermann/R/project")  
> file.path(paste0(getwd(), "/output/results.csv"))  
[1] "C:/Users/Mustermann/R/project/output/results_csv"
```

R PROJECTS

here::here() works like **file.path()**

but the path root is implicitly set to
“the path to the top-level of my current project”

```
> setwd("C:/Users/Mustermann/R/project")  
> file.path(paste0(getwd(), "/output/results.csv"))  
  
> here::here("output", "results.csv")  
[1] "C:/Users/Mustermann/R/project/output/results.csv"
```




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MERGE
BITBUCKET
FORK
BRANCHING
PULL REQUEST
COMMIT
VERSION
MAIN
CONTROL
MASTER
REPOSITORY
FETCH
CLONE
PUSH
.GITIGNORE
GIT
README
REMOTE

CREATE A GITHUB REPOSITORY

To create a corresponding repository set `github = TRUE`:

```
d6::new_project(  
  name = "project",  
  github = TRUE  
)
```

CREATE A GITHUB REPOSITORY

By default the created repository is private, not public:

```
d6::new_project(  
  name = "project",  
  github = TRUE,  
  private_repo = TRUE  
)
```



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ver·sion con·trol

/ 'və:ʃ(ə)n / / kən'trəʊl/

A system that **records changes** to a file or set of files
over time so that you can recall specific versions later.

USE VERSION CONTROL



- 1_data.R
- Analysis.R
- Analysis_PVA_050320.R
- Analysis_PVA_210320_final.R
- Analysis_PVA_210320_final_v2.R
- Copy mail metadaten Steph.txt
- plot_glmm.Rmd
- shapefile_wonderland.zip
- unicorn-2015.xls
- unicorn-2016.xls
- unicorn-merged.csv

- unicorn_merged.csv
- geo-proc
 - wonderland_tcd_clean.geojson
- plots
 - 01_pva.pdf
 - 01_pva_presentation.png
 - 02_pva_individual.pdf
- R
 - 01_data_import.Rmd
 - 02_analysis_pva.Rmd
- .gitignore

History for `d6 / R / new_project.R`

Commits on Oct 8, 2020

🐞 github setup working now 🍷

 Z3tt committed 31 minutes ago

🐞 fix usethis::use_github in new_project

