Automated slide decks with the officeverse

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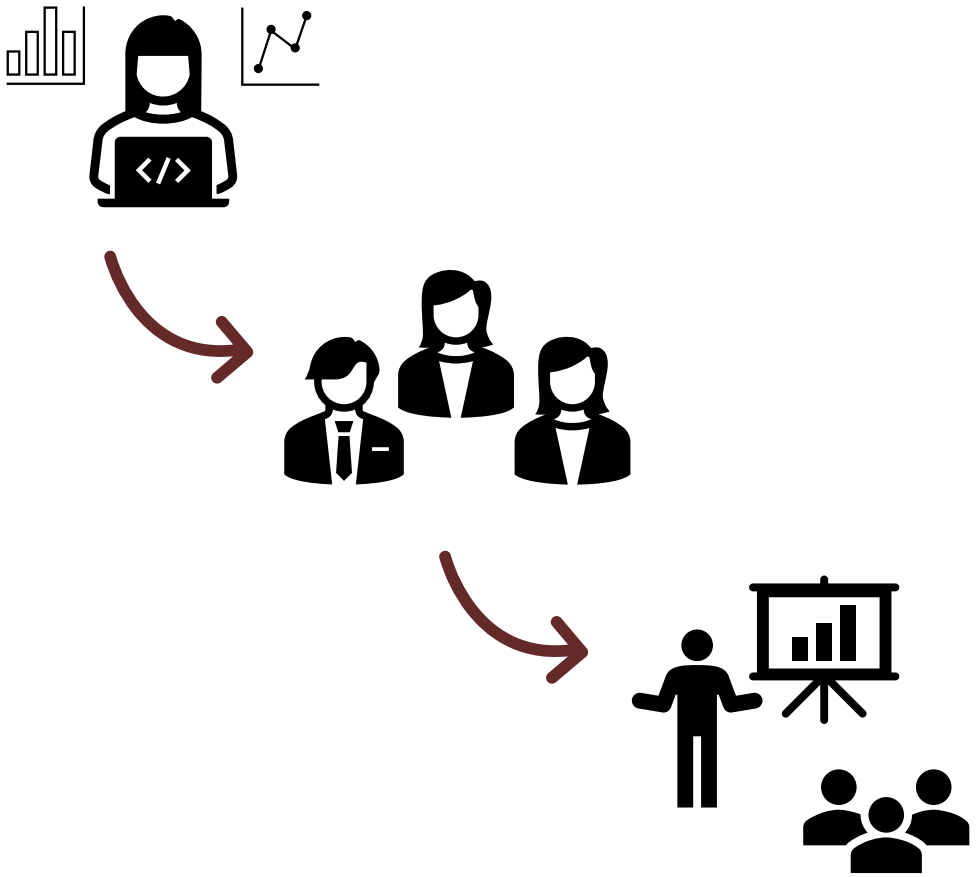
Reality of a government data scientist



What I needed:

R + officeverse

R Markdown

- ✓ Microsoft PowerPoint compatible
- ✓ Slide design conforms to official corporate template
- ✓ Fast, automated, and accurate (eliminate copy-paste)

- ✓ Flexible slide layout (text + images + plots)
- ✓ Editable text, tables, and charts

The officeverse

officer

- Creates Word or PowerPoint docs based on template
- Best for mix of text, tables, graphs

mschart

- Native office charts for Word or PowerPoint
- Chart design, size, text, and underlying data can be edited

officedown

- Enhances R Markdown Word or PowerPoint output
- Better for text heavy docs

rvg

- High-quality vector graphics for PowerPoint or Excel
- Graphic size, color, and text can be edited

