

# KPIs and metrics

MARKETING ANALYTICS FOR BUSINESS



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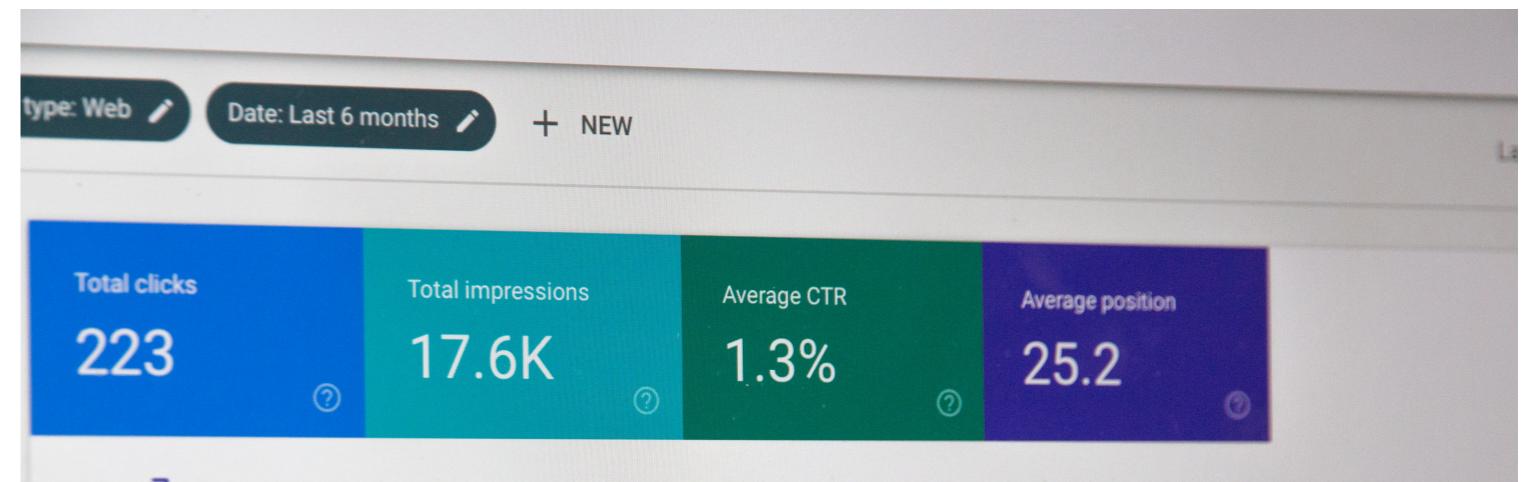
# KPIs versus supporting metrics

**Key Performance Indicator (KPI):** a metric to show marketing impact on the business

- Should be 1-2 maximum
- Linked to business growth
- Directly ties to campaign goal

**Supporting metric:** a metric to monitor for channel health

- Can be several metrics
- Relates to marketing engagement
- Reflect tactic optimizations



<sup>1</sup> RODNAE Productions via Pexels <sup>2</sup> Stephen Phillips Hostreviews.co.uk via Unsplash

