

# Building Capacity in R in Consulting

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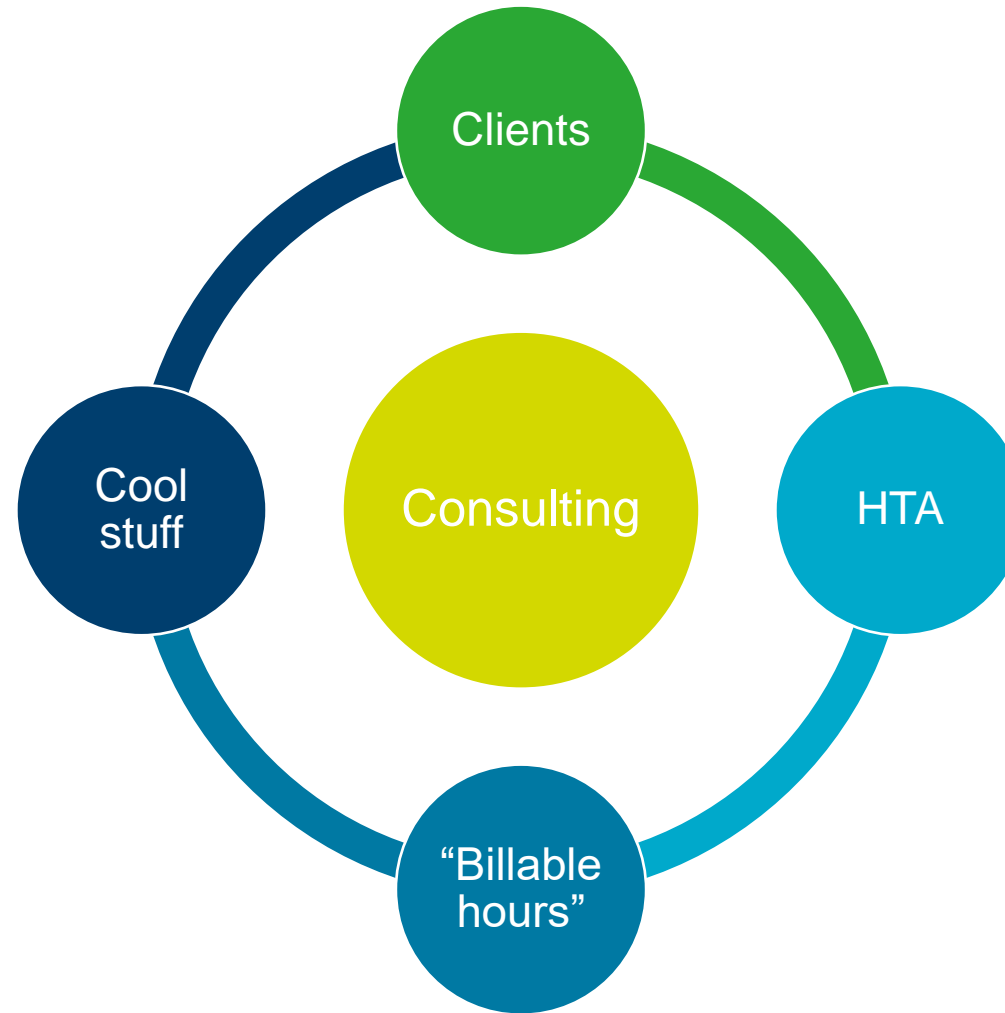


# Disclaimer

This deck represents my experience over the years in Consulting. It is not an endorsement from my employer and is not necessarily the opinion of my employer.



# Consulting is at an exciting intersection in HEOR Modelling



# HEOR Consulting has a variable need for experience in R

- From 0% to ~25% of modelling projects in R \*
  - either because it makes sense (e.g. dynamic modelling)
  - or because it is requested by our client;
  - I have never encountered a project where past submissions were the primary reason for choosing R
- Most of the interactive layers are now in R (R-Shiny):
  - model dashboard,
  - early CEM,
  - model overlay for a non-modeller audience
  - ...