flextable

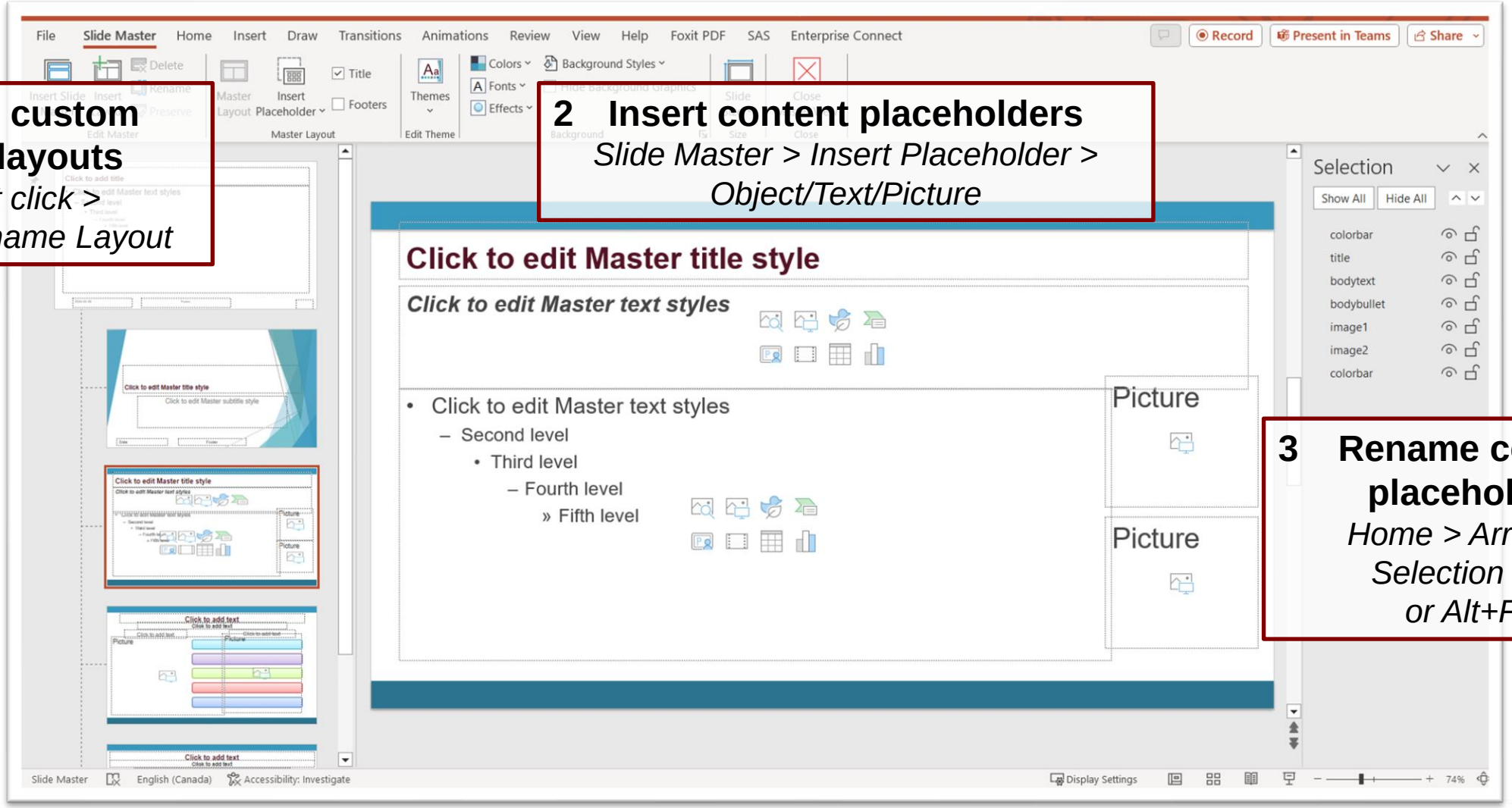
- Design flexible tables or crosstabs for R Markdown (html, pdf), Word, or PowerPoint docs

https://ardata-fr.github.io/officeverse

Mastering the slide master

1 Create custom slide layouts
Right click > Insert/Rename Layout

2 Insert content placeholders
Slide Master > Insert Placeholder > Object/Text/Picture



3 Rename content placeholders
Home > Arrange > Selection Pane or Alt+F10

Mastering the code

- Read the PowerPoint template into R and add a slide

```
> my_deck <- officer::read_pptx("jennys_template.pptx") %>%
    add_slide(my_deck, layout = "slide1_layout")
```

- Create editable graphics and charts

```
> my_ggplot <- rvg::dml(ggobj = my_ggplot, bg = "transparent")
> my_mschart <- mscharts::ms_barchart() %>% chart_settings() %>% chart_labels()
```

- Insert data into the content placeholders

```
> my_deck <- my_deck %>% ph_with(value = "Hello World!", location =
    ph_location_label(ph_label = "title")) %>%
    ph_with(value = my_ggplot, location = ph_location_label("graph1"))
```