# Marketing funnel

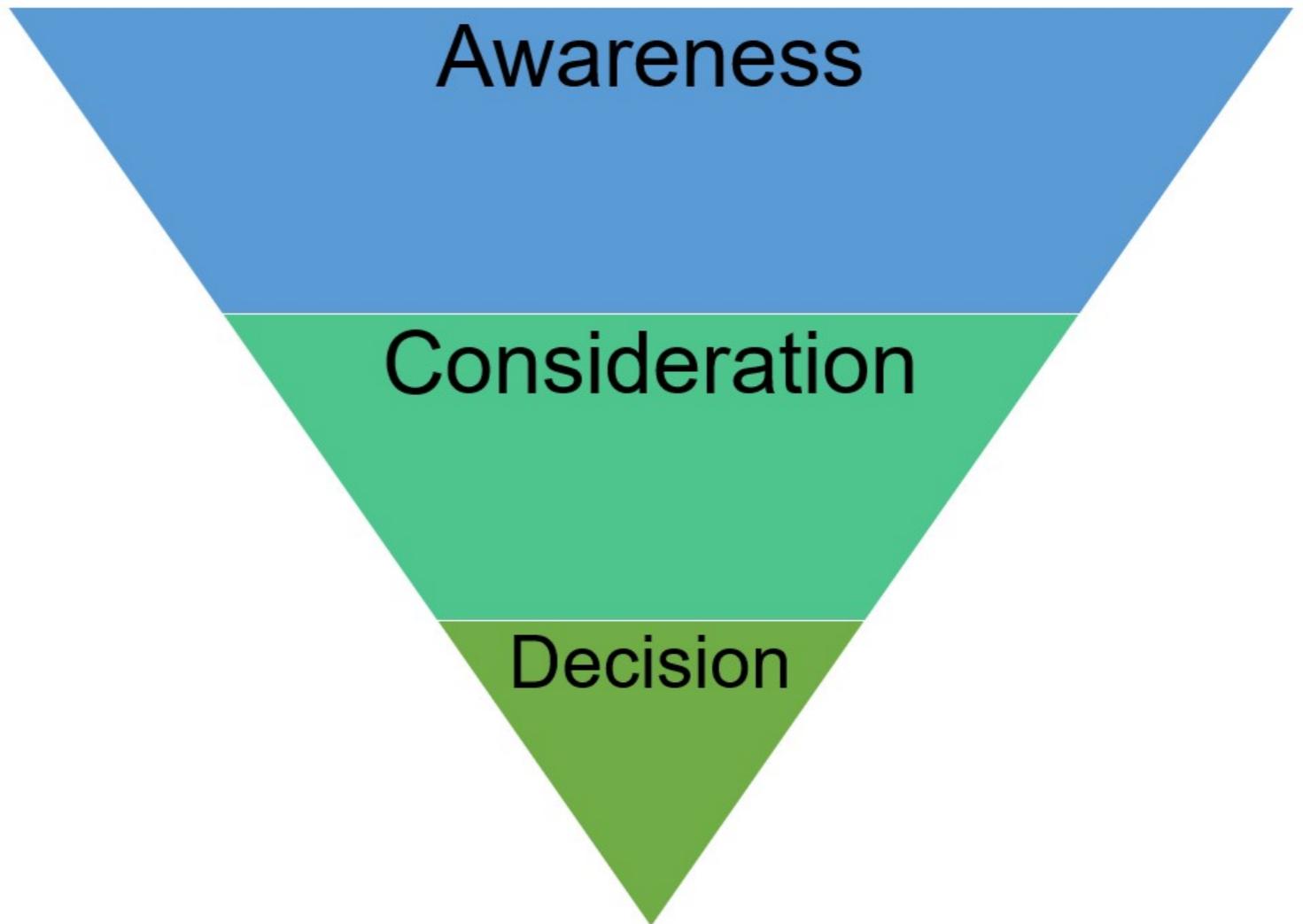


<sup>1</sup> mohamed Hassan from Pixabay

# Marketing funnel: awareness

## Awareness or "upper funnel"

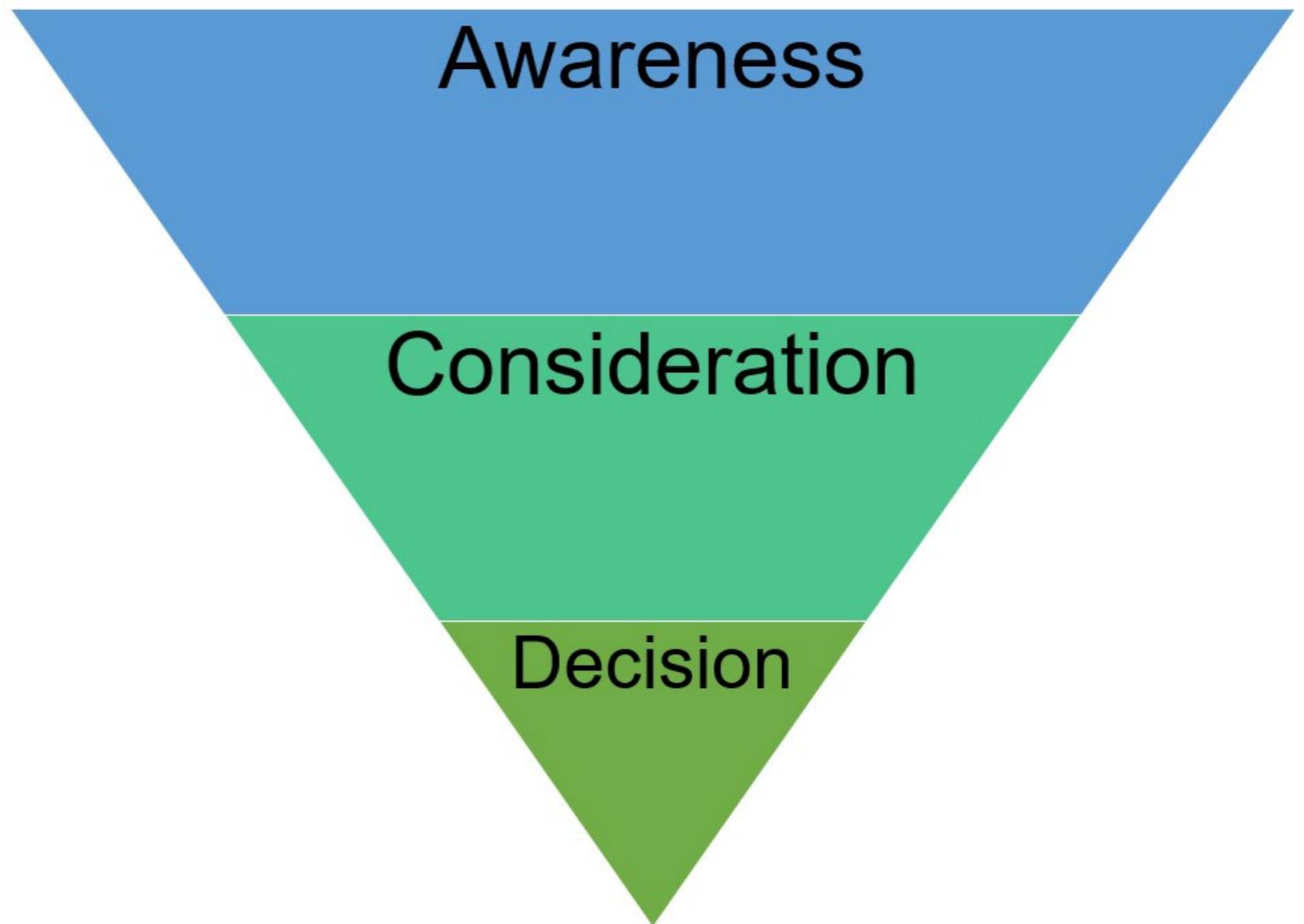
- Make customer aware of brand
- Channels that reach a wide audience like TV or billboards



# Marketing funnel: consideration

## Consideration or "mid funnel"

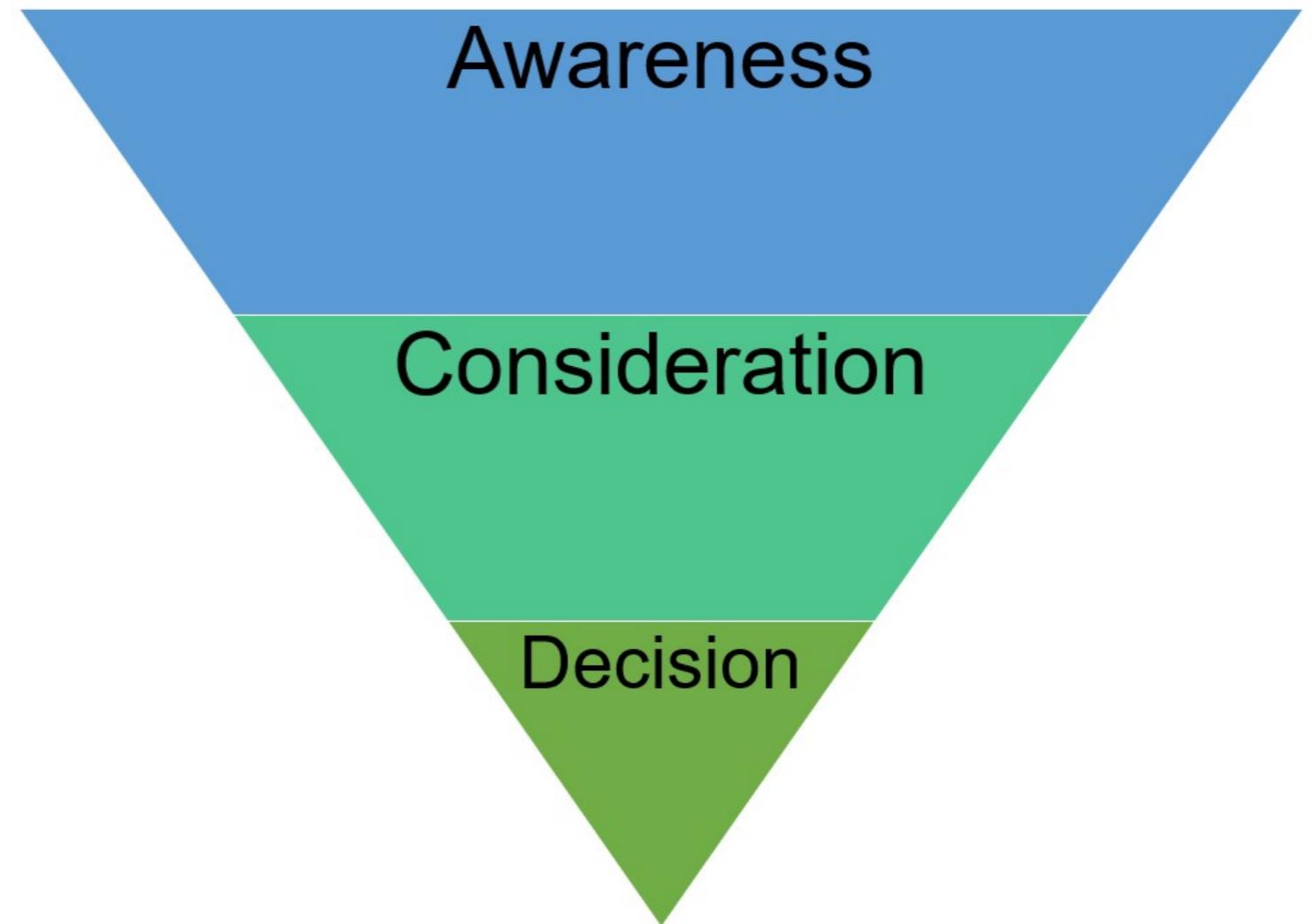
- Channels seen during customer research like display or social media
- Evaluate brand as a purchase option versus other brands



# Marketing funnel: decision

## Decision or "lower funnel"

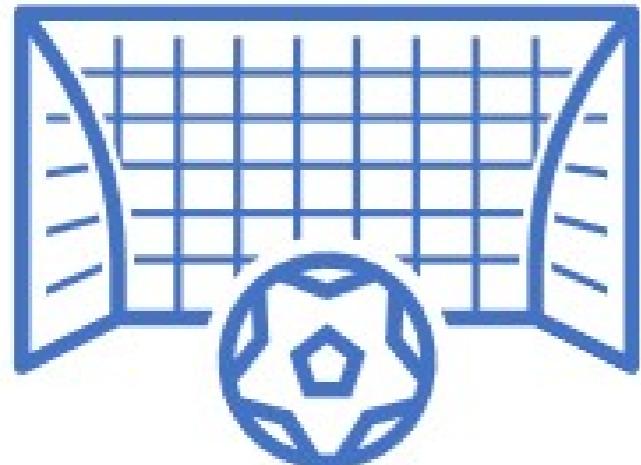
- Ready to purchase from brand
- Channels that get customer directly to purchase process like paid search



