



# Welcome to the Tidyverse

## An Introduction To Data Science

Teon Brooks



# Our Day

12:00-12:15 PM	Introduction
12:15-1:00 PM	Getting Started
1:00-1:15 PM	Break
1:15-1:45 PM	Data Basics
1:45-2:00 PM	Break
2:00-2:45 PM	Data Transformations
3:00-4:00 PM	Break
4:00-5:00 PM	Data Visualization 1

# What is Data Science?

"Data science: An interdisciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from data...."

–Wikipedia (abridged)

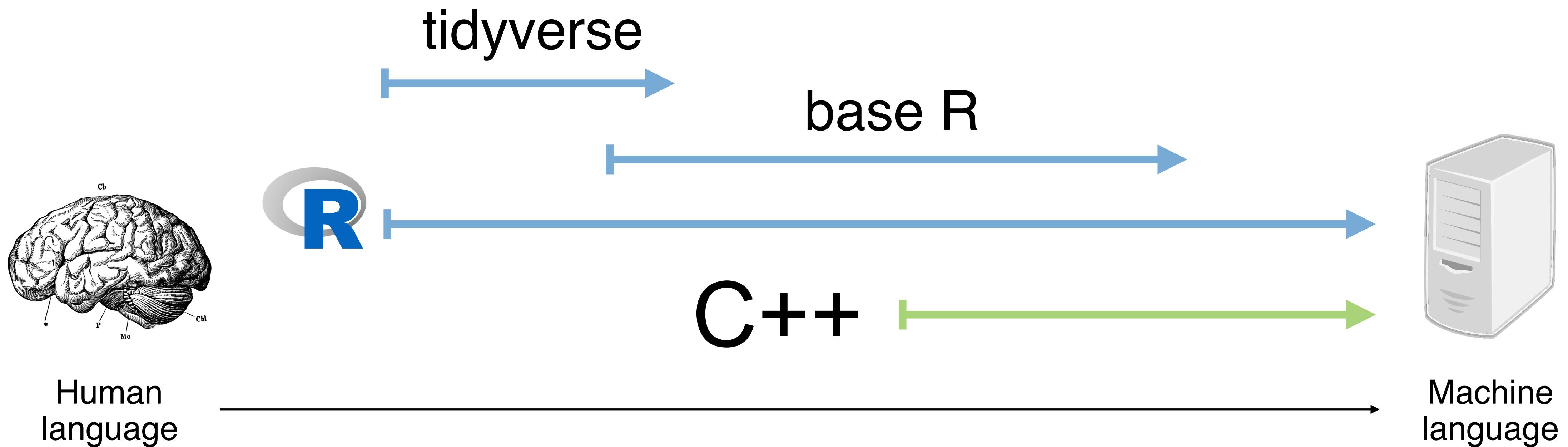
Data Science is the process  
of creating insights using data