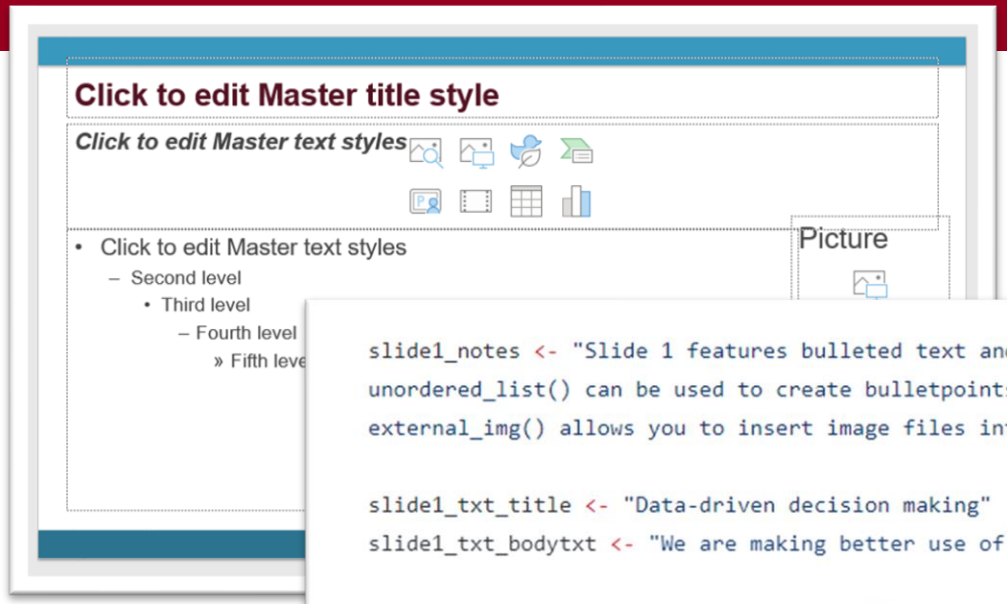
- Save the slides to a .pptx

```
> print(my_deck, target = "Final_Deck_2023-04-02.pptx")
```

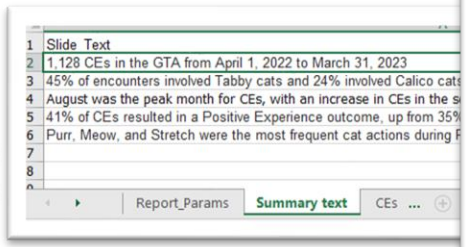
https://ardata-fr.github.io/officeverse/officer-for-powerpoint.html

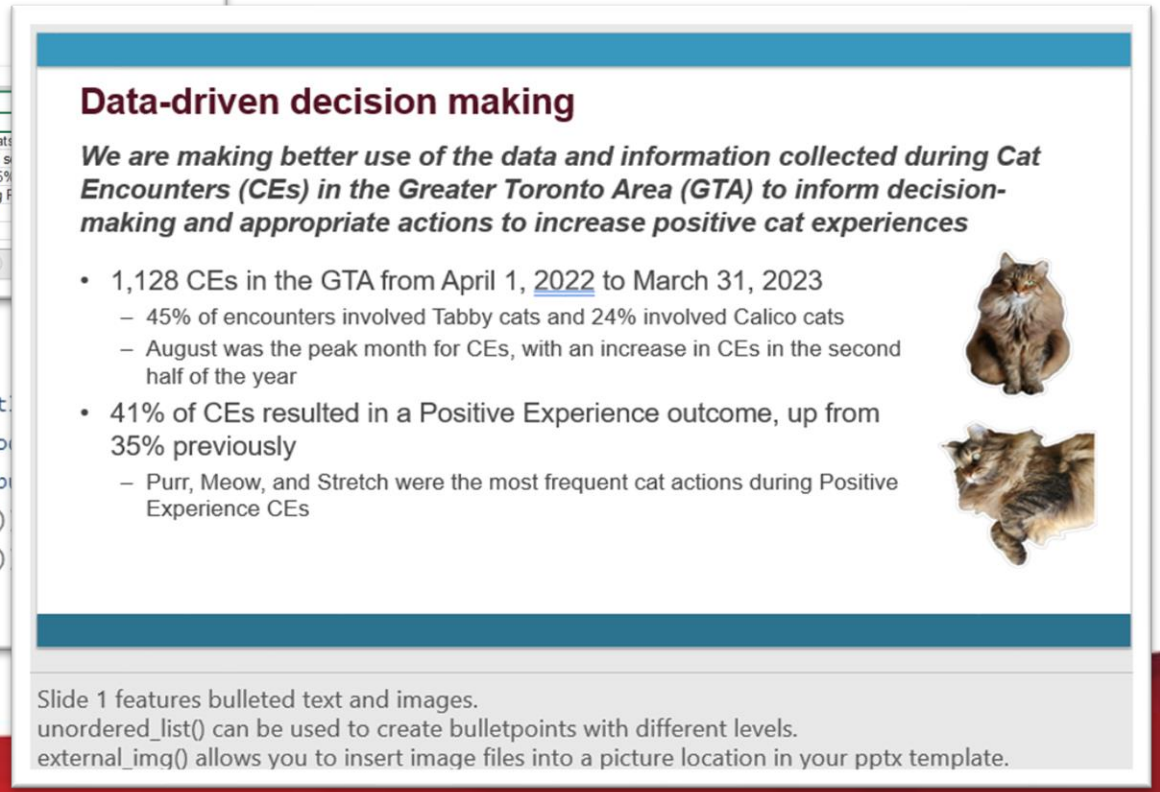
officer in action!