# Campaign funnel goals

## Campaign goals:

- *Awareness*: improve awareness or perception
- *Consideration*: increase research activity on a brand or product
- *Decision*: increase purchase activity



## Campaign measurement:

- *Awareness*: relies heavily on surveys
- *Consideration*: difficult to compare to competitors
- *Decision*: easier to see revenue impact



# Campaign goal KPIs

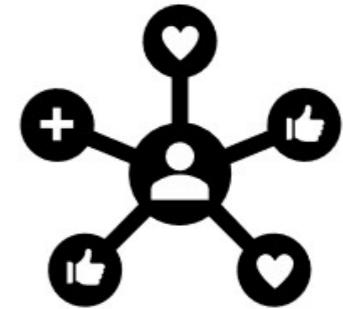
## Awareness:

- Awareness or perception (surveys)
- Audience reach (impressions)



## Consideration:

- Traffic (visits to website)
- Engagement (social media)



## Decision:

- Conversions (purchases)
- Revenue (average order value)



# Campaign supporting metrics

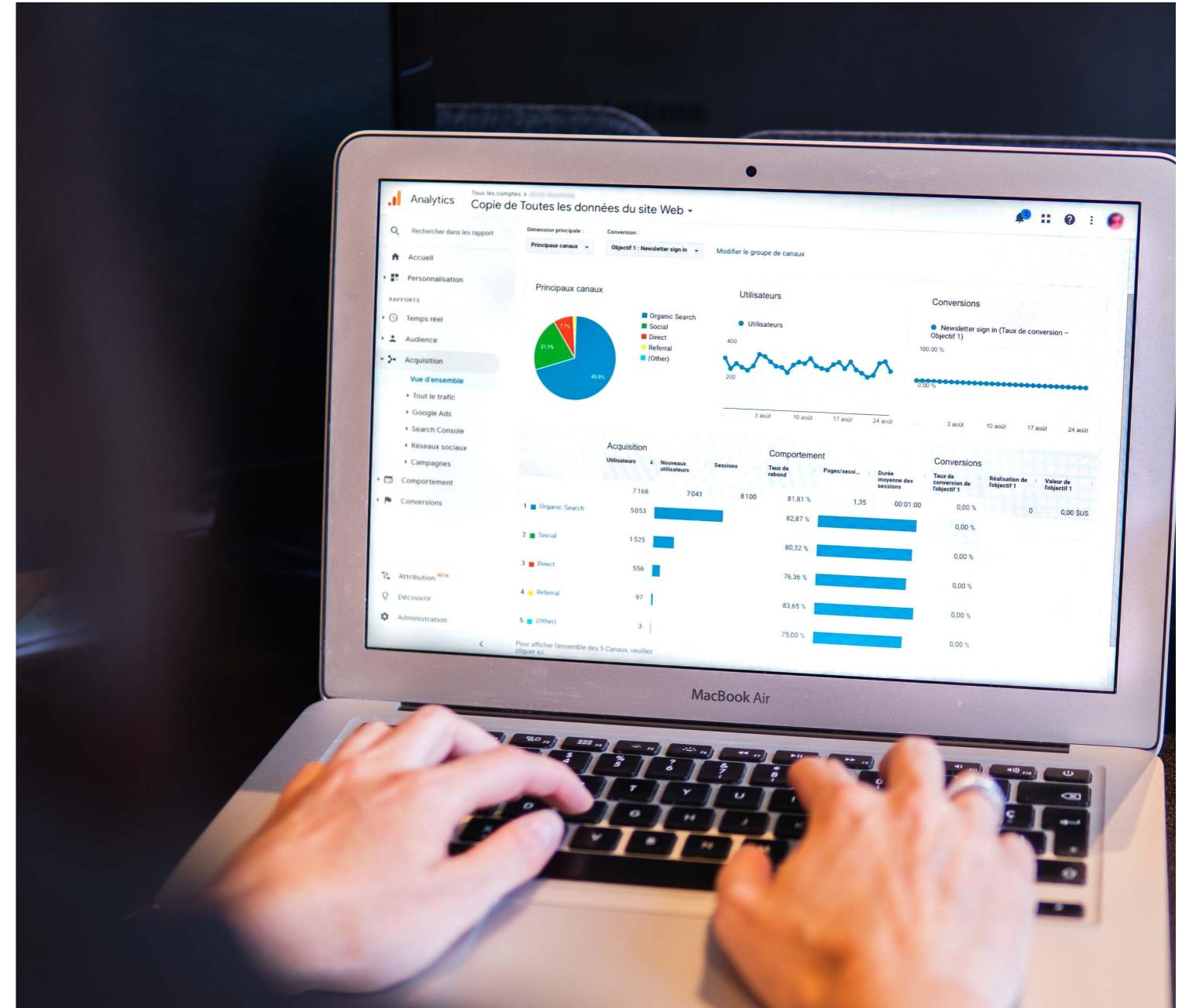
Can this metric improve via small changes in spend?

Will business growth be directly affected by this metric?

**Awareness:** Cost per mille (1000) impressions, brand term searches

**Consideration:** Instagram likes, YouTube video views, Cost per mille (1000) impressions

**Decision:** Cost per Click, ad clickthrough rate



<sup>1</sup> Myriam Jessier on Unsplash

# **Let's practice!**

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# Marketing forecasting

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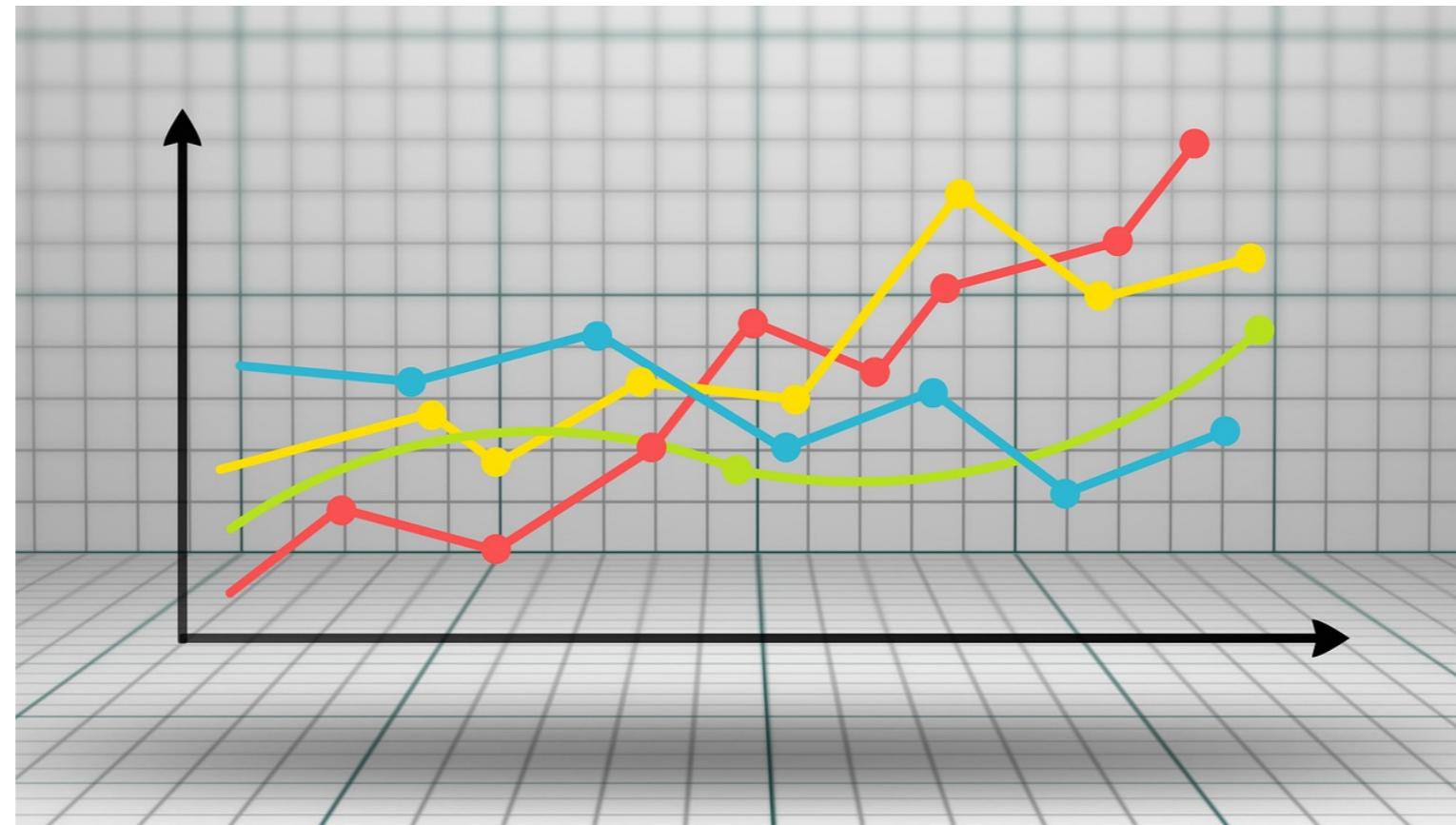


