# Getting starting with $\boldsymbol{R}$

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### Who am I?

- evolutionary biologist / statistician
- studies in France (Montpellier), postdoc in the UK (Sheffield)
- senior researcher at Leibniz IZW / Lecturer at Freie University
- experience with **R**:
  - 2003: starting to study R (still ongoing)
  - 2008: starting to use R most days
  - 2010: starting to teach R
  - 2016: starting to develop R packages

# Getting started with ${\bf R}$

① What is **R**?

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What is R?

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**R** is a programming language and software environment for statistical computing & graphics.

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- open source (explore: https://github.com/wch/r-source)

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- cutting edge (check updates for today: http://dirk.eddelbuettel.com/cranberries/cran/updated/)
- used by millions
- R is the best software environment for statistical computing, but it is far from perfect!

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# Is **R** good for you?

### Good for:

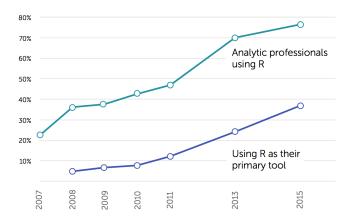
- data manipulation
- plots, including GIS
- analysing big (incl. seq.), medium and small data
- simulating data

# Not optimal for:

- beginners
- data entry
- formal algebra

### Who uses **R**?

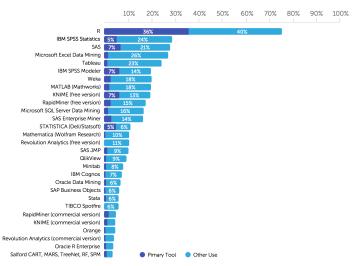
#### **RISE OF R USAGE**



Rexer Analytics
[1220 analytic professionals from 72 countries participated in this survey]

### What else?

#### **TOOL USE**





## A short history of **R**

- early 1980s: S version 1: genesis of an interactive statistical system (Becker & Chambers at Bell Labs)
- mid 1980s: **S** version 2: portable version (thanks to UNIX)
- 1988: **S** version 3 (**S**3): object-based, C-based (very much like R)
- 1991: **S**3 includes a large statistical modeling toolbox
- 1993: the replication of S as the R project starts (Ihaka & Gentleman at University of Auckland)
- 29/02/2000: **R** version 1.0.0 (R core)

Due to the ownership of S by a phone company, S could not be free, nor open source. Hence R!