

# Big Data vs Big Knowledge

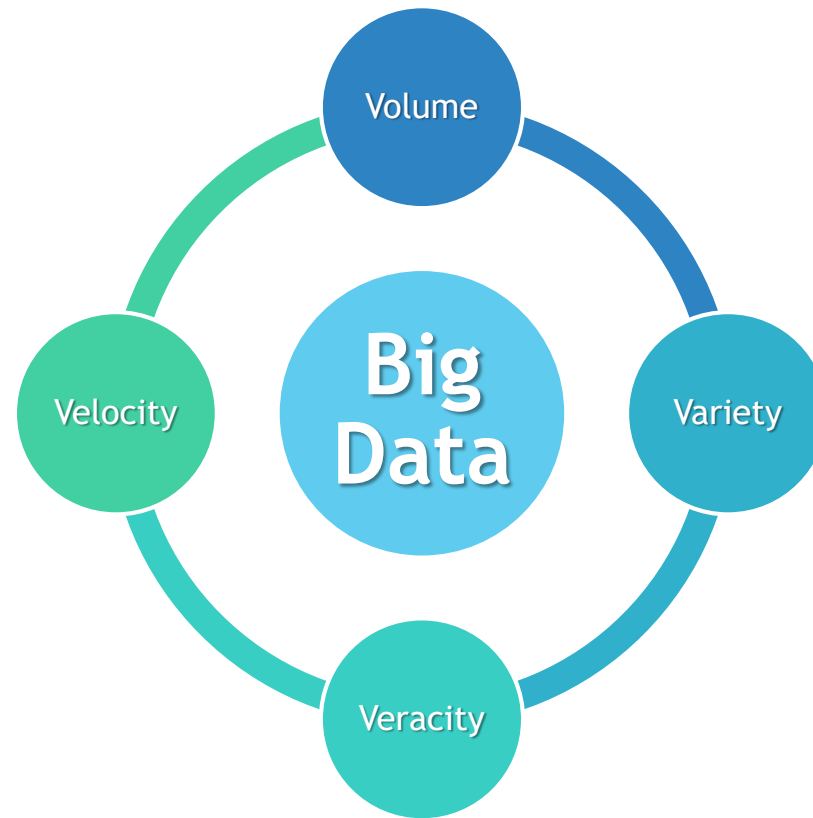
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Boston 2016

# What is NOT Big Data

- ▶ Big Excel sheets
- ▶ Database that can be analyzed by your PC
- ▶ Database that can be uploaded/downloaded in a couple of seconds

# The 4V's



# VALUE!!!!

- ▶ What might be there? What can we do now?
- ▶ What does it mean for the various stakeholders?
- ▶ The output should be actionable and quantitative.

Big Data Analytics is not way to “turn a kilogram of data to a kilogram of powerpoint by turning a crank.”\*

