



# Web Analytics