 Z3tt committed 1 hour ago



600d6cd



5f25523



Commits on Oct 1, 2020

🐞 move readme to start script

 Z3tt committed 7 days ago

🔔 fix readme new_project()

 Z3tt committed 7 days ago

🐞 use utils (no golem dep) and add new dir structure

 Z3tt committed 7 days ago



45d0acd



7511113



340d511



Commits on Sep 16, 2020

✏️ rename start script

 Z3tt committed 22 days ago

🐞 add option for spatial data (or not)

 Z3tt committed 22 days ago

🐞 allow path with andwithout / at the end

 Z3tt committed 22 days ago

🌟 D6 template package

 Z3tt committed 22 days ago



0fcd0a2



86499ca



0b1b34b



932aa06



USE VERSION CONTROL



- 1_data.R
- Analysis.R
- Analysis_PVA_050320.R
- Analysis_PVA_210320_final.R
- Analysis_PVA_210320_final_v2.R
- Copy mail metadaten Steph.txt
- plot_glmm.Rmd
- shapefile_wonderland.zip
- unicorn-2015.xls
- unicorn-2016.xls
- unicorn-merged.csv

- unicorn_merged.csv
- geo-proc
 - wonderland_tcd_clean.geojson
- plots
 - 01_pva.pdf
 - 01_pva_presentation.png
 - 02_pva_individual.pdf
- R
 - 01_data_import.Rmd
 - 02_analysis_pva.Rmd
- .gitignore

master 1 branch 1 tag

Go to file

Add file

Code

Z3tt update readme

#7cc39d 20 days ago 22 commits

R	R scripts + source files	2 years ago
model	clean-up	14 months ago
simulations	model + related files	2 years ago
.gitattributes	Initial commit	2 years ago
.gitignore	update gitignore	2 years ago
0_calibration.Rmd	changes for major rev oikos	9 months ago
1_nlms.Rmd	changes for major rev oikos	9 months ago
2_data.Rmd	some clean up	12 months ago
3_expl-plots.Rmd	some clean up	12 months ago
4_final-plots.Rmd	changes for major rev oikos	9 months ago
README.md	update readme	20 days ago
SwiFCoIBMove.Rproj	renaming	2 years ago

README.md

Scherer et al. 2020 OIKOS SwiFCoIBMove

