

# Data-driven Decision Making

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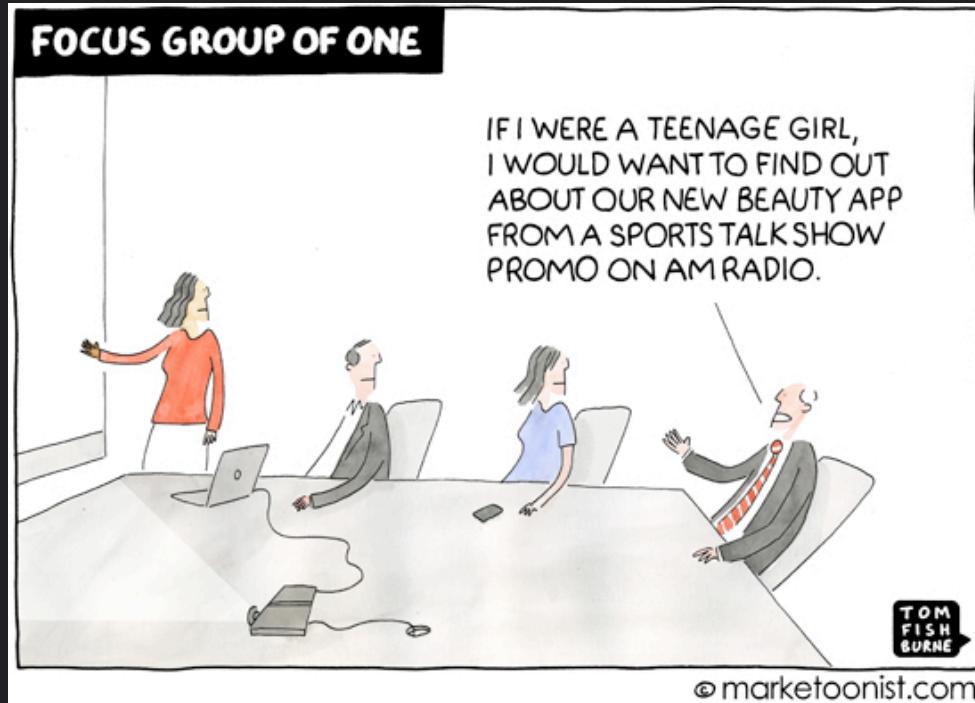
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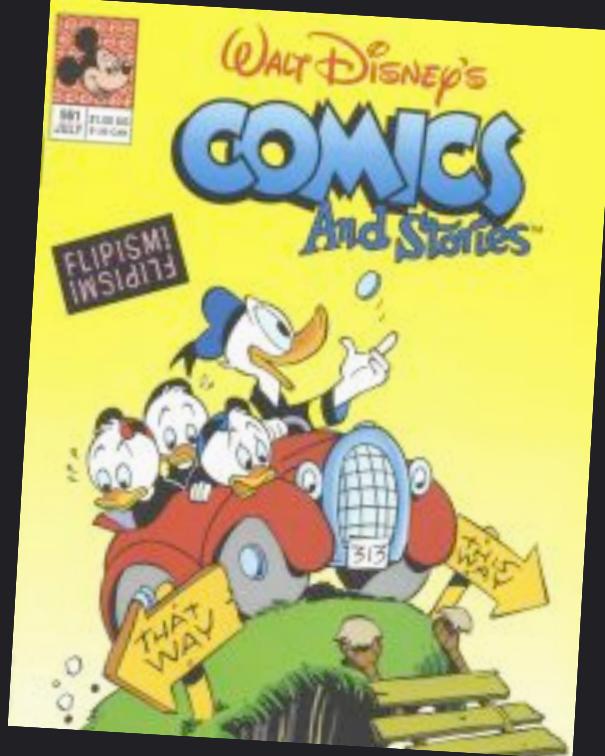
# Taking Decisions