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# Forecasting on KPIs

- Forecasts can be set for KPIs at individual channel or marketing program levels
- Create in partnership with finance — to use similar approach
- Tells us what we expect this channel to deliver based on historical data and campaign goals



<sup>1</sup> Mediamodifier from Pixabay

# Forecasting accuracy

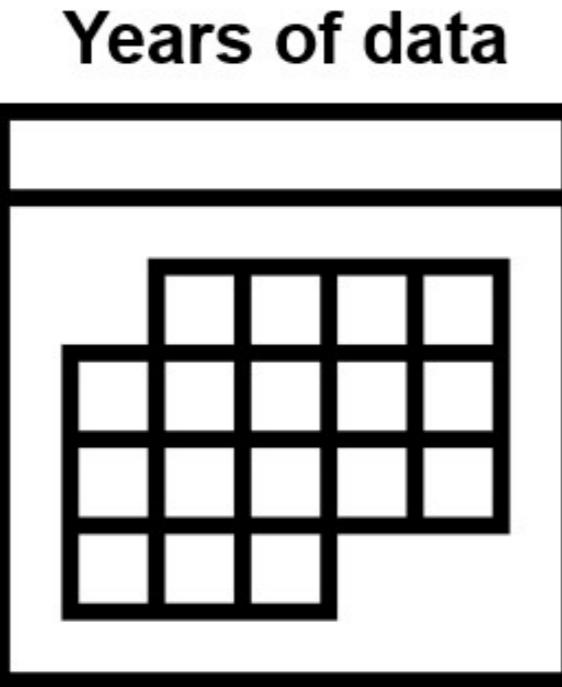


- Historical data consists of seasonal patterns, anomalies, longer-term trends
- Forecasts separate historical data into discrete parts to isolate true trends

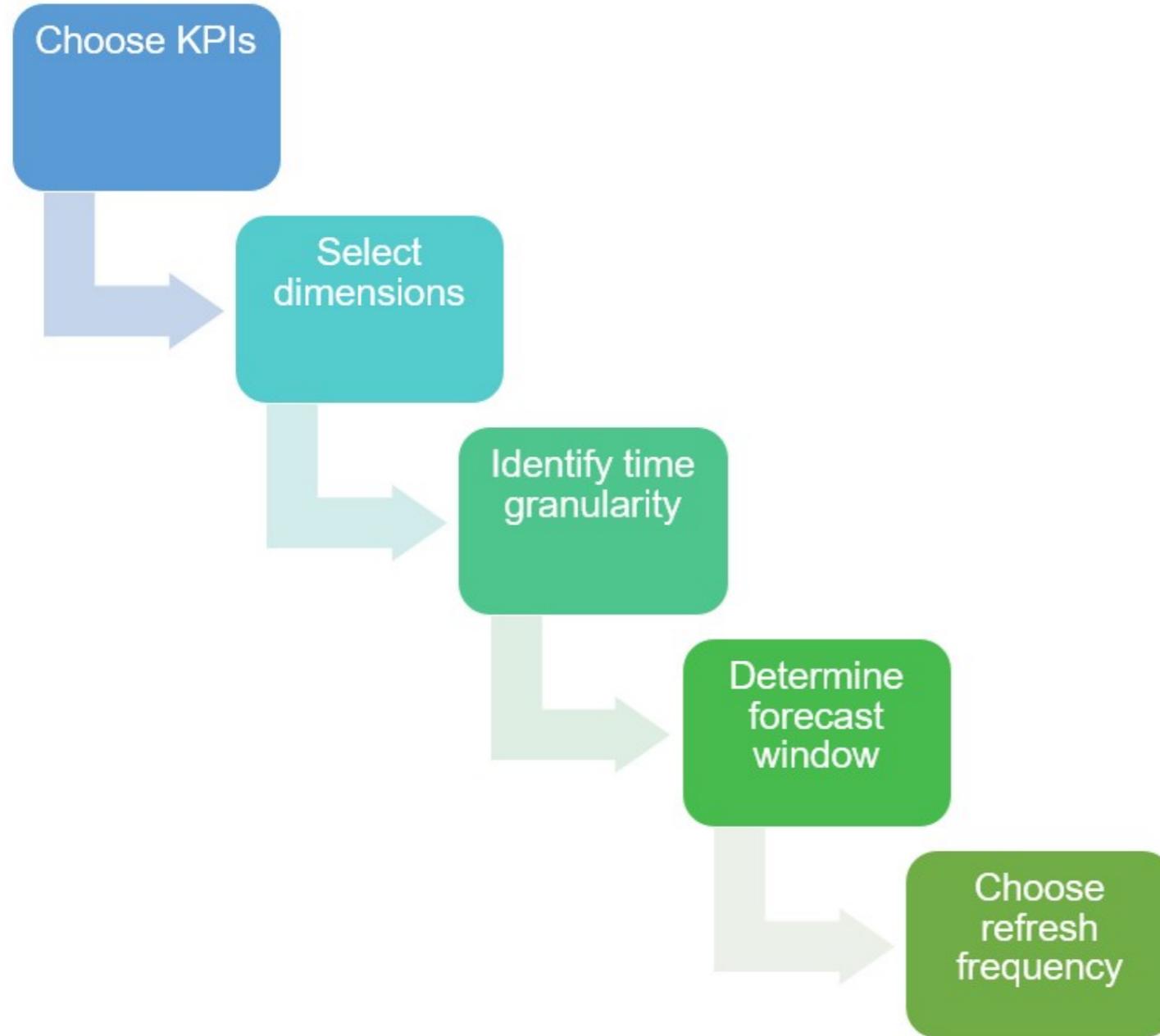
<sup>1</sup> Pexels from Pixabay

# Forecasting requirements

- *Multiple years:* 2-3+ years of historical data for multi-year patterns (daily is best!)
- *Marketing anomalies:* "we paused display for a month last July"
- *Seasonal changes:* "Back to School" academic calendar spikes



# Forecast planning process



1. Choose marketing KPIs
2. Decide on marketing dimensions (e.g., channel, geography, etc.)
3. Determine lowest common time granularity (e.g., daily, weekly, etc.)
4. Determine how far into the future to forecast
5. Decide on forecast refresh cadence (e.g., monthly, quarterly, etc.)