R

# Why R?

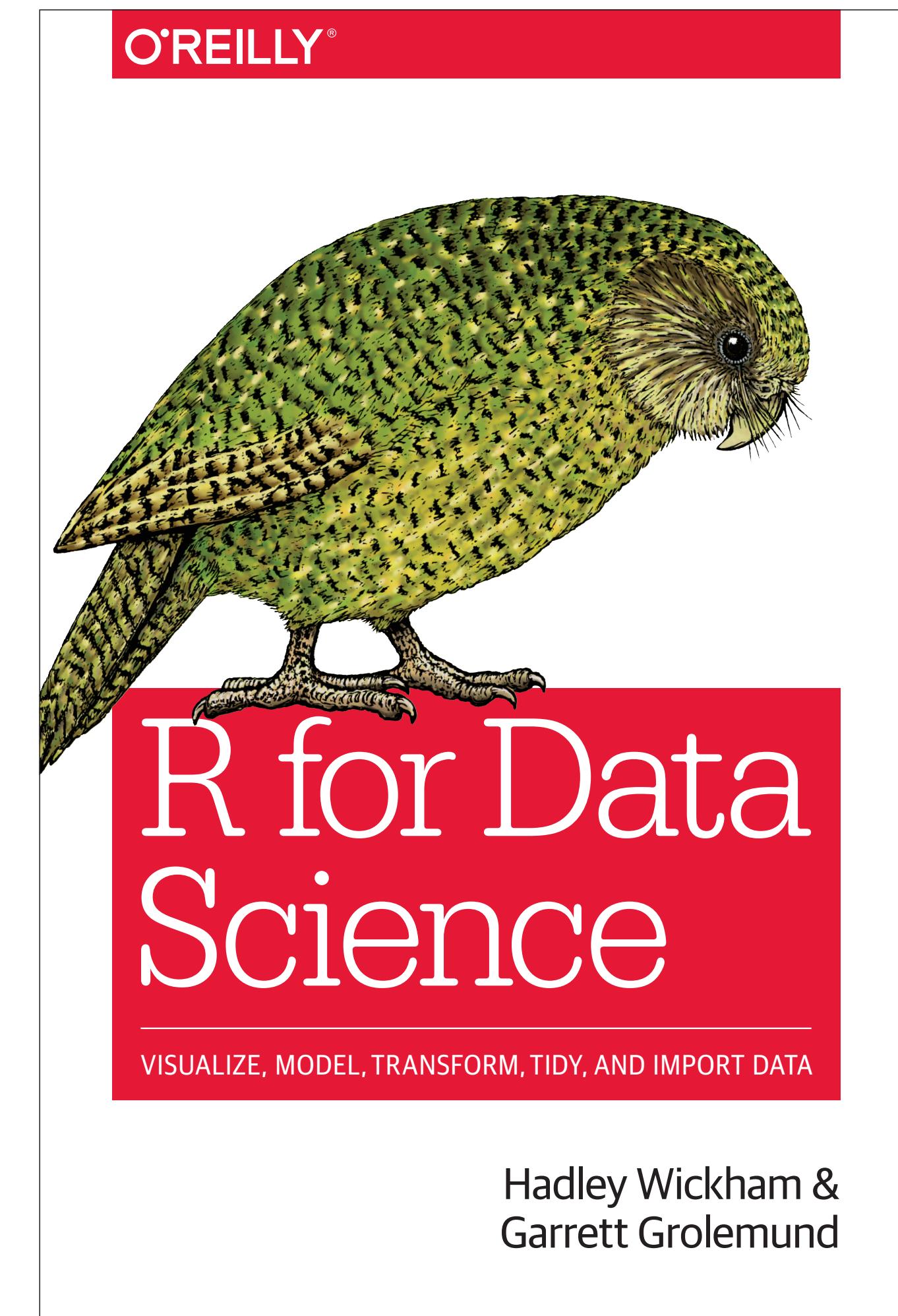
A large, semi-transparent watermark of the letter 'R' is positioned in the bottom right corner of the slide. The 'R' is composed of two overlapping circles, with the top circle being light blue and the bottom circle being white.

# R - A computer language for scientists



Online at:

<http://r4ds.had.co.nz/>



# Document

Single, 9-inch PIE CRUST

$\frac{1}{2}$ C Crisco  
 $\frac{1}{2}$ t salt

Sift flour & salt into bowl. Take out  $\frac{1}{4}$  C flour & set aside. Cut Crisco into remaining water till pieces are size of small peas. Mix water with flour & add paste to other mixture. Mix & shape into ball. Place in pan, flute edges, prick sides to fit 9-in. pan. Roll on floured board and bottom generously with fork, and bake in hot oven (450) for 12 to 15 min.

$1\frac{1}{4}$  C sifted flour  
3 T water

Pastry for:  
H PIE

LATTICE CRUST 9 INCH  
1/3  
2/3 C Crisco  
2 C sifted flour  
1 t salt  
 $\frac{1}{4}$  C water

salt into bowl. Take out  $\frac{1}{3}$  Crisco into remaining flour until the size of small peas. Mix  $\frac{1}{4}$  C flour to form paste. Add flour paste to flour mixture. Mix & shape into a ball. Dough into 2 parts and proceed to make crusts. Use  $\frac{1}{2}$  of the lattice crust recipe for a lattice pie. (in 1/3)  
450° oven - 12-15 min.



