Graphic Design with ggplot2

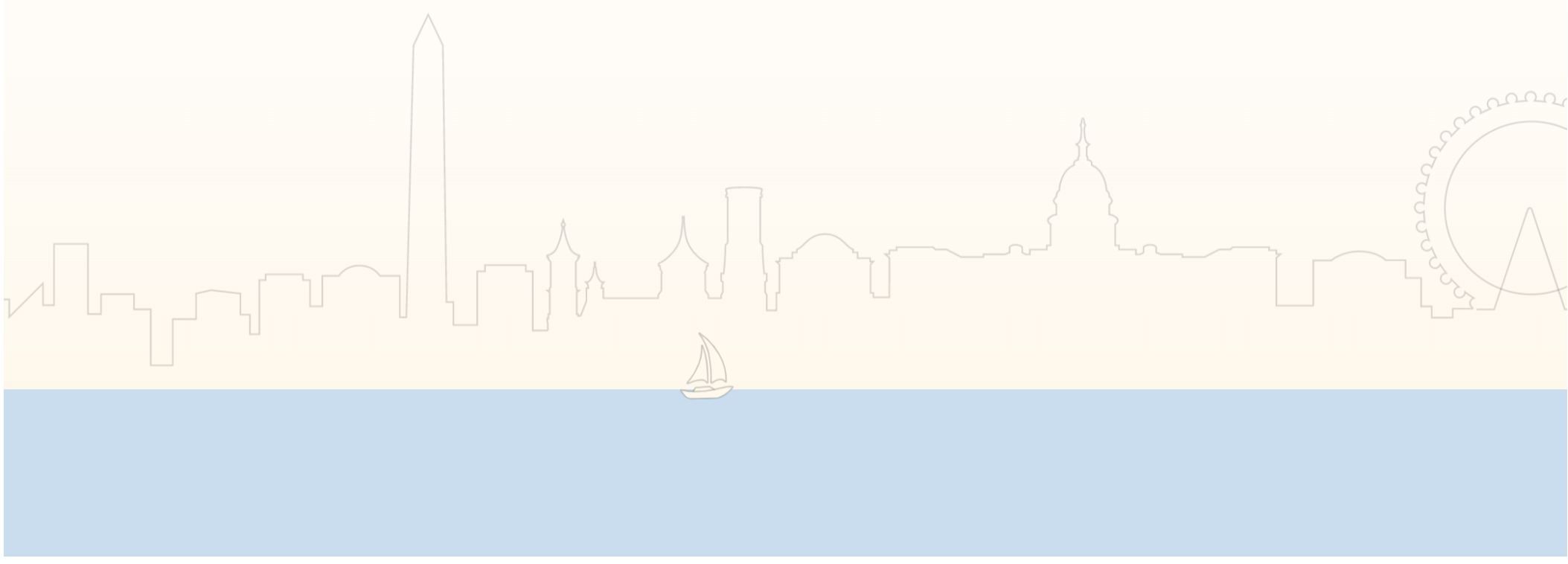
Working with Labels and Annotations:
Solution Exercise 2

Cédric Scherer // rstudio::conf // July 2022

- **Create this logo:**

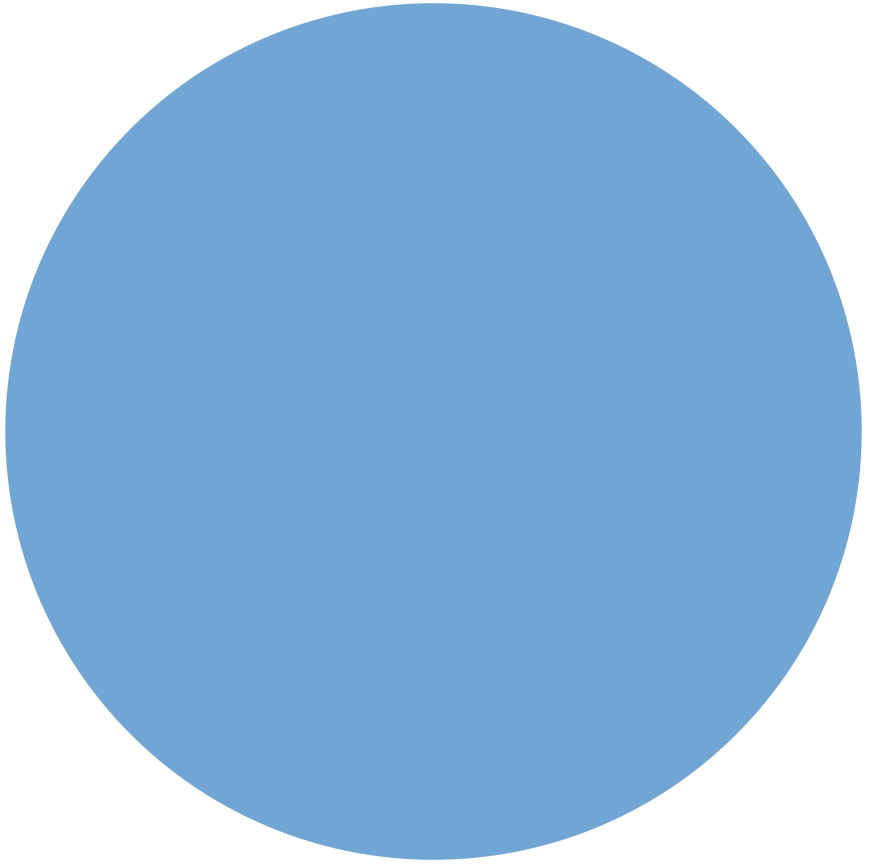
Load and Modify Image

```
1  skyline <- magick::image_read(here::here("exercises", "img", "rstudioconf-washington-bg.png"))
2
3  skyline
```