# Forecast modeling options

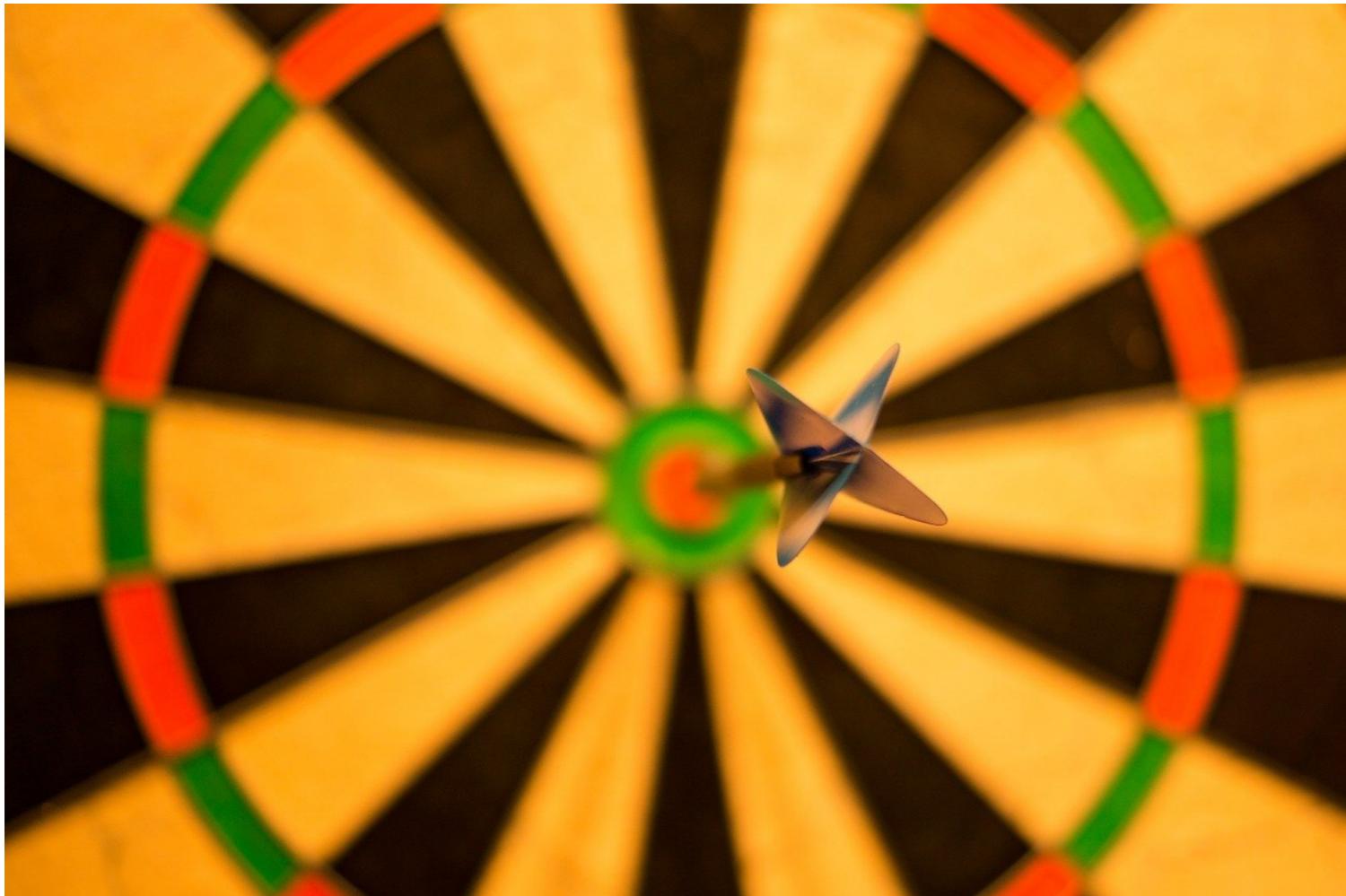
Forecasts can range from simple equations to advanced machine learning models

- Start with pre-built forecast functions in tools like Excel
- Evolve into more advanced statistical models for fine-tuning
- Statistical options include regression, econometrics, time-series, and others



<sup>1</sup> Chris Liverani on Unsplash

# Target setting



- Forecasts are a great stepping stone to setting targets
- First, estimate future performance based on seasonal expectations from forecast
- Then, set targets relative to forecast to have reasonable goals
- Marketing partners will advise based on domain knowledge

<sup>1</sup> Rudy and Peter Skitterians from Pixabay

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# Attribution modeling

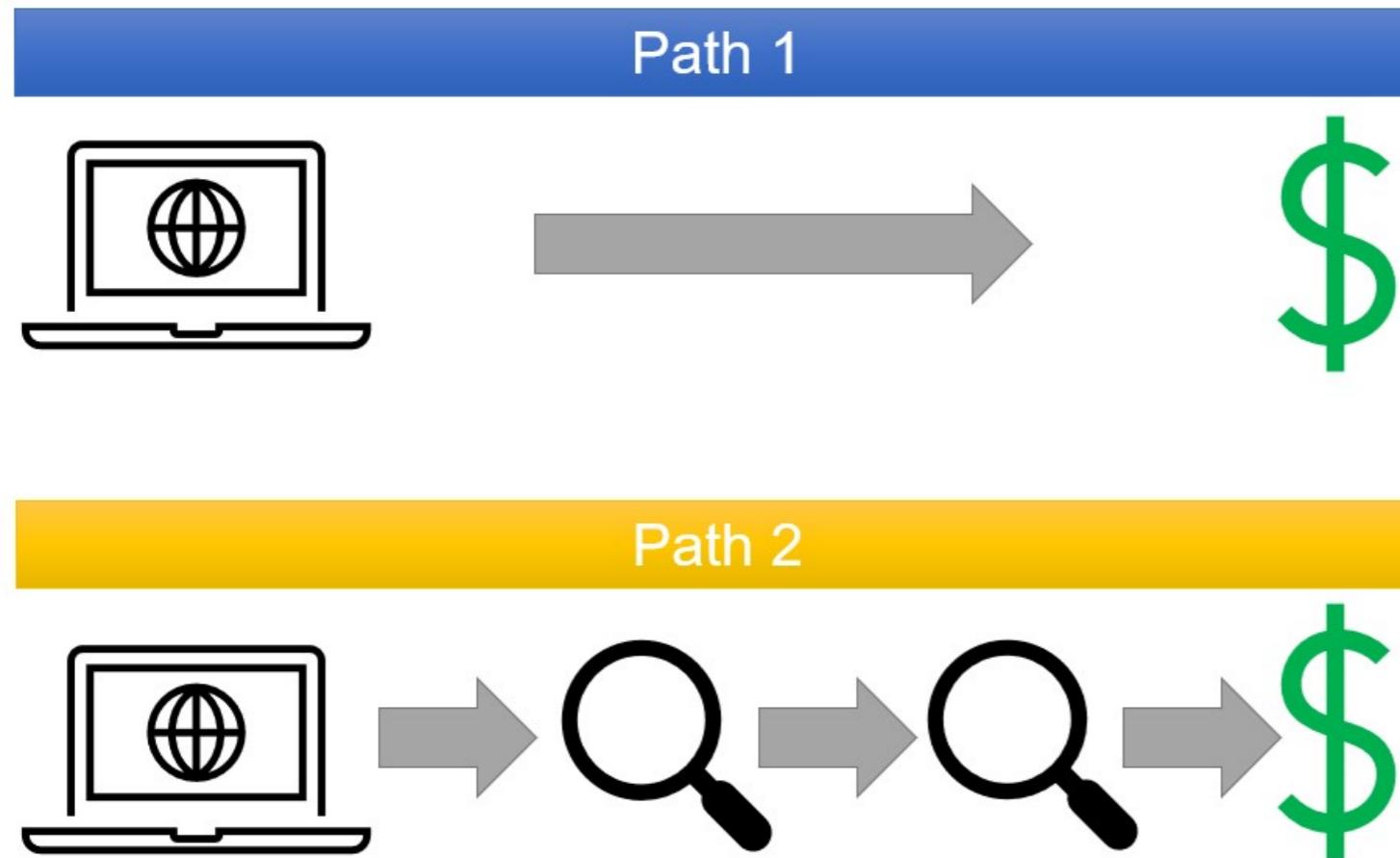
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# What is attribution modeling?