Cédric Scherer, Viktoriia Radchuk, Mathias Franz, Hans-Hermann Thulke, Martin Lange, Volker Grimm & Stephanie Kramer-Schadt (2020) Moving infections: individual movement decisions drive disease persistence in spatially structured landscapes. *Oikos* 129 (5):651–667. DOI: [10.1111/oik.07002](https://doi.org/10.1111/oik.07002)

The spatially explicit agent-based eco-epidemiological model is based on the study by [Kramer-Schadt et al. \(2009\)](#) and subsequent modifications by [Lange et al. \(2012\)](#). In the original model transmission is based on nearest-neighbour group mixing processes, where infection pressure within and between neighbouring groups is based on constant transmission probabilities without movement of the host individuals. The modified version presented here assumes explicit phenomenological, fully imposed movement patterns and mechanistic movement based on individual decisions of hosts. In the paper we present essential parts of the model necessary for understanding model outcomes. The full model description following the overview, design concepts and details ('ODD') protocol (Grimm et al. 2006, 2010) is provided in the Supplementary material Appendix 1. The NetLogo model and the R code to analyse the

About

"Moving infections: individual movement decisions drive disease persistence in spatially structured landscapes" (doi: 10.1111/oik.07002)

agent-based-modeling
spatially-explicit-models netlogo rstats
disease disease-spread
animal-movement wild-boar csf

Readme

Releases 1

SwiFCoIBMove Latest
on 25 Mar 2019

Packages

No packages published
[Publish your first package](#)

Languages



Reproducibility

(for you and others)

Reliability

(will it work again?)

Reusability □

(don't re-invent the wheel)

Visibility

(let others see and use your work)

Version control workflow



03_plot.Rmd

```
library(ggplot2)
ggplot(df, aes(x, y)) +
  geom_point() +
  ggsave()
```



Version control workflow