Full code and dummy data available on [my github]




```
slide1_notes <- "Slide 1 features bulleted text and images.
unordered_list() can be used to create bulletpoints with different levels.
external_img() allows you to insert image files into a picture location in your pptx template."

slide1_txt_title <- "Data-driven decision making"
slide1_txt_bodytxt <- "We are making better use of the data and information collected during Cat

CE_txt <- read_excel(excel_fn, sheet = "Summary text", col_names = TRUE)
slide1_bullets <- unordered_list(
  level_list = c(1, 2, 2, 1, 2),
  str_list = c(CE_txt$Slide_Text))

image_file1 <- external_img("mr_jones2.png")
image_file2 <- external_img("mr_jones4.png")

### Slide 1 print to powerpoint
ppt_out <- add_slide(ppt_out, layout = "slide1", master = "Theme1") %>%
  ph_with(value = slide1_txt_title, location = ph_location_label(ph_label = "tit
  ph_with(value = slide1_txt_bodytxt,location = ph_location_label(ph_label = "bo
  ph_with(value = slide1_bullets, location = ph_location_label(ph_label = "bodyb
  ph_with(value = image_file1, location = ph_location_label(ph_label = "image1")
  ph_with(value = image_file2, location = ph_location_label(ph_label = "image2")
  set_notes(value = slide1_notes, location = notes_location_type("body"))
```