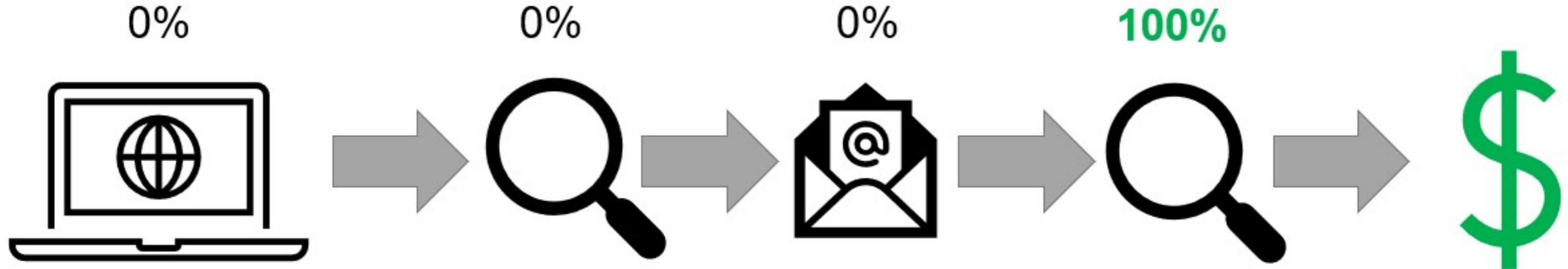
**Attribution modeling:** determine how much credit to give to marketing efforts upstream from decision

- Analysts select attribution methodology for their marketing program
- Attribution influences optimization, ROI modeling, and marketing investments

# Last touch attribution

**Last touch attribution (LTA):** 100% of credit goes to the last channel / tactic / campaign

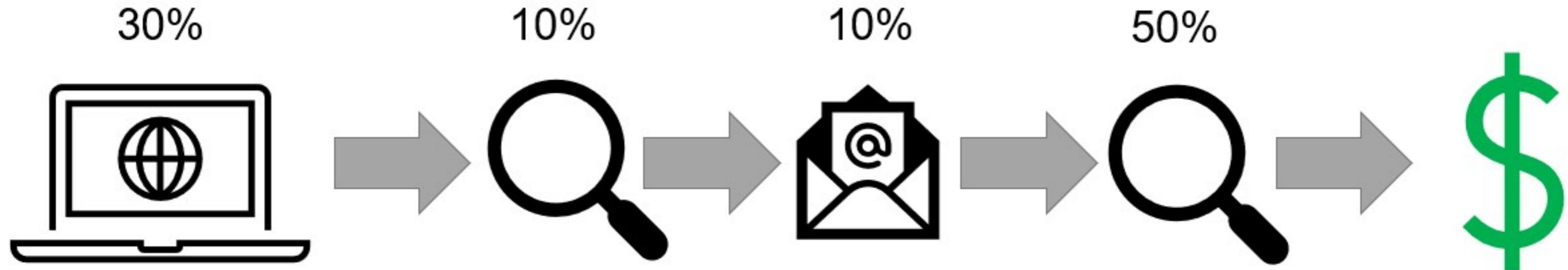
- It is very easy to understand this method and explain trends
- Channels with Direct impact naturally get the most credit
- Indirect channels get low credit because they are rarely last in the purchase process



# Multi-touch attribution

**Multi-touch attribution (MTA):** giving credit to multiple marketing efforts that led to a customer purchase

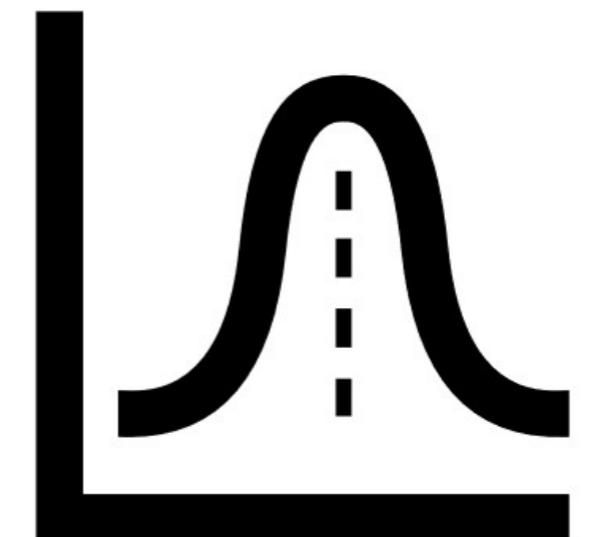
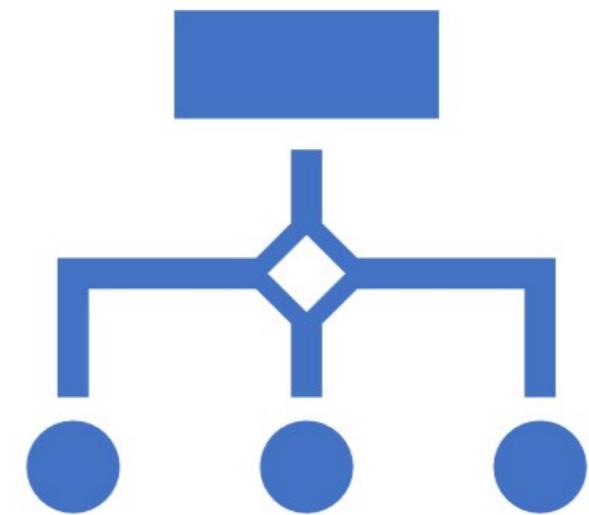
- Multi-touch attribution can account for Direct and Indirect impact
- MTA makes it challenging to identify which channel is driving marketing trends



# Heuristic and algorithmic MTA

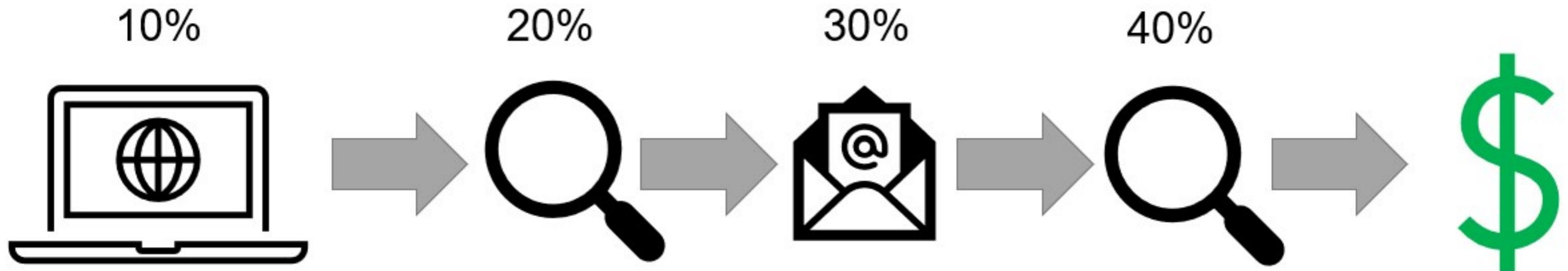
MTA can be heuristic (rules-based) or algorithmic (statistical model-based), while adding up to 100%

- **Heuristic example:** linear splits credit equally between all channels
- **Algorithmic example:** regression modeling ranks influence of channels based on strength of relationship to KPI