- In many organizations decisions are made by "questionable" methodologies

# Taking Decisions: HiPPO



# Taking Decisions: Flipism



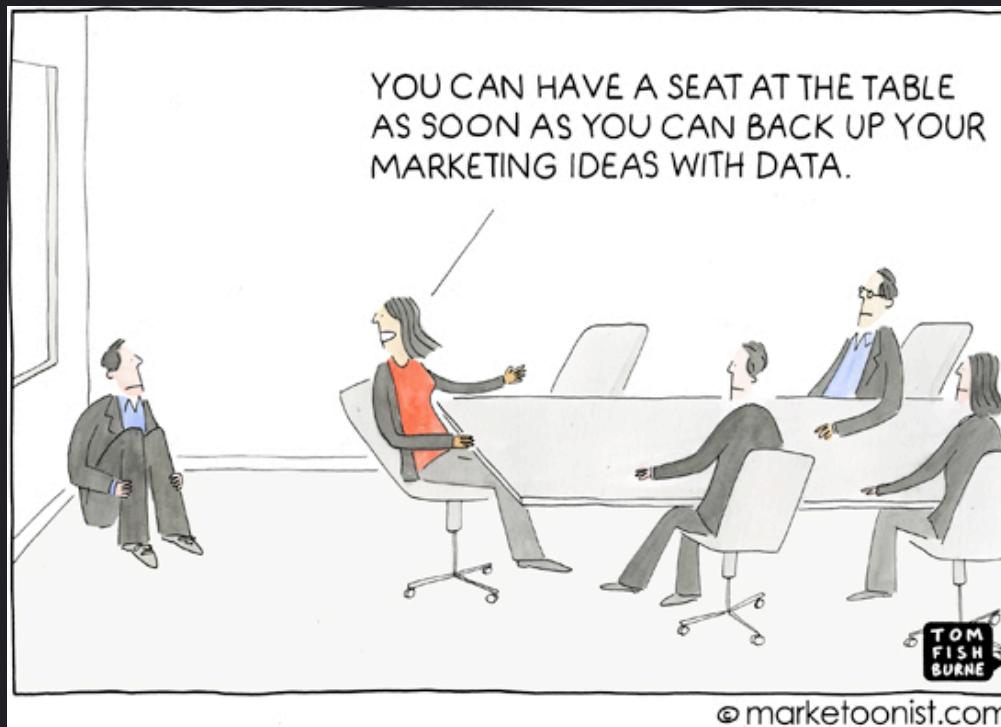
## Taking Decisions (cont.)

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  - **Highest Paid Person Opinion (HiPPO)**
  - **Flipism** (all decisions are made by flipping a coin)
- This could have been the **right** approach **in the '70s** ...
  - See the "Theory of Bounded Rationality" by Herbert Simons

## Taking Decisions (cont.)

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  - **Highest Paid Person Opinion (HiPPO)**
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- This could have been the right approach in the '70s ...
  - See the "Theory of Bounded Rationality" by Herbert Simons
- ... but **in the Digital Era** one can dream of **data-driven organization**

# Taking Decisions: data-driven organization



## Data-Driven Decisions

**Decisions** no longer have to be made in the dark or based on gut instinct; they can be **based on evidence, experiments and more accurate forecasts.**

-- McKinsey

# Data-driven organizations

- **perform better**
  - The data shows where they can streamline their processes
- **are operationally more predictable**
  - Data insights fuel current and future decision making
- **are more profitable**
  - Constant improvements and better predictions help to outsmart the competition and improve innovation.

# It's a streaming world ...

- Off-shore oil operations



- Smart Cities



- Social networks



- Generate **data streams** and **events!**



## ... looking for historical analysis ...

- What is the average time to failure for the different brands of turbine in use?
- What is the maximum delay of the public transport per city district?
- Which content features are correlated to high impact posts?
- Requiring the ability to **store** massive **timeseries** and **process** them in a scalable way

