

# Introducción a la ciencia reproducible con R

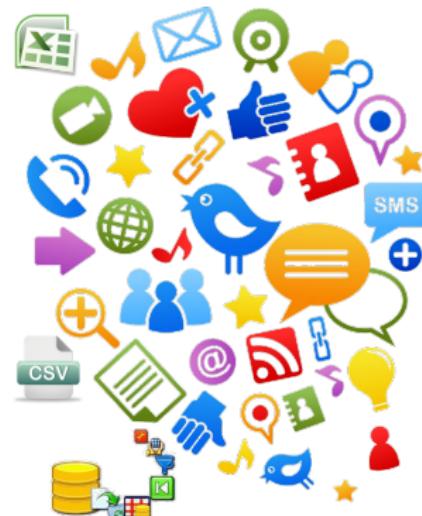
Document Freedom Day - OSLUGR

Francisco Charte

25 marzo 2015

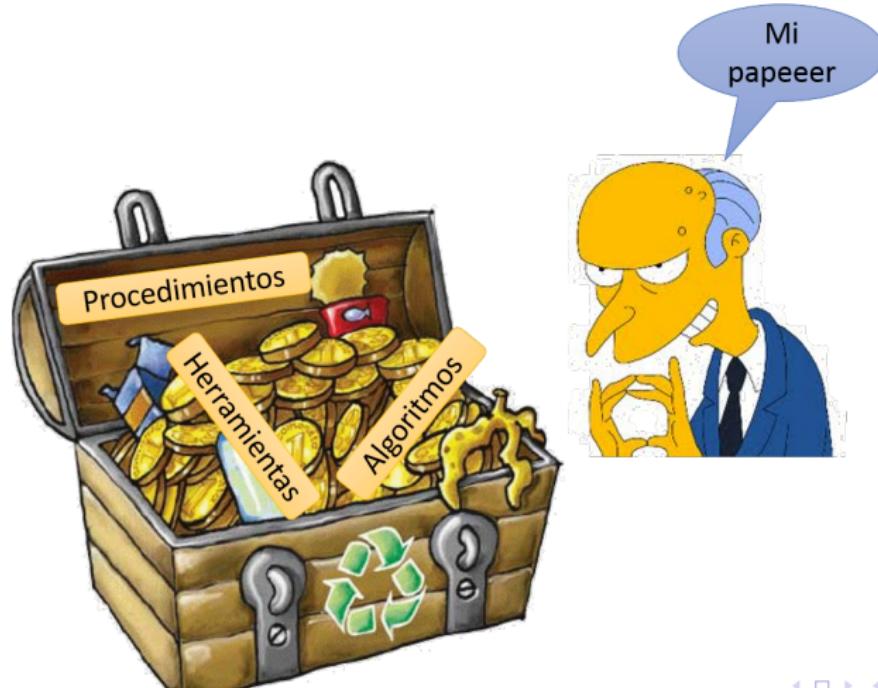
# En qué consiste la ciencia reproducible

## Datos disponibles y accesibles



# En qué consiste la ciencia reproducible

Procedimientos, algoritmos y herramientas disponibles y accesibles



## En qué consiste la ciencia reproducible

Las acciones manuales no son fácilmente reproducibles

Nothing can stop automation



# Introducción a R

The screenshot shows the RStudio interface with the following components:

- File Browser (Left):** Shows files like RBenchmarks.R, graphics.R, CRANDDownloads.R, and CienciaReproducible.Rmd.
- Code Editor (Top Left):** Displays R code for a presentation template and a plot of CRAN downloads.
- Console (Bottom Left):** Shows R commands and their output, including the creation of a data frame from a URL and plotting it.
- Environment Tab (Top Right):** Shows the current project structure, including a file named R/evaluate.R.
- Plots Tab (Bottom Right):** Displays a line plot titled "CRAN downloads for package mldr". The y-axis is "Number of downloads" (0 to 25) and the x-axis is "Date" (from 2015-01-01 to 2015-12-31). The plot shows a sharp peak around December 2015.

# Importación de datos - Desde archivos

- ▶ CSV: `read.table()`
- ▶ Paquete `foreign`
  - ▶ Stata: `read.dta()`
  - ▶ SPSS: `read.spss()`
  - ▶ SAS: `read.ssd()`
  - ▶ dBase: `read.dbf()`
  - ▶ ARFF: `read.arff()`
  - ▶ Octave: `read.octave()`
- ▶ Excel: `loadWorkbook()` - Paquete `XLConnect`
- ▶ OpenOffice/LibreOffice: `read.ods()` - Paquete `ROpenOffice`
- ▶ XML: `xmlParse()` - Paquete `XML`

# Publicación de datos