# Communicate

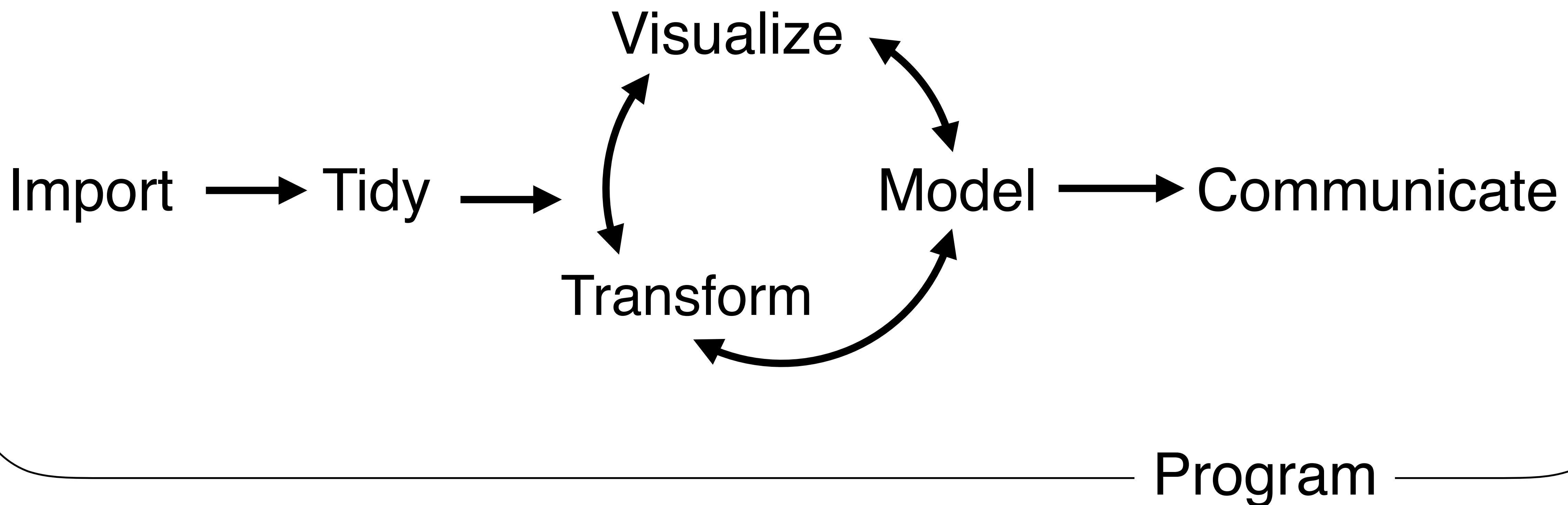
Image credit: Poster Session widdowquinn <https://flic.kr/p/7KD1iU> by cbna

# Automate

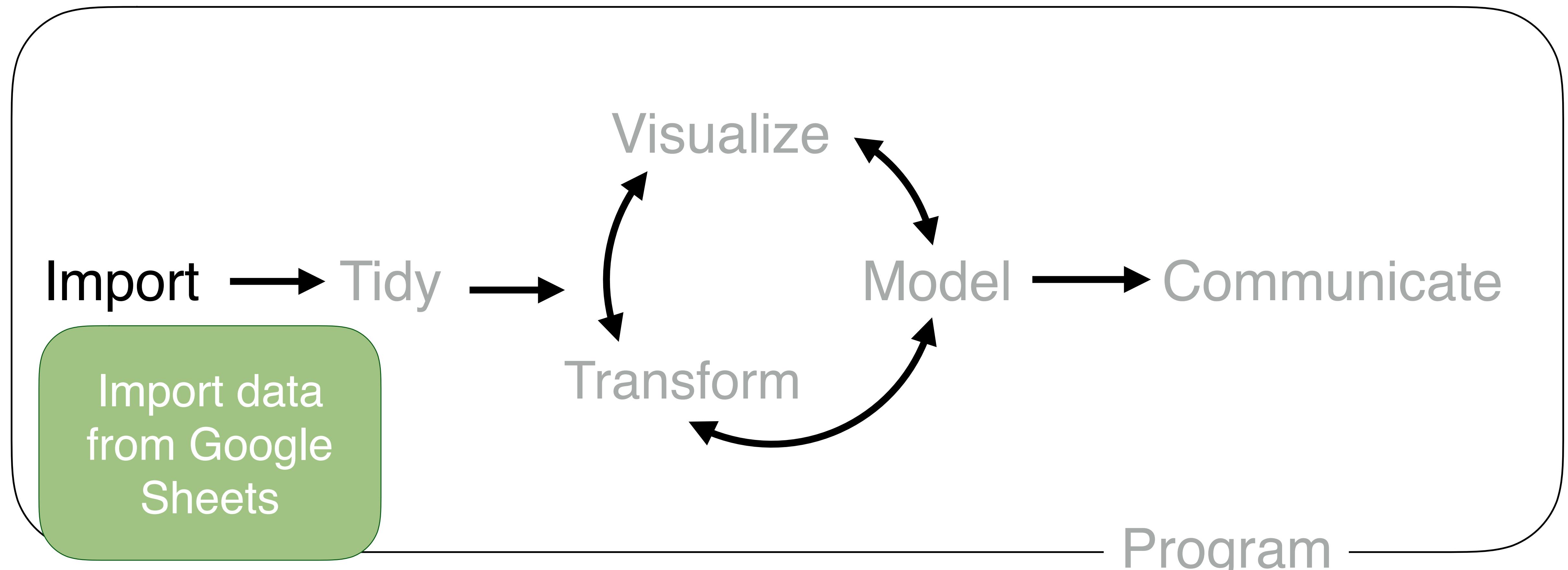
Image credit: Rover 200 Framing Line Spencer Cooper <https://flic.kr/p/cp5WgS> by cbd