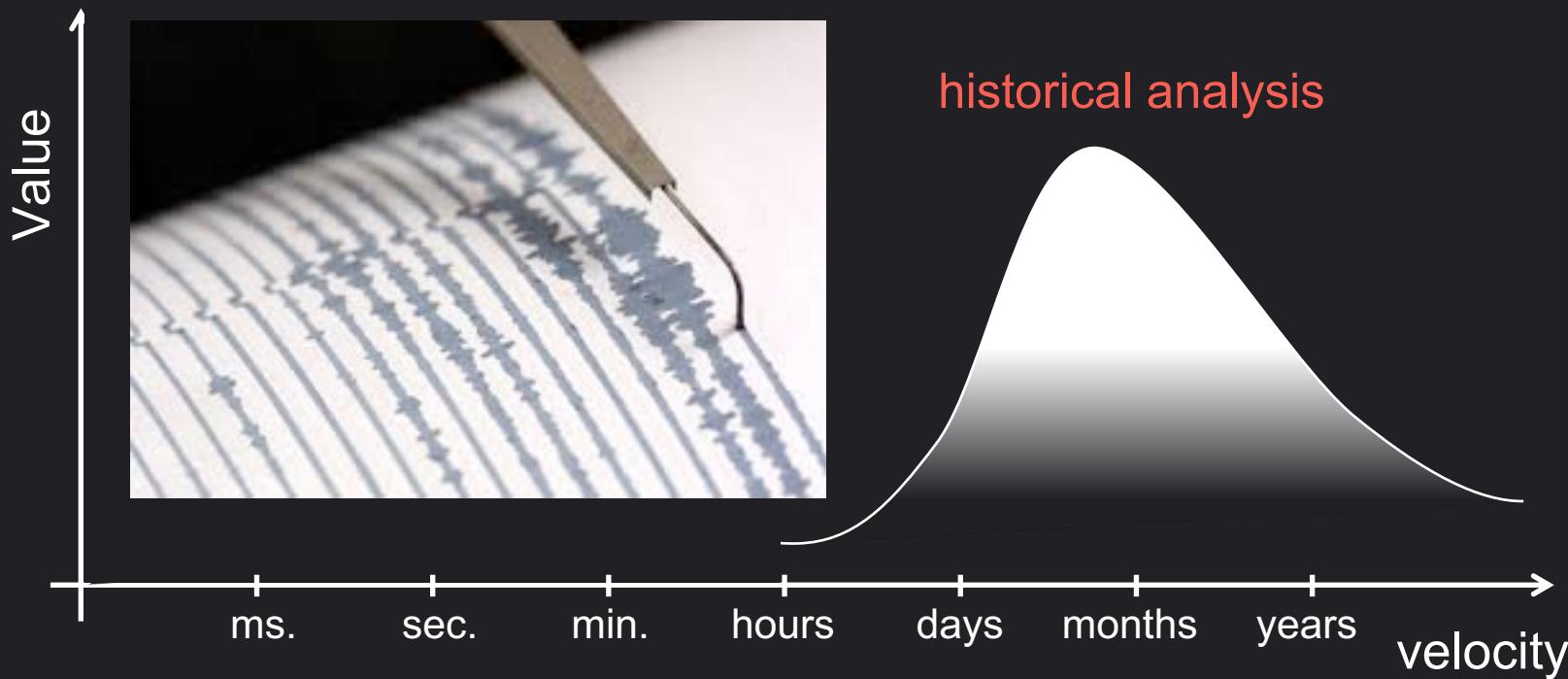


## ... struggling with reactive answers

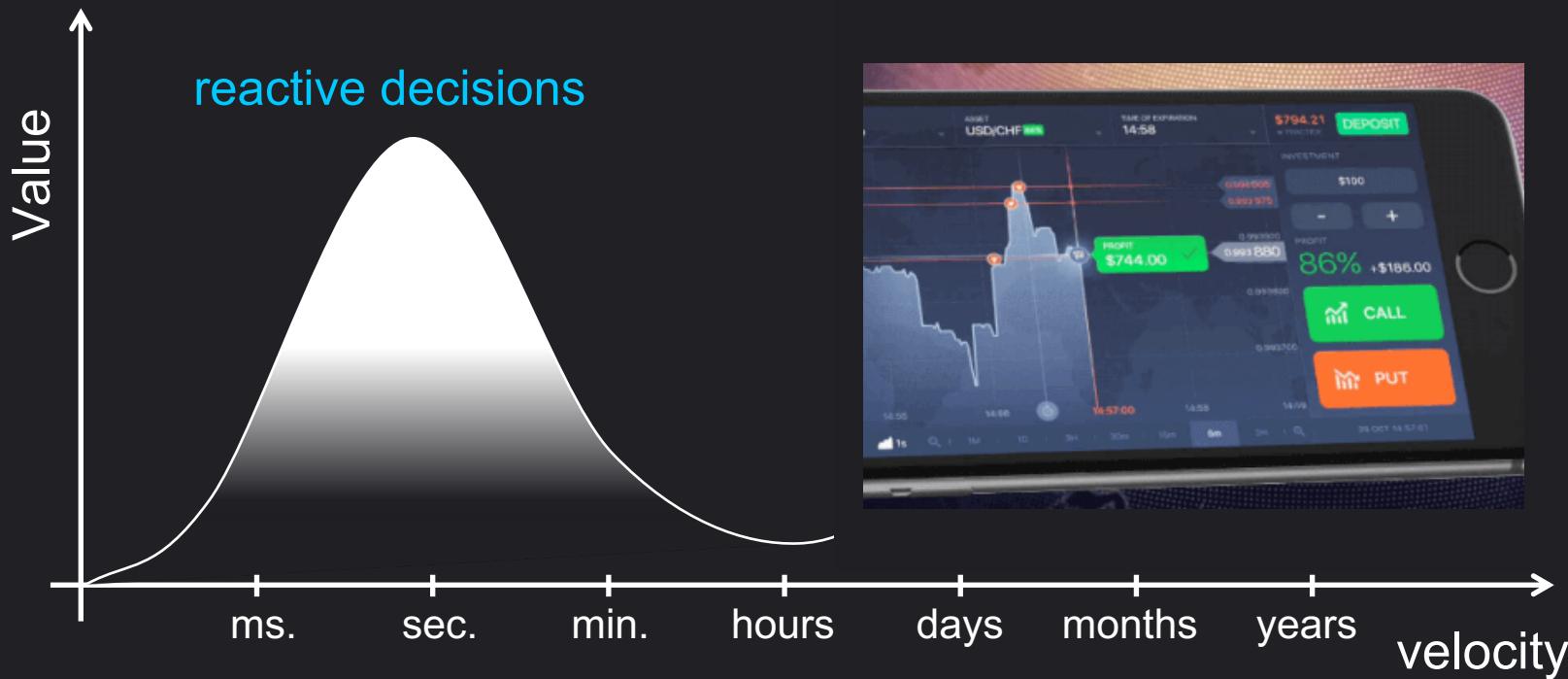
- What is the expected time to failure when that turbine starts to vibrate as detected in the last 10 minutes?
- Can I get to that meeting in the next 15 min using public transport?