Create a Blue Dot

```
1  library(tidyverse)
2
3  ggplot(mapping = aes(x = 0, y = 0)) +
4    geom_point(
5      color = "#71a5d4", size = 150
6    ) +
7    xlim(-5, 5) +
8    ylim(-5, 5) +
9    theme_void()
```



Add the “R”

```
ggplot(mapping = aes(x = 0, y = 0)) +
  geom_point(
    color = "#71a5d4", size = 150
  ) +
  geom_text(
    label = "R", size = 80,
    family = "Tabular",
    color = "white"
  ) +
  xlim(-5, 5) +
  ylim(-5, 5) +
  theme_void()
```

Add the rstudio::conf Skyline

```
ggplot(mapping = aes(x = 0, y = 0)) +
  annotation_custom(
    grid::rasterGrob(
      image = skyline,
      x = .5,
      y = .5
    )
  ) +
  geom_point(
    color = "#71a5d4", size = 150
  ) +
  geom_text(
    label = "R", size = 80,
    family = "Tabular",
    color = "white"
  ) +
  xlim(-5, 5) +
  ylim(-5, 5) +
  theme_void()
```

Position the rstudio::conf Skyline

```
ggplot(mapping = aes(x = 0, y = 0)) +
  annotation_custom(
    grid::rasterGrob(
      image = skyline,
      x = .5,
      y = .1
    )
  ) +
  geom_point(
    color = "#71a5d4", size = 150
  ) +
  geom_text(
    label = "R", size = 80,
    family = "Tabular",
    color = "white"
  ) +
  xlim(-5, 5) +
  ylim(-7.5, 5) +
  theme_void()
```

Position the rstudio::conf Skyline

```
ggplot(mapping = aes(x = 0, y = 0)) +
  annotation_custom(
    grid::rasterGrob(
      image = skyline,
      x = .5,
      y = -.2
    )
  )  +
  geom_point(
    color = "#71a5d4", size = 150
  ) +
  geom_text(
    label = "R", size = 80,
    family = "Tabular",
    color = "white"
  ) +
  coord_cartesian(clip = "off") +
  xlim(-5, 5) +
  ylim(-5, 5) +
  theme_void() +
  theme(
    plot.margin = margin(t = 30, b = 120)
  )
```

Change Background Color

```
ggplot(mapping = aes(x = 0, y = 0)) +
  annotation_custom(
    grid::rasterGrob(
      image = skyline,
      x = .5,
      y = .1
    )
  ) +
  geom_point(
    color = "#71a5d4", size = 150
  ) +
  geom_text(
    label = "R", size = 80,
    family = "Tabular",
    color = "white"
  ) +
  xlim(-5, 5) +
  ylim(-7.5, 5) +
  theme_void() +
  theme(
    plot.background = element_rect(
      fill = "#fffdf9", color = "#fffdf9"
    )
```

Save the Plot

```
1 ggsave(here::here("exercises", "plots", "05_annotations_ex2.png"),
2        width = 5, height = 6, dpi = 300)
```