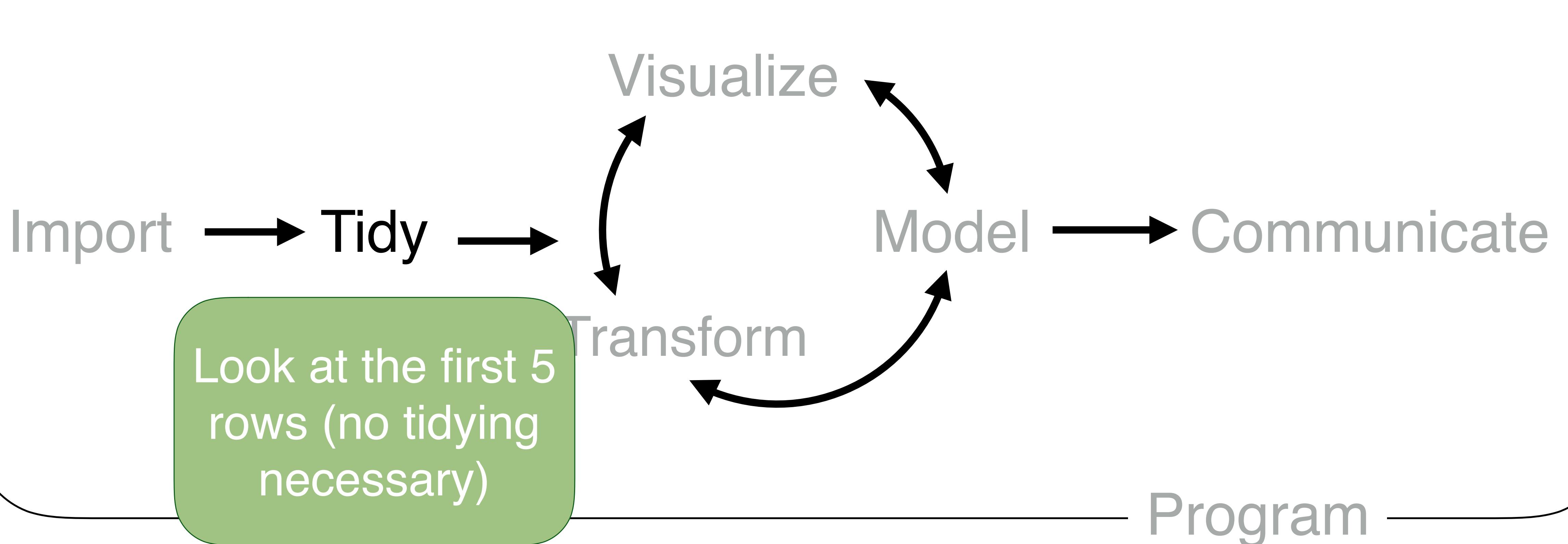
# (Applied) Data Science



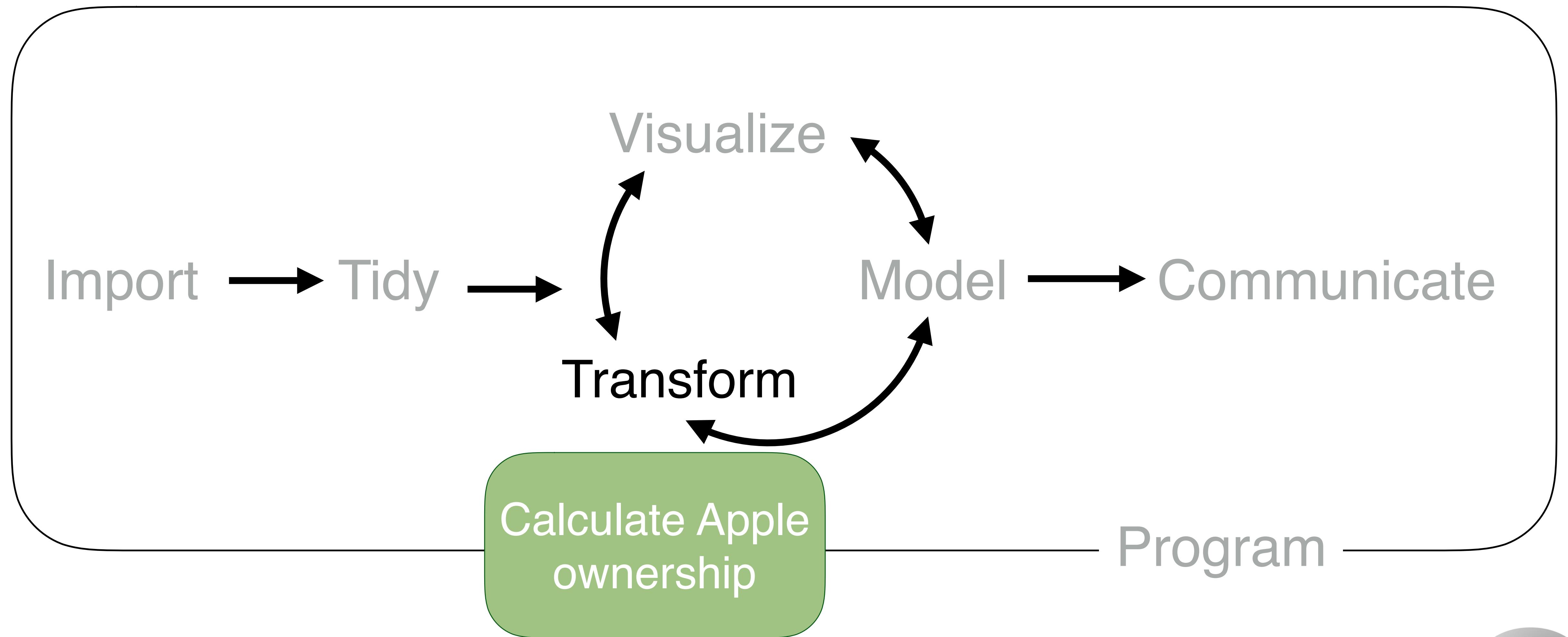
# (Applied) Data Science