- Who is driving the discussion about the top 10 emerging topics?
- Requiring **continuous processing** and **reactive answers**



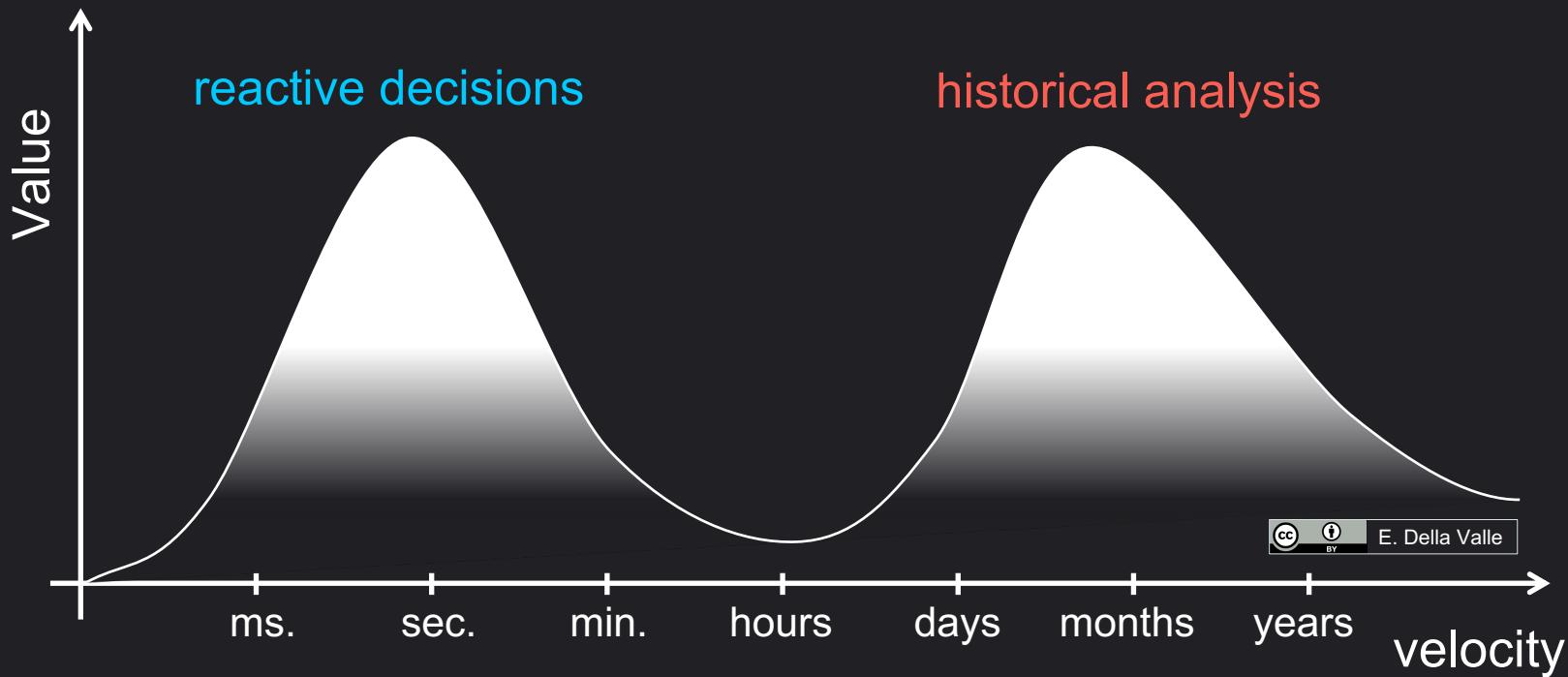
**Because there are two moments to extract value from data**