03_plot.Rmd

```
library(ggplot2)
ggplot(df, aes(x, y)) +
  geom_line(aes(color = z)) +
  geom_point(aes(color = z)) +
  ggsave()
```

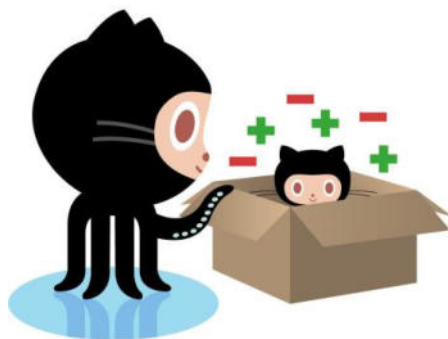


Version control workflow

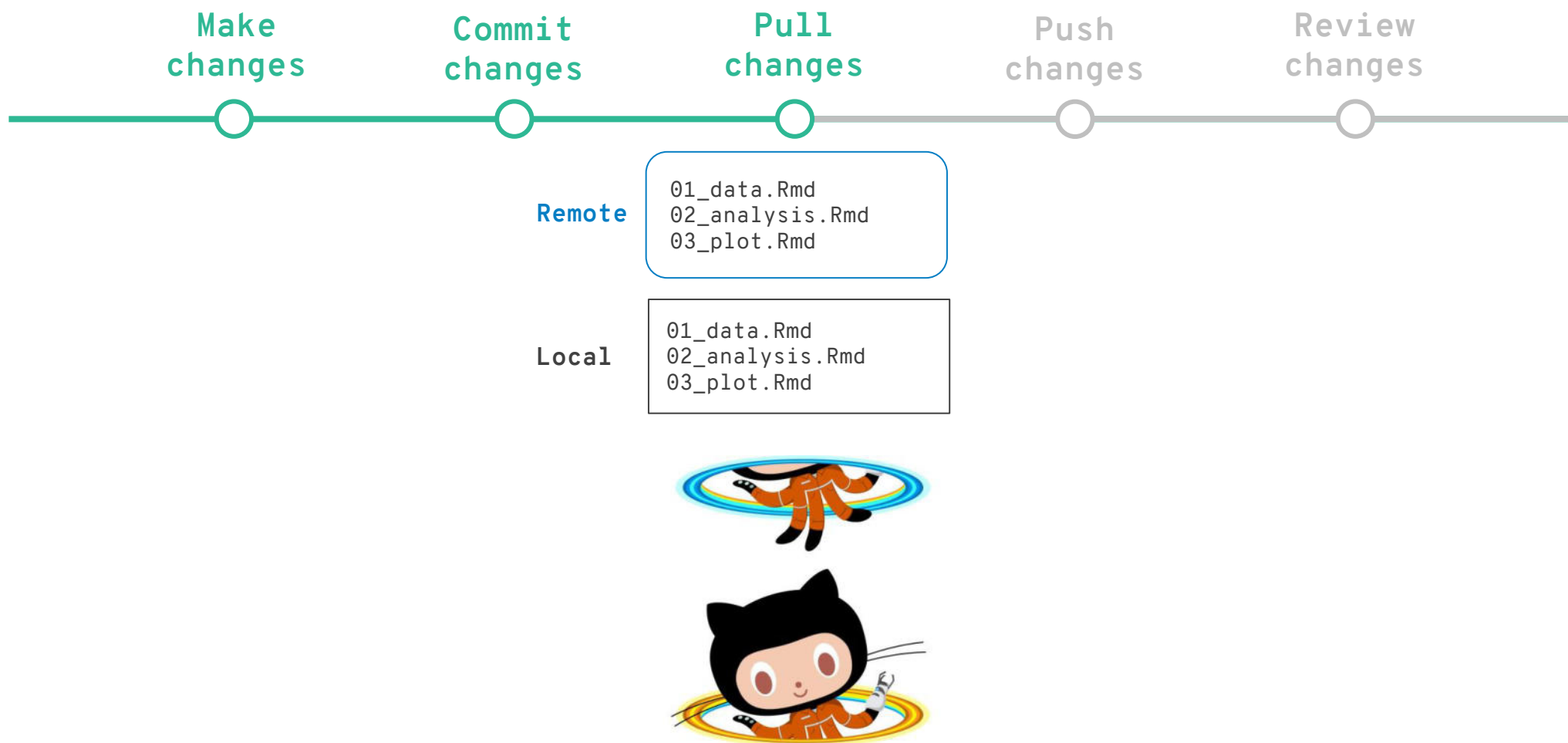


03_plot.Rmd

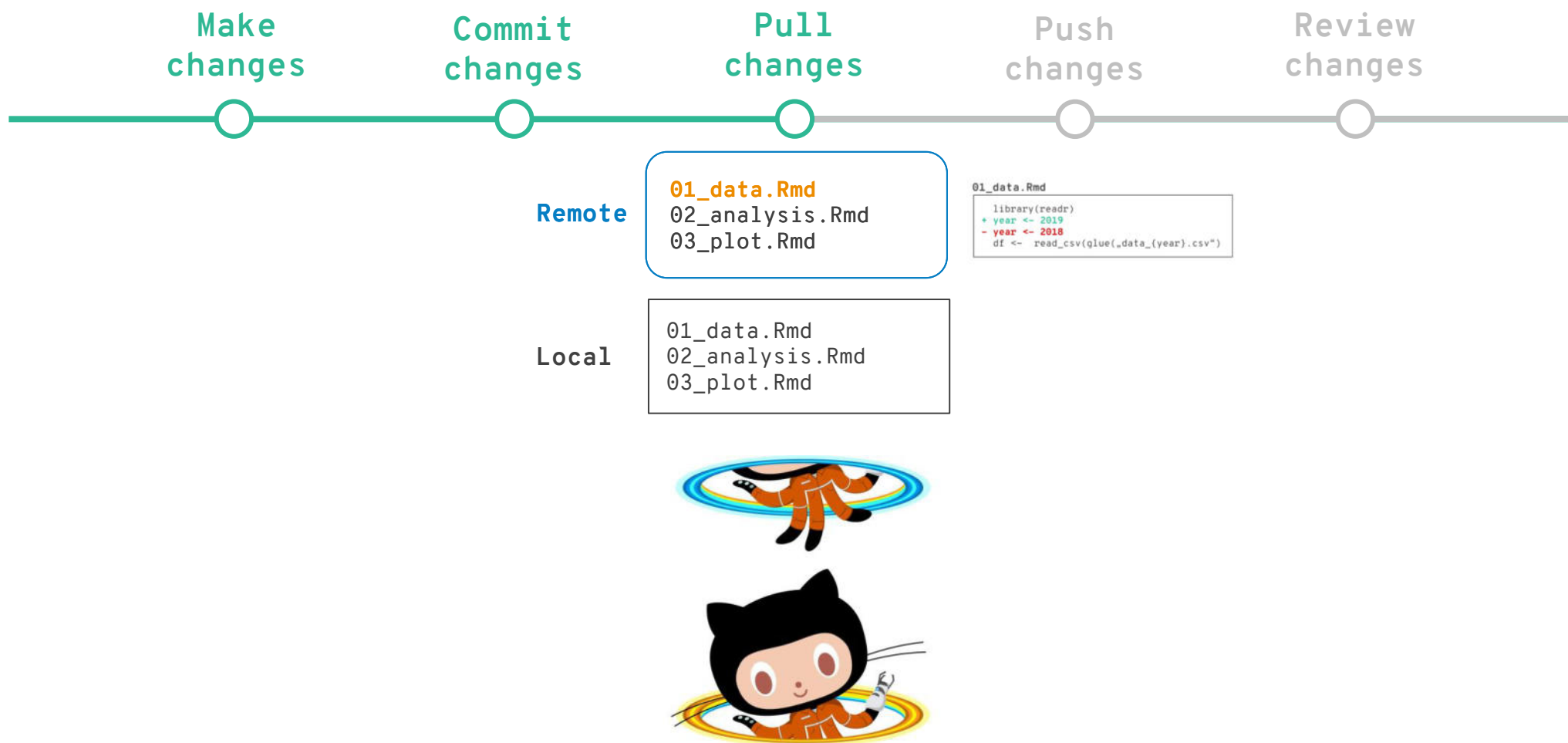
```
library(ggplot2)
ggplot(df, aes(x, y)) +
+   geom_line(aes(color = z)) +
+   geom_point(aes(color = z)) +
-   geom_point() +
  ggsave()
```



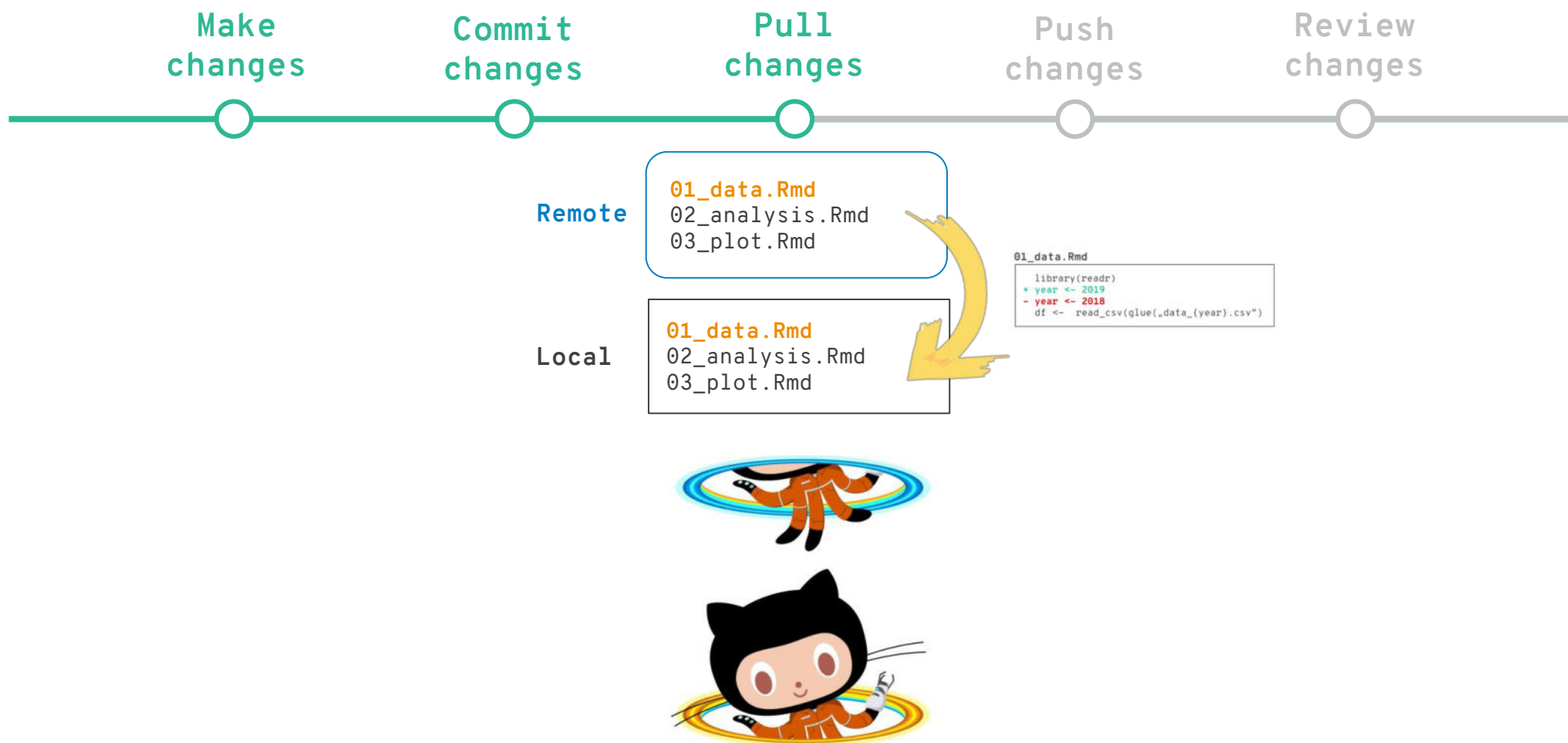
Version control workflow



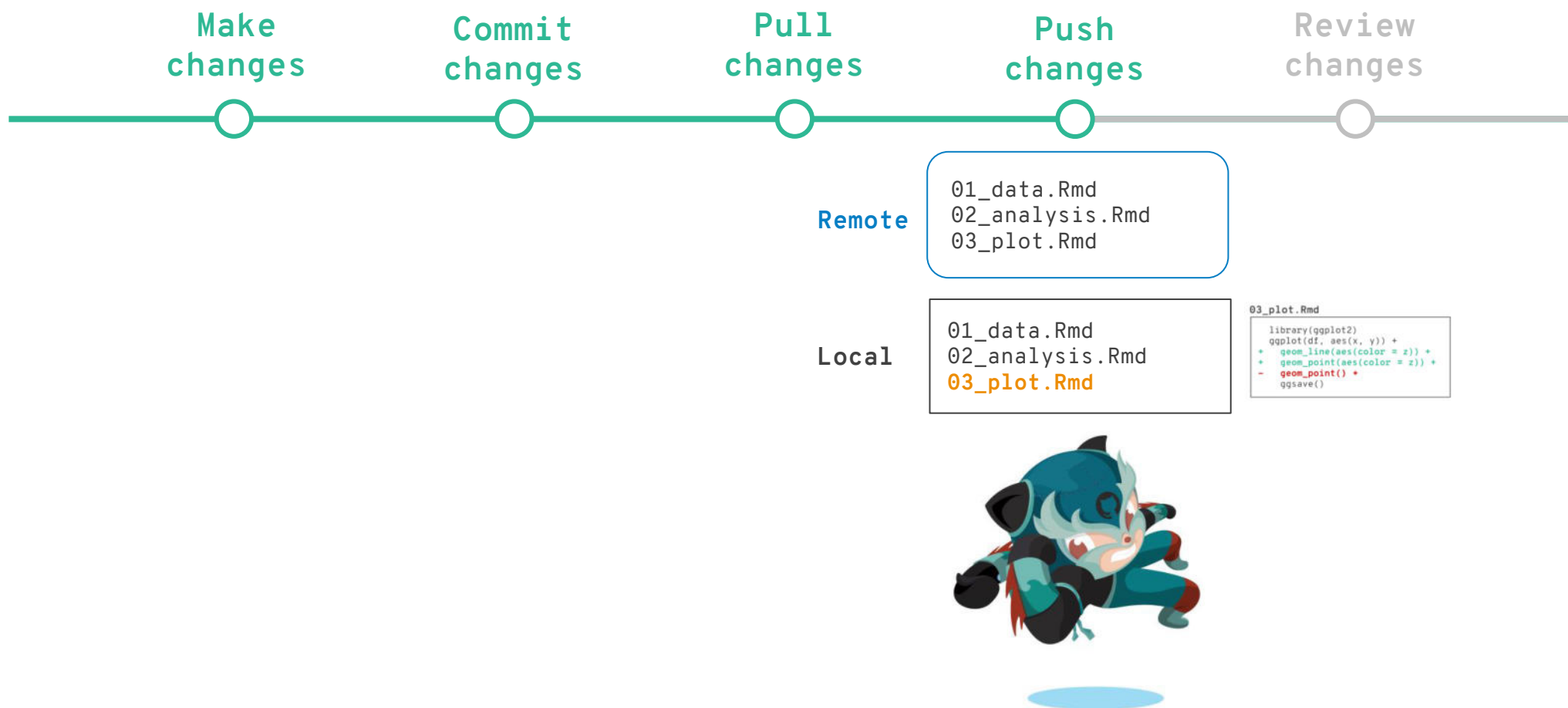
Version control workflow



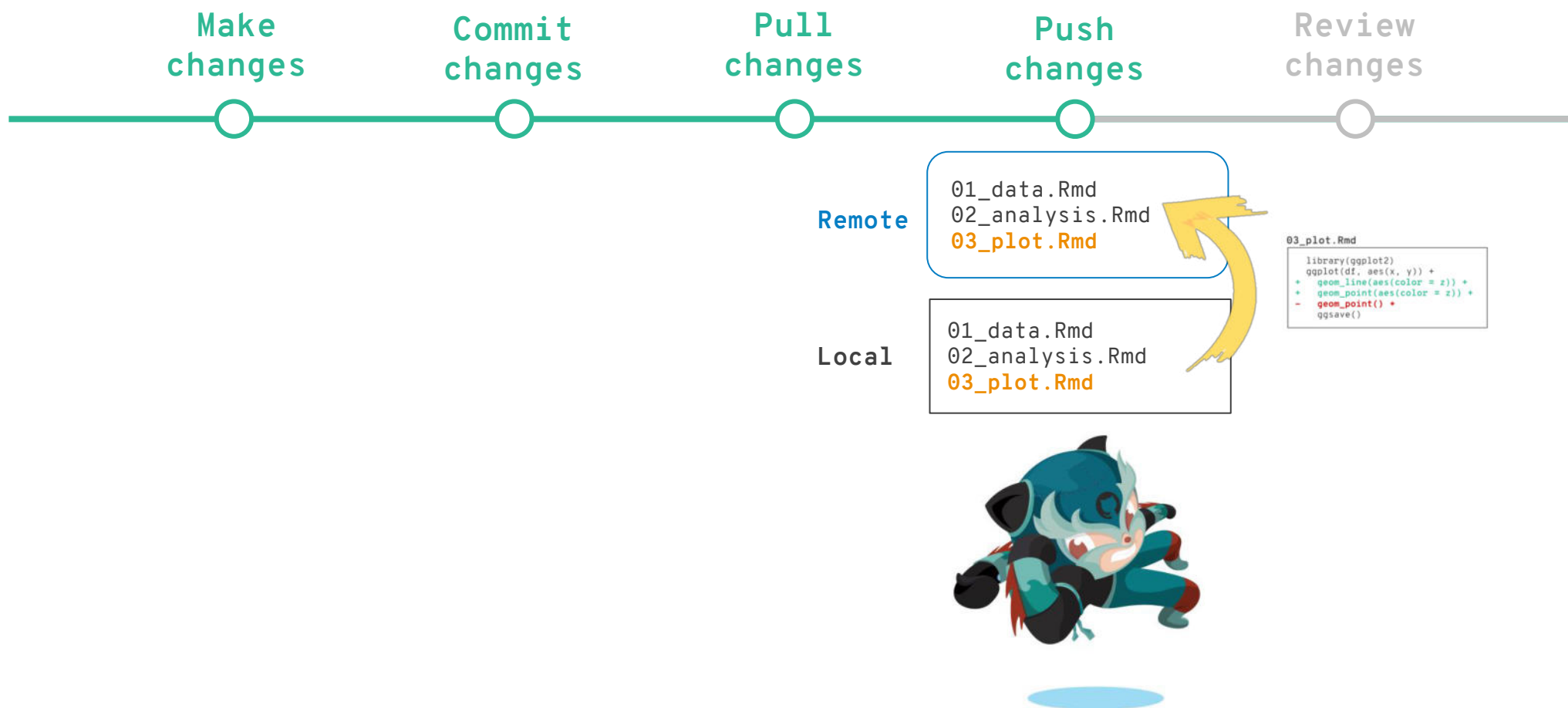
Version control workflow



Version control workflow



Version control workflow



Version control workflow



03_plot.Rmd

```
library(ggplot2)
ggplot(df, aes(x, y)) +
+   geom_line(aes(color = z)) +
+   geom_point(aes(color = z)) +
-   geom_point() +
  ggsave()
```



Version control workflow



03_plot.Rmd