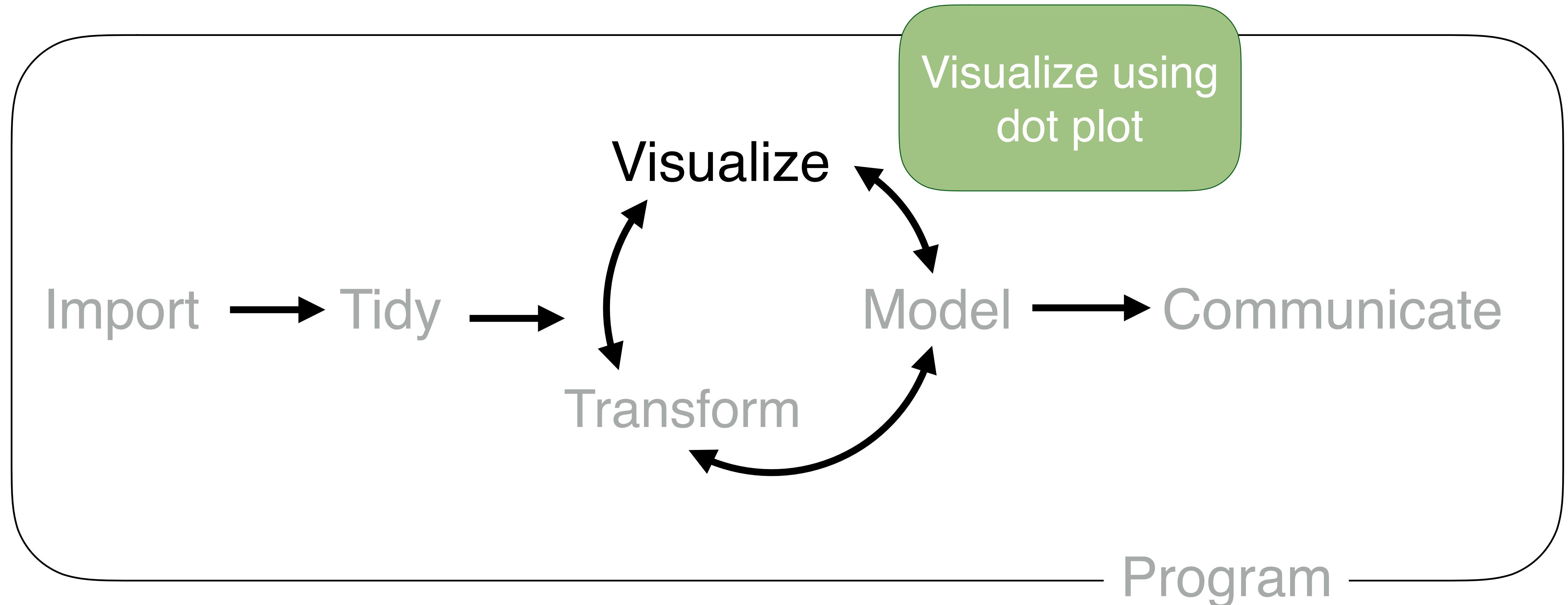
# (Applied) Data Science



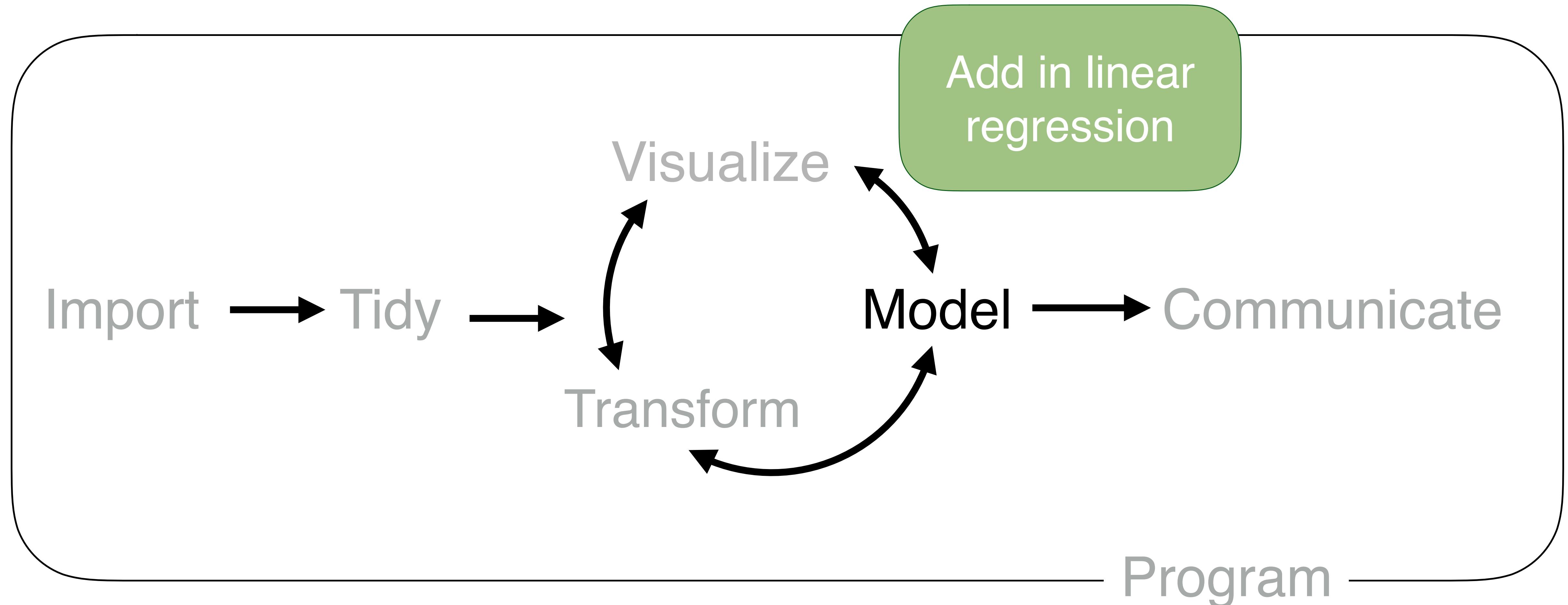
# (Applied) Data Science



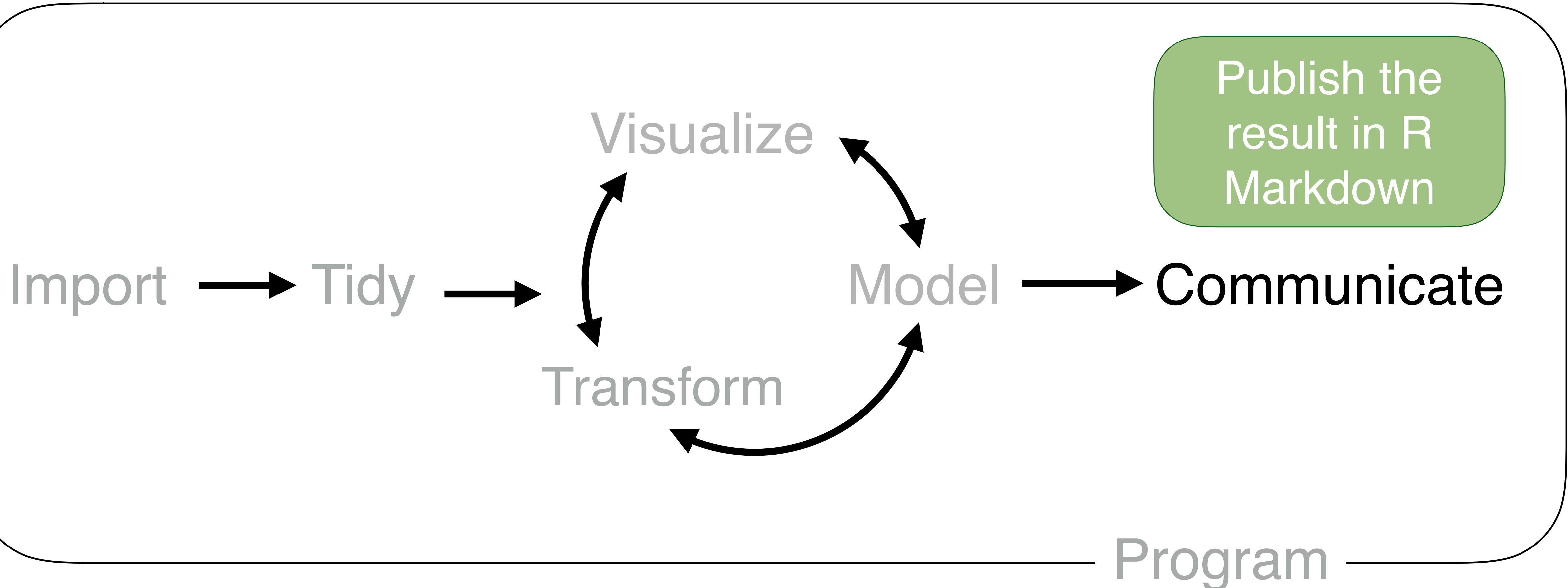
# (Applied) Data Science



# (Applied) Data Science



# (Applied) Data Science



# Summary

In this quick introduction, we've learned

- What data science is
- Why we're teaching data science with R
- A process for creating data science results

Next, we'll dive into the Tidyverse