# Time decay attribution

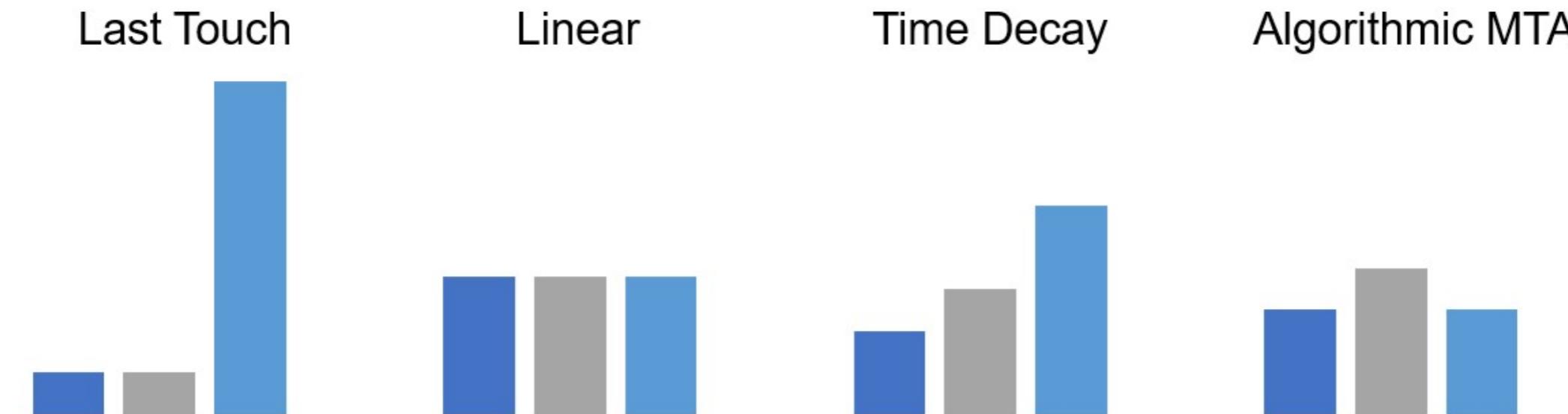
**Time decay attribution:** heuristic MTA where rules assign gradually more credit based on recency



# Choosing an attribution model

"All attribution models are wrong."

- No single correct model, but need to evaluate trade-offs of each
- Consider need for precision, ease of interpretation, customer behavior, channel mix, and data availability
- *Privacy law impact:* algorithmic can mitigate when data is not tied to customer directly



# **Let's practice!**

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# Revenue and cost modeling

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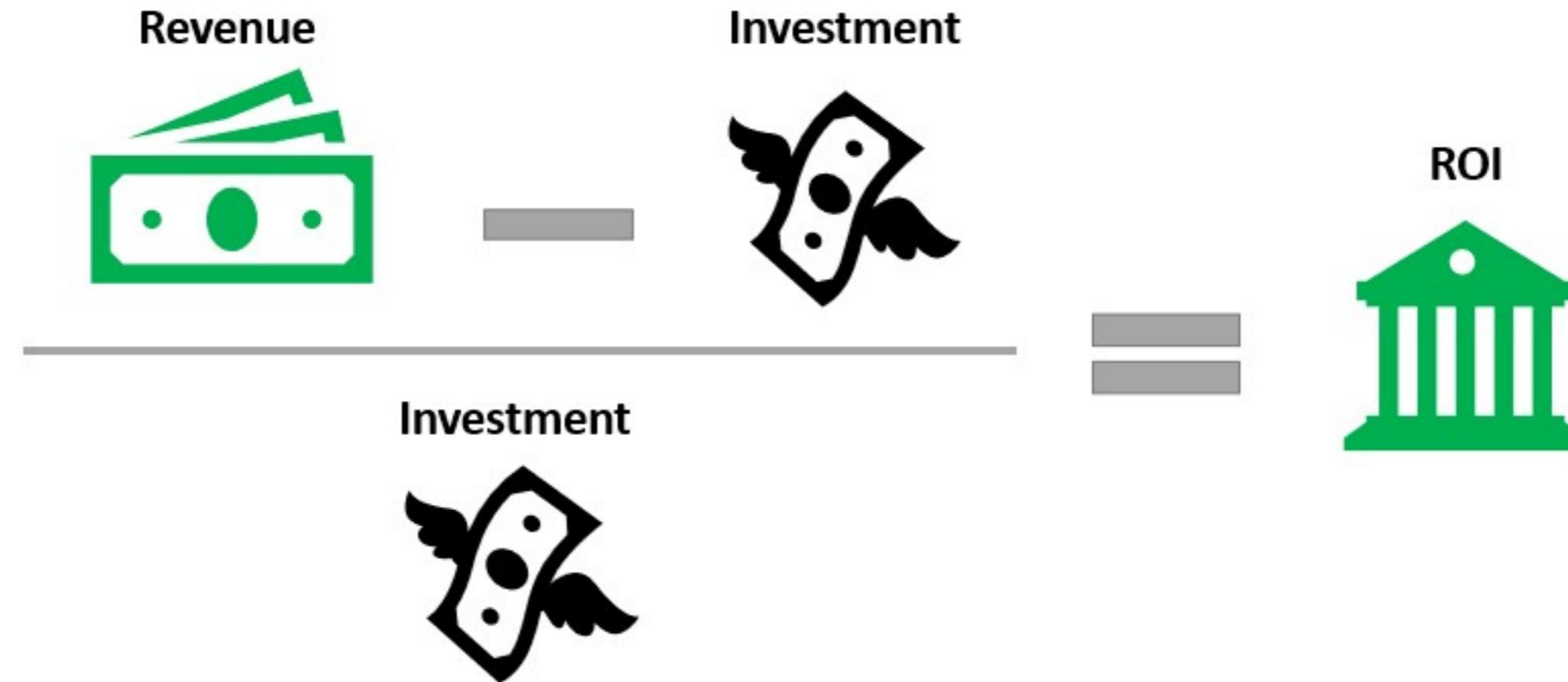


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# Marketing ROI

- Return on Investment (ROI): net marketing revenue / marketing investment
- Ultimate goal of marketing operational excellence is positive ROI



# Marketing spend



Spend model varies by channel and tactic, and can be cross-channel

## Channel:

- Cost per click (paid search)
- Cost per mille (1000) (display, TV)

## Tactic:

- Cost per view (video ads)