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ggplot(df, aes(x, y)) +
+   geom_line(aes(color = z)) +
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Version control workflow

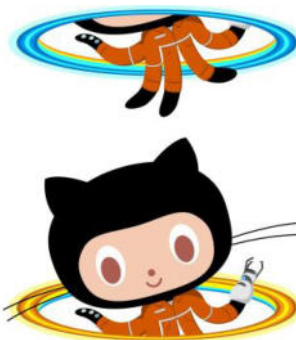
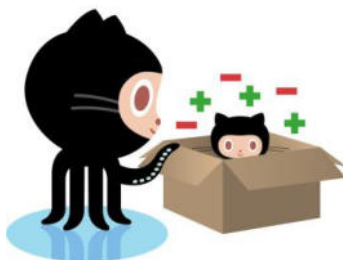
Make
changes

Commit
changes

Pull
changes

Push
changes

Review
changes



Version control workflow

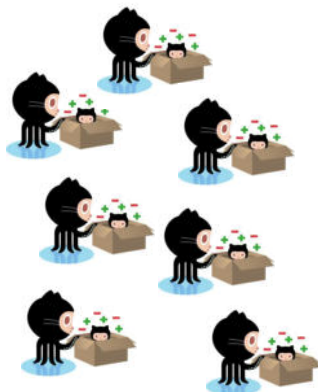
Make
changes

Commit
changes

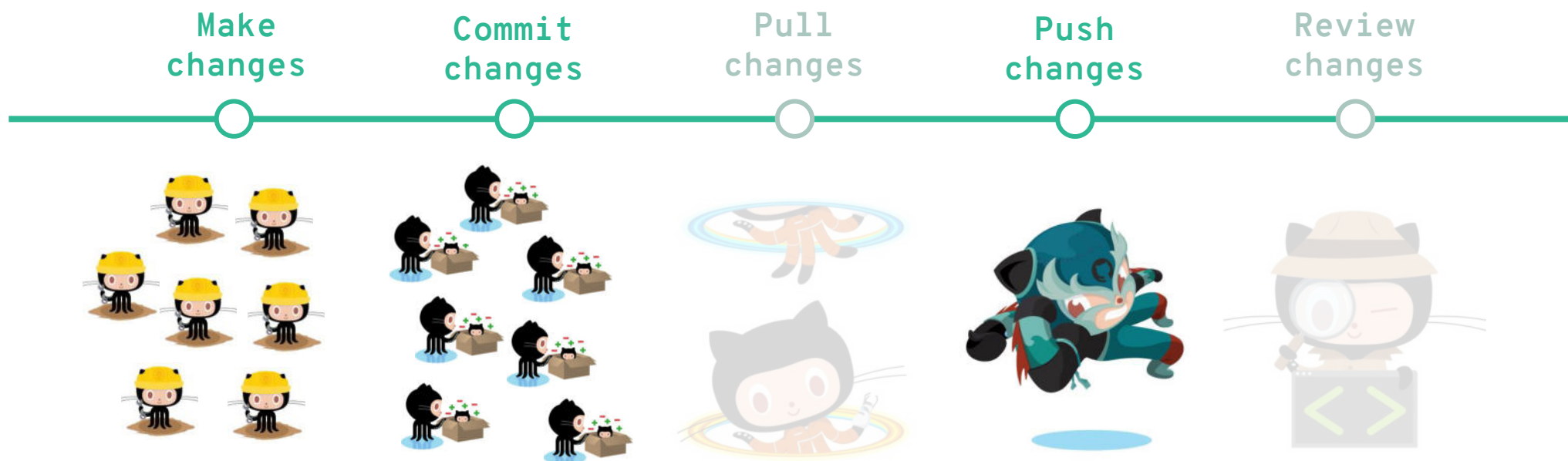
Pull
changes

Push
changes

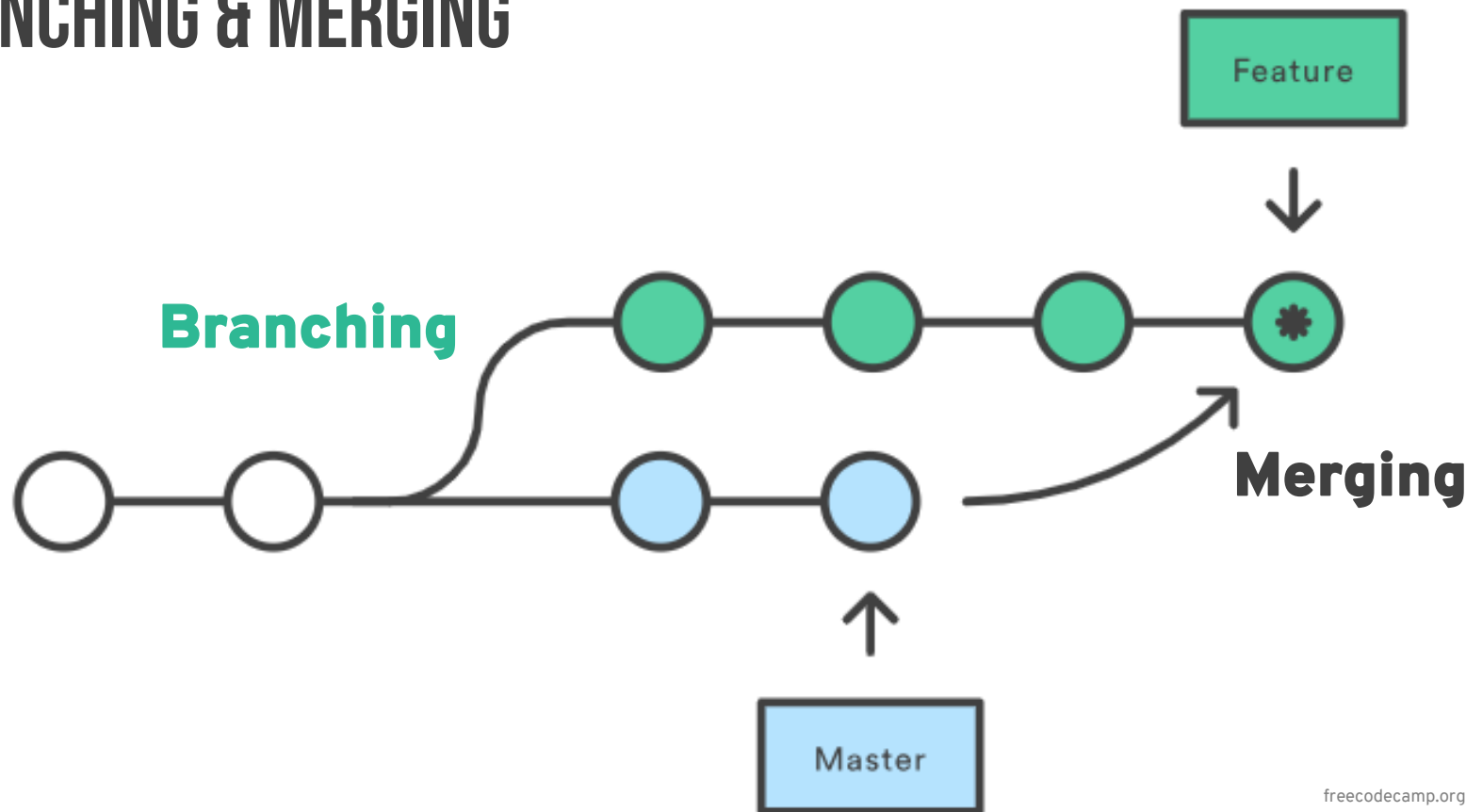
Review
changes



Version control workflow



BRANCHING & MERGING

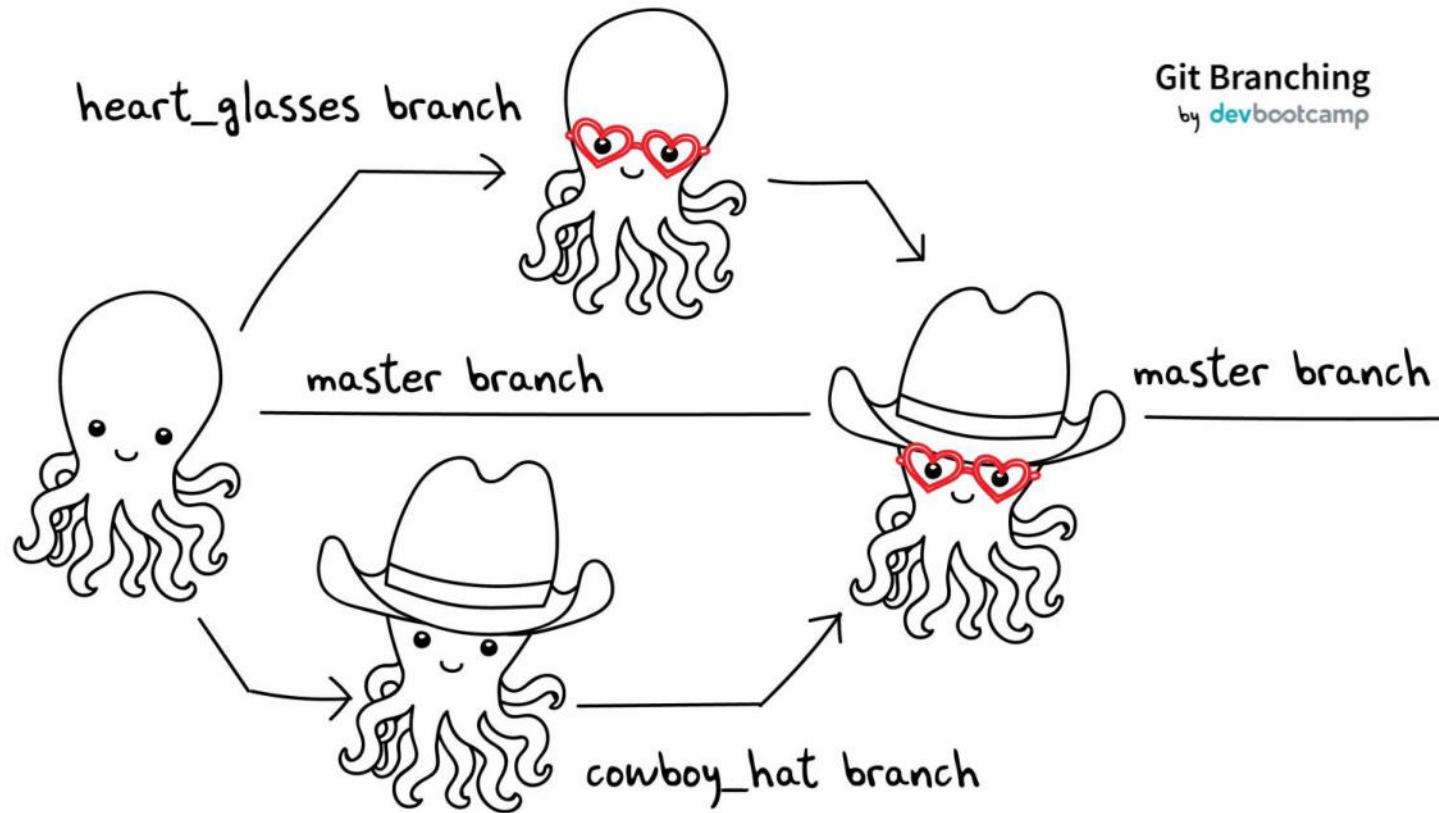


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Branching is the way to work on different versions of a repository at one time.

Merging is combining multiple branches of commits into one unified history.

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