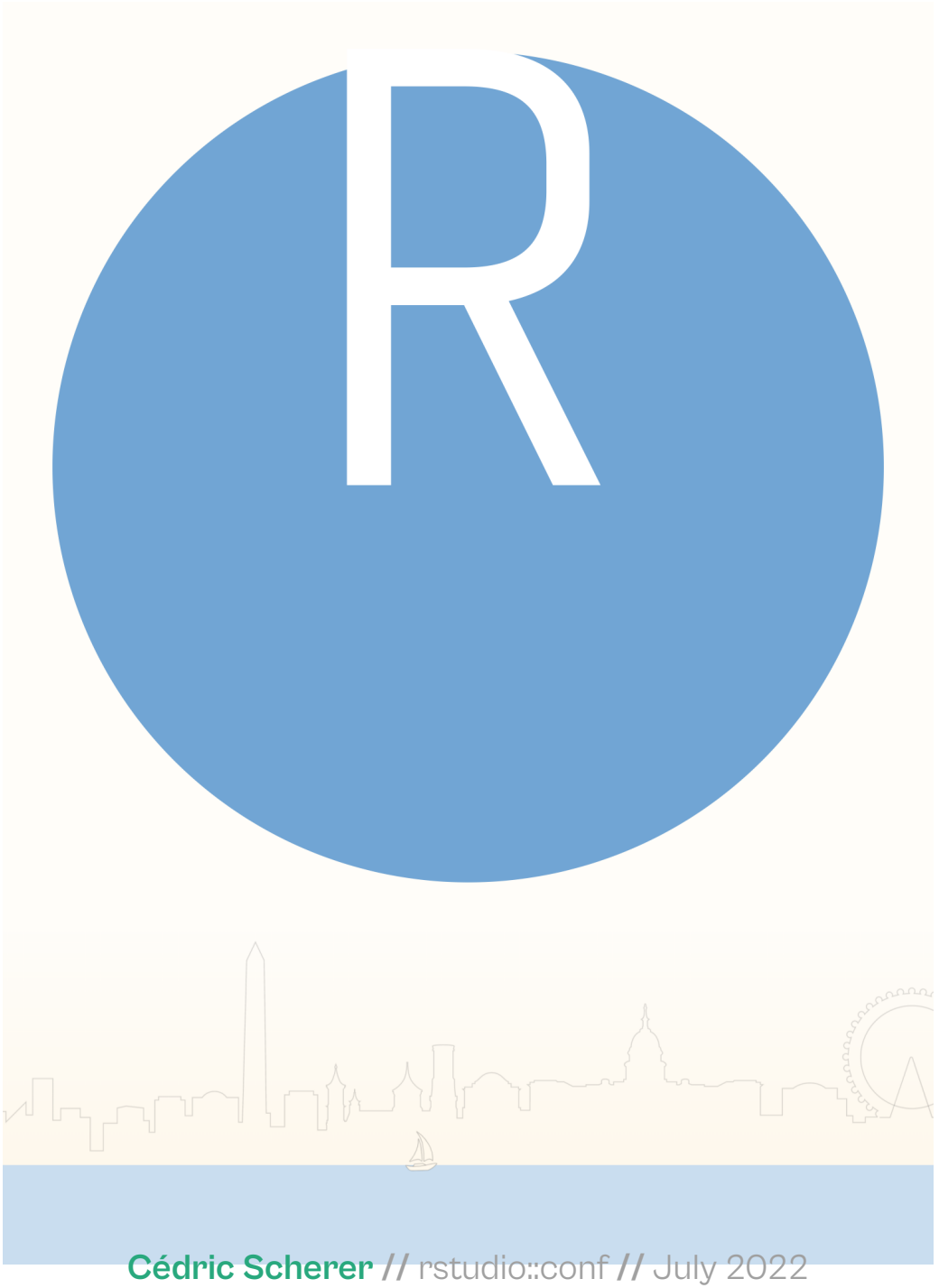
Or: Combine Images with {magick}

```r
g <- ggplot(mapping = aes(x = 0, y = 0)) +
  geom_point(color = "#71a5d4", size = 150) +
  geom_text(
    label = "R", size = 80,
    family = "Tabular", color = "white"
  ) +
  theme_void()  +
  theme(plot.background = element_rect(fill = "#fffdf9", color = "#fffdf9"))
```

```r
ggsave(plot = g, filename = here::here("exercises", "img", "rstudio-dot.png"),
       width = 5, height = 5, dpi = 3600)
```

Or: Combine Images with {magick}

```
1 library(magick)
2
3 dot <- image_read(here::here("exercises", "img", "rstudio-dot.png"))
4 img <- c(dot, skyline)
5 img <- image_append(image_scale(img, "1500"), stack = TRUE)
6 image_write(img, path = here::here("exercises", "plots", "05_annotations_ex2_combined.png"), format
```



Cédric Scherer // rstudio::conf // July 2022