## Cross-channel:

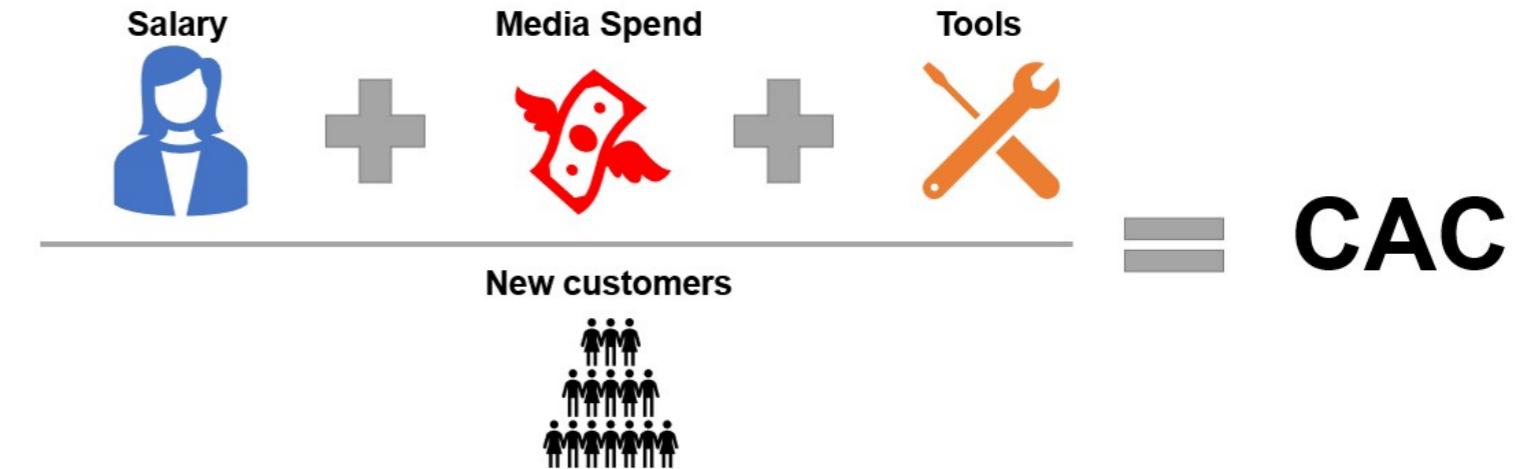
- Ad production costs

<sup>1</sup> Pexels by Pixabay

# CAC

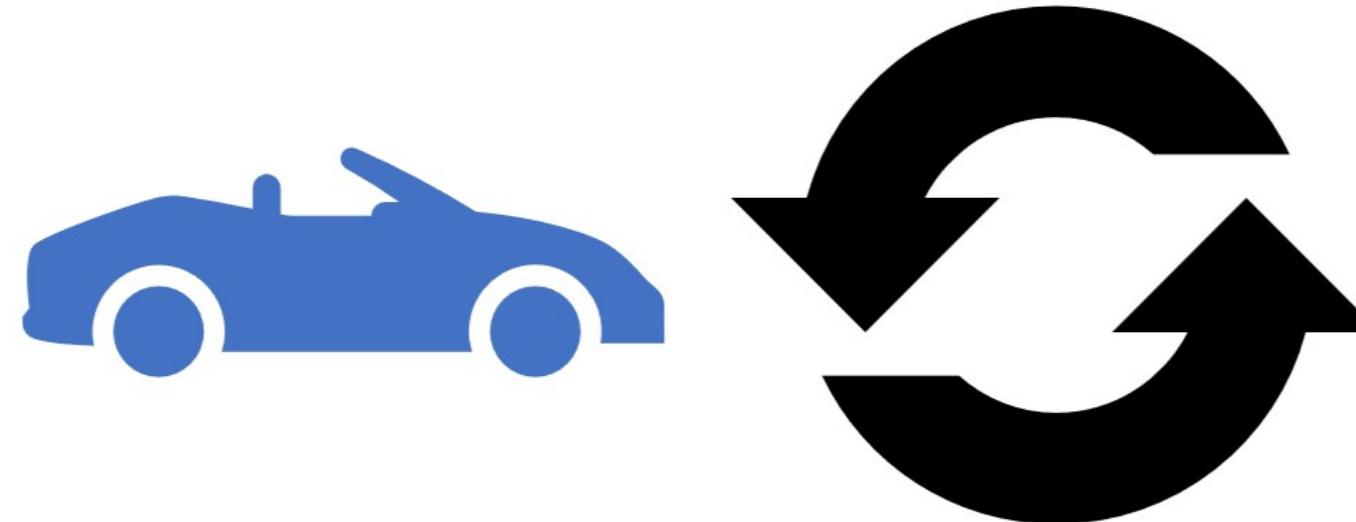
- Customer Acquisition Cost (CAC):** cost of convincing a potential customer to buy a product or service
- Accounts for all marketing spend and new customers per period
  - Used across multiple channels or individual channels
  - Finance partners can help identify marketing overhead costs

**Total Marketing Costs / # of Acquired Customers**



# Marketing revenue

- **Channel impact:**
  - Direct channels can associate to revenue more easily
  - Indirect channels are rarely directly tied to revenue
- **Product cost:** expensive purchases (like a car) have delayed revenue impact
- **Product type:** business models can have different revenue impact depending on goods or services offered

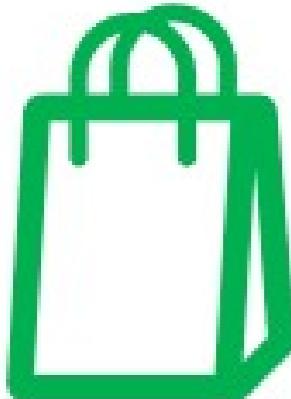


# LTV

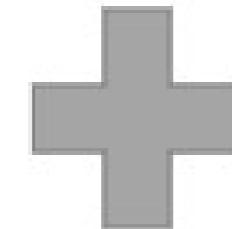
**Lifetime Value:** prediction of net profit attributed to future relationship with a customer

- LTV combines net revenue, customer lifespan, and churn behavior.
  - Avg. purchases per customer
  - Avg. value of a purchase
  - Avg. length of a customer relationship

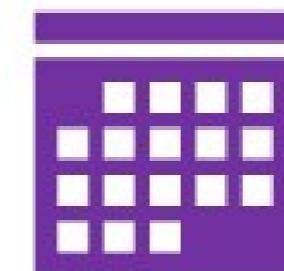
Purchase  
value



Purchase  
frequency



Length of  
relationship

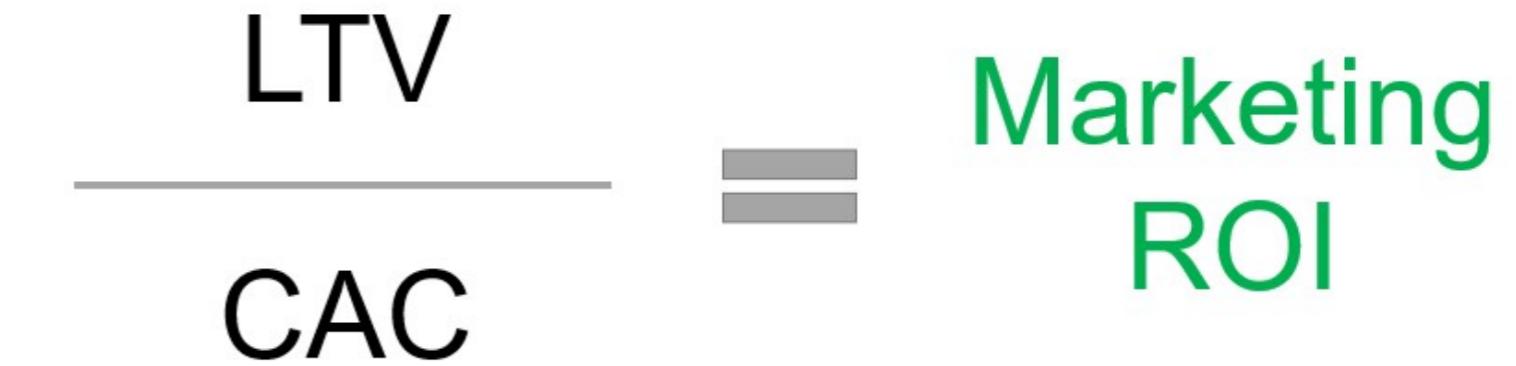


LTV

# LTV to CAC ratio

- Want to spend more on customers that have a higher LTV

**LTV to CAC ratio:** LTV divided by CAC



- Monitoring LTV versus CAC keeps marketing accountable to positive ROI

# LTV to CAC example

- Minimum 1:1 LTV to CAC ratio to avoid negative ROI
- 3:1 LTV to CAC is a good starting point

Paid  
Search

$$\frac{\$200 \text{ LTV}}{\$100 \text{ CAC}} =$$

**2:1 LTV to CAC**

Integrated  
Campaign

$$\frac{\$100 \text{ LTV}}{\$300 \text{ CAC}} =$$

**1:3 LTV to CAC**

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# Wrap up

## MARKETING ANALYTICS FOR BUSINESS



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# Recap

*Chapter 1:* marketing levers and business questions

*Chapter 2:* privacy law, data sources, and Indirect impact

*Chapter 3:* text / sentiment analysis, segmentation, and predictive modeling

*Chapter 4:* KPIs, forecasts, attribution models, and LTV to CAC ratio

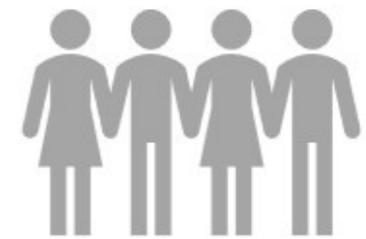
**Chapter 1:**



**Chapter 2:**



**Chapter 3:**



**Chapter 4:**



# Follow up

- Machine Learning for Marketing Analytics in R
- Machine Learning for Marketing in Python
- Marketing Analytics in Spreadsheets
- Analyzing Marketing Campaigns with pandas

# **Congratulations!**

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