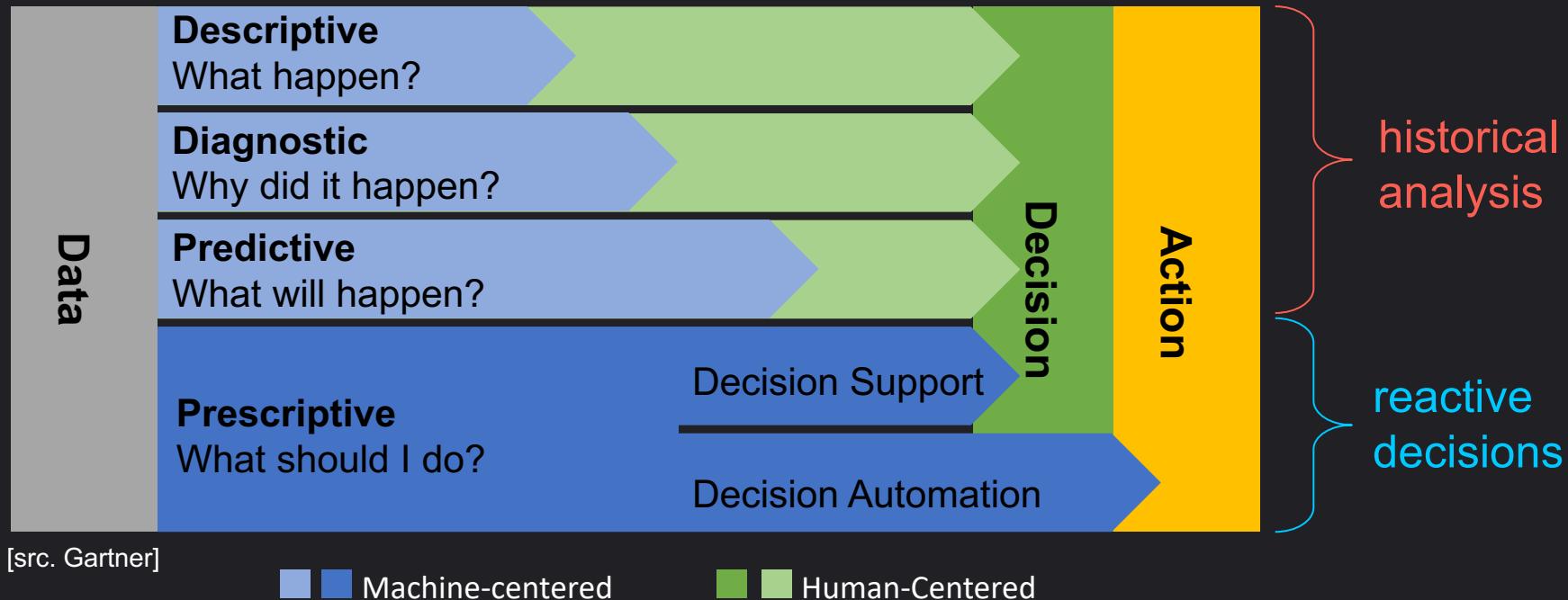
# Because there are two moments to extract value from data



**Because there are two moments to extract value from data**



# Data-driven decision





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