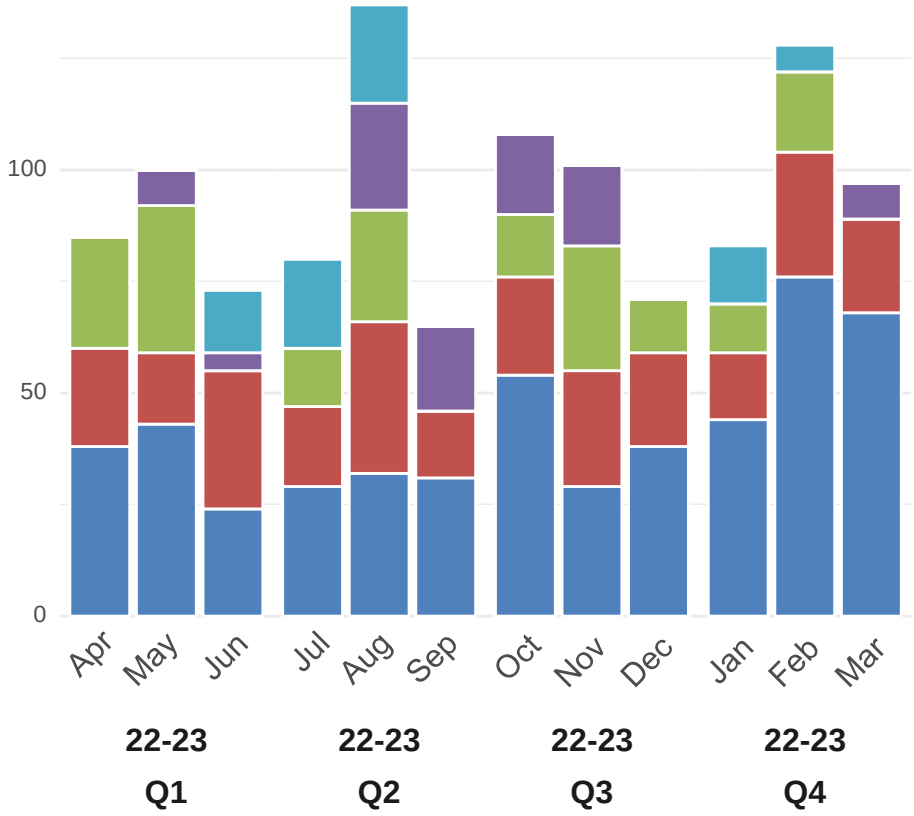


https://github.com/jennyrieck/auto-slide-deck-officer

Characteristics of GTA Cats Encountered

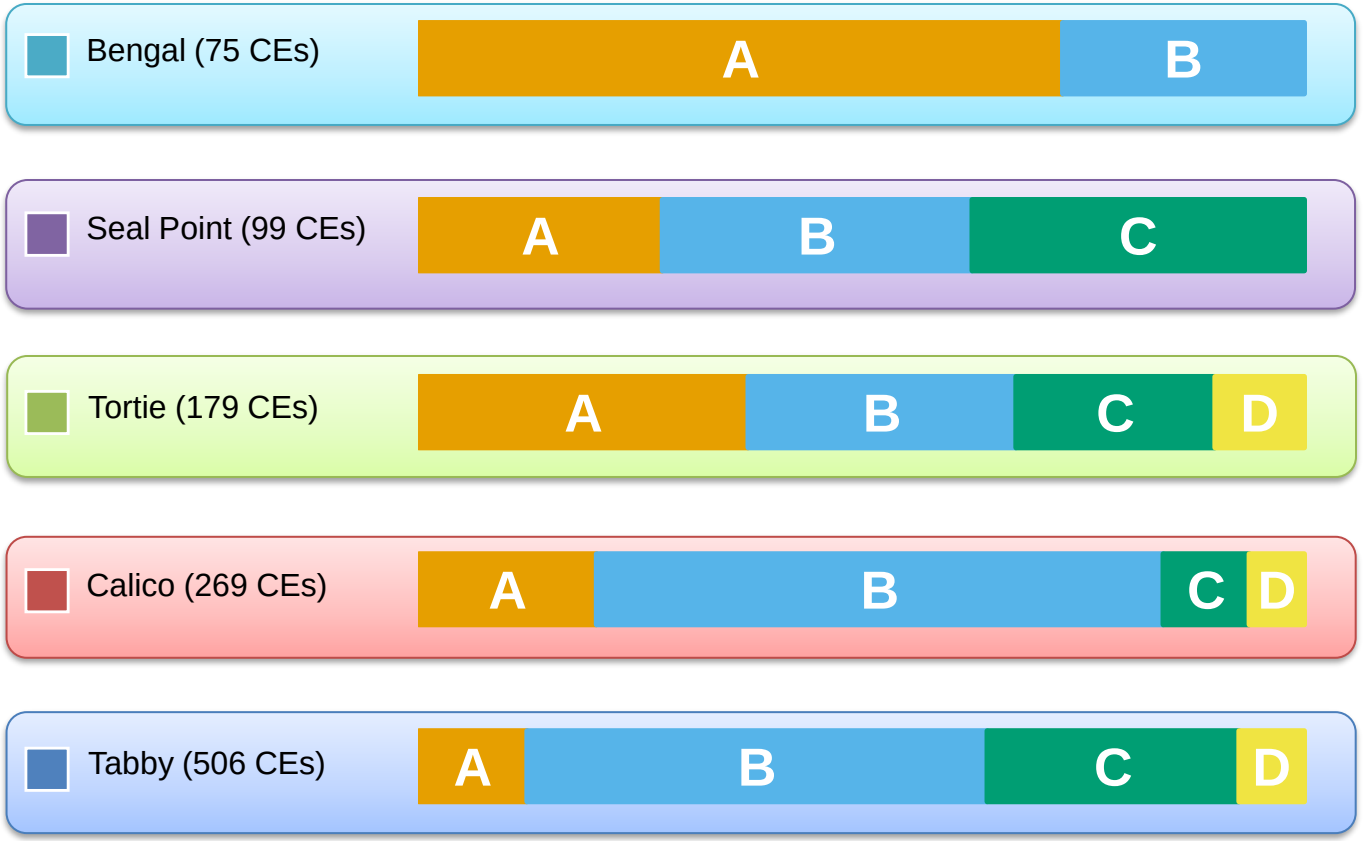
1 Apr 2022 and 31 Mar 2023

Cat Breed




```
> rvg::dml(ggobj = my_ggplot)
```

Cat Grade




```
> mscharts::ms_barchart()
```

Thank you for your attention!

- All code and materials available on my github:

https://github.com/jennyrieck/auto-slide-deck-officer

- Other helpful resources:
  - officer for PowerPoint
  - officer vignette
  - charts with mschart
  - Up and running with officedown
  - PowerPoint slides in R via officer: A handholding guide