\*P. Grindrod

# Why big data?

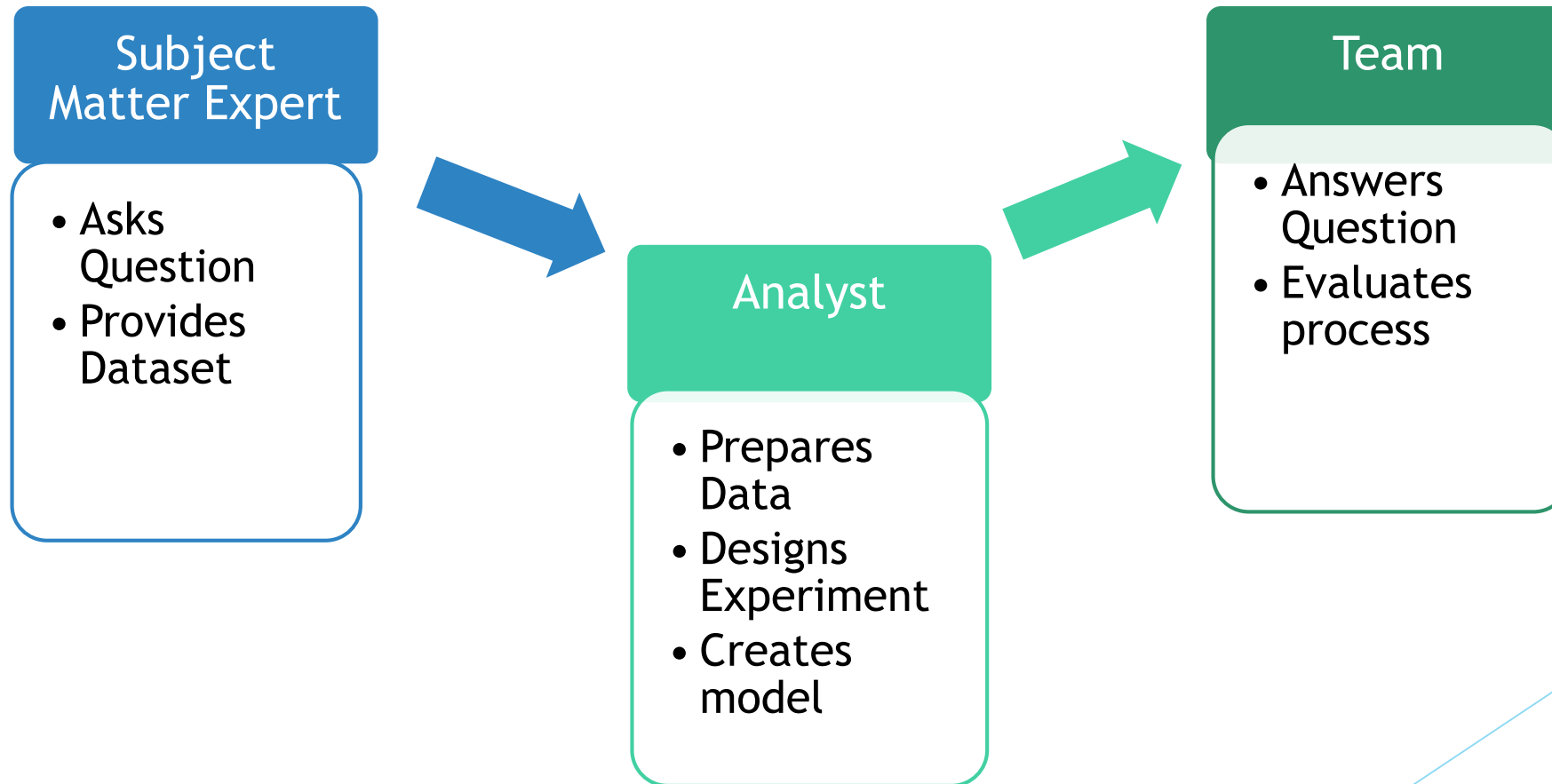
**40 years ago - Data Scarcity**



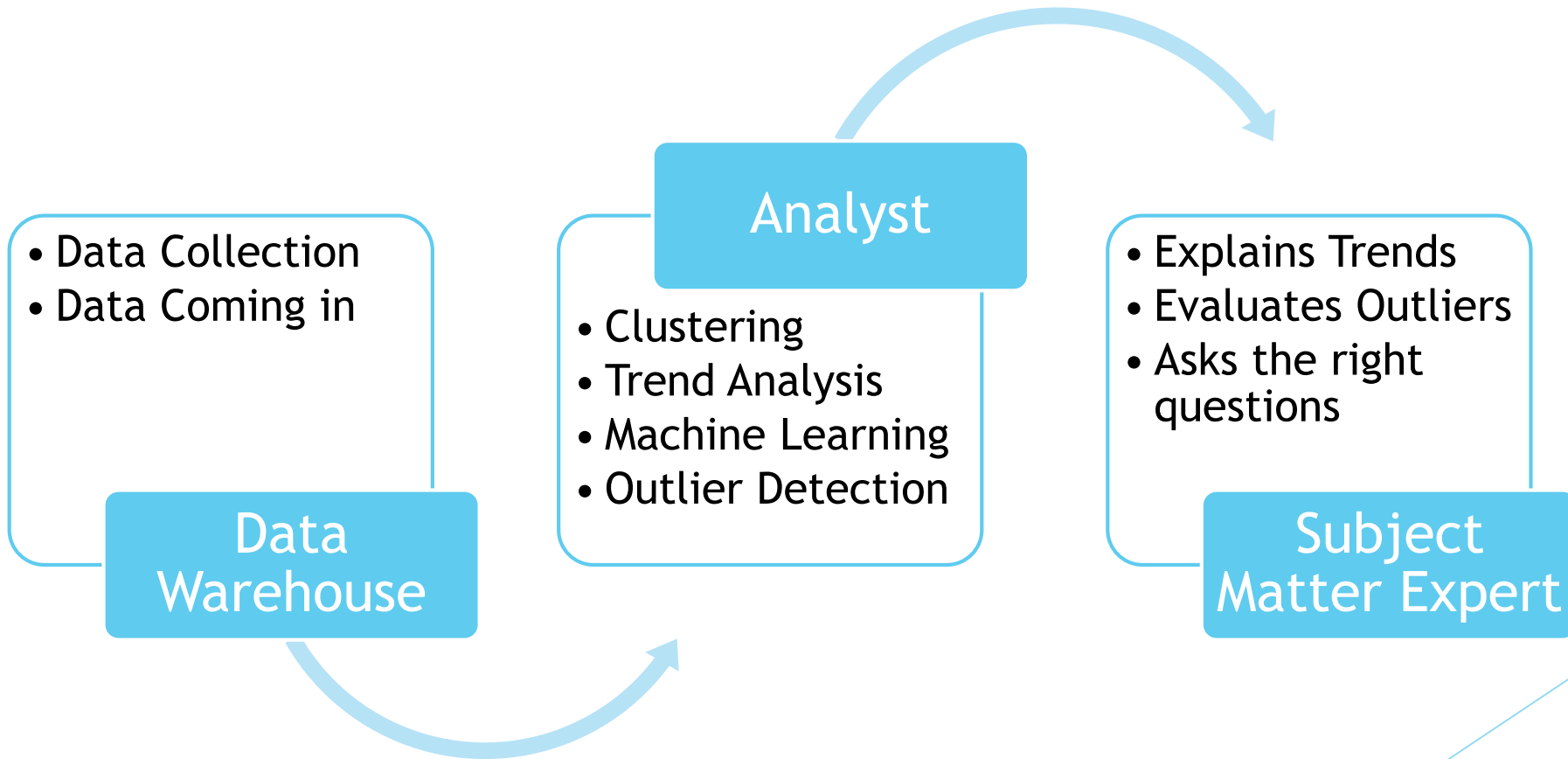
**Today - Big Data Reality**



# Standard Model For Analysis

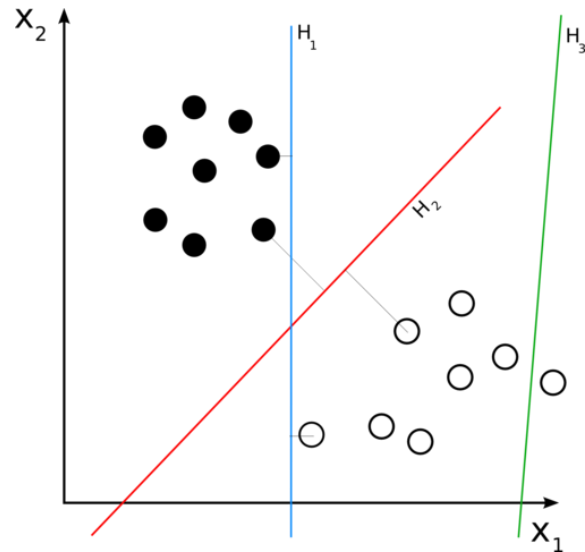


# Big Data Model

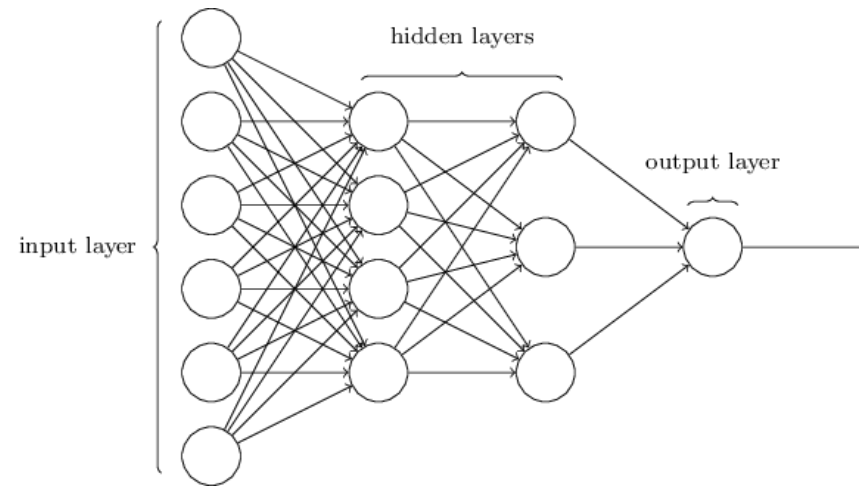


# Analytic Tools

## ► Support Vector Machines



## ► Neural Networks/Deep Learning



**PARALLEL COMPUTING!**



# Big Data in Economics

- ▶ Fraud Detection
- ▶ Customer classification
- ▶ Purchase suggestions
- ▶ Network of clients

# Big Data I know - I am getting into

- ▶ Health Record analysis
- ▶ Networks of “individuals”
- ▶ Gene expression correlations
  
- ▶ Stock market analysis
- ▶ Topographical analysis (drone image analysis)
- ▶ Smart sensors



Laboratory for  
Analytic Sciences

Thank you!