# HEOR Consulting and recruiting talented R modellers

## Facilities

- › Flexible IT partner for a quick integration of new R versions, tools (Quarto e.g.) and server environments (Shiny in a sandbox)
- › Quick exchange with stats / biostats teams for best practices, problem-solving, reusing infrastructure, etc.
- › Hiring possible by specialisation (“R programmer”) rather than by domain (“HEOR”)

## Difficulties

- › Young modellers are often exposed to R in their curriculum. Exposure varies from the basics to some experience ... but in statistics
- › Hiring experienced R programmers: lack of health economics/modelling background
- › Currently, most experienced modellers (in the Consulting market) are proficient in Excel, less (if at all) in R. This is an issue for mentoring younger modellers
- › Turnover (project sustainability)

# Therefore, HEOR Consulting usually builds a rigorous R programming environment

- › Inspired/shared from biostats, and clinical trial analysts (highly regulated, reproducible and open ... with the regulator)
- › Bootstrapping from Regulatory Guidelines and Standard Operating Procedures (with some more flexibility in implementation)
- › Standardized environment (.RProfile) based on RStudio
- › Style guide (a mix between Google's and tidyverse's) with enforcement via styler and lintr (RStudio) → more accessible to read, share, and verify
- › Validated package repository (4 types of packages)
- › Company-wide version control server (GitLab)

# Therefore, HEOR Consulting is trying to build an R programming curriculum

## Challenges:

- › Time availability
- › Capacity (cf. most experienced modellers are more proficient in Excel)
- › Importance of learning R tools and environment (in addition to “just” modelling)

## Solutions:

- › Assemble a patchwork of resources, “pearl-growing” learning method
- › Bootstrap with external support (in-person, virtual, private LLMs)
- › Build an autonomous, interactive learning path (learnr, Rtutor)
- ~~› Build a course~~

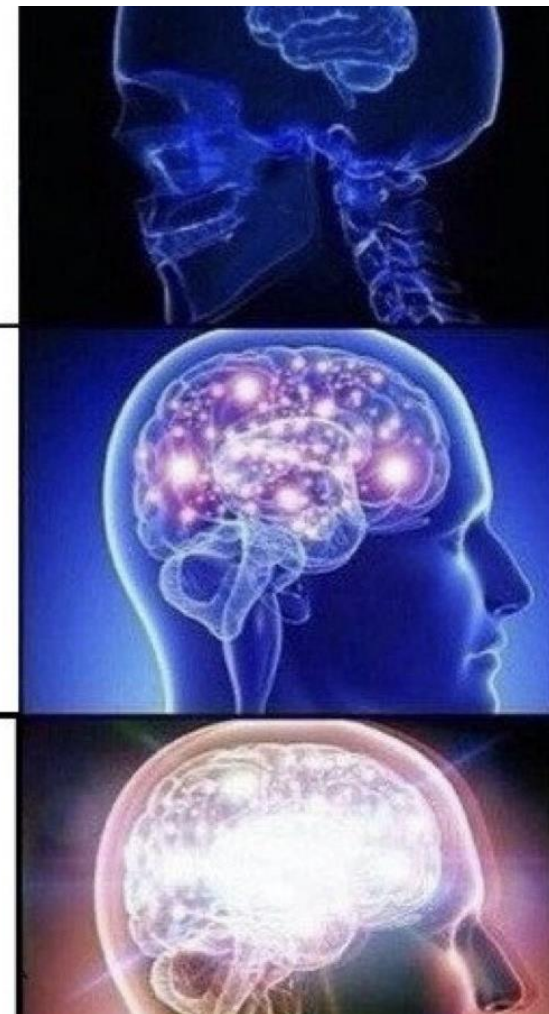
# How can we build better capacity for the R/HEOR future?

- Improve theoretical (programming) and practical (hands-on) training in HEOR in R
- Share:
  - programming best practices and success stories
  - where, when and how R helped deliver HEOR models (awareness)
  - pitfalls (and how to recover from them)
- Encourage/Suggest using R to client (when appropriate)

**TREEAGE**

**EXCEL**

**R**







# Thank you!

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*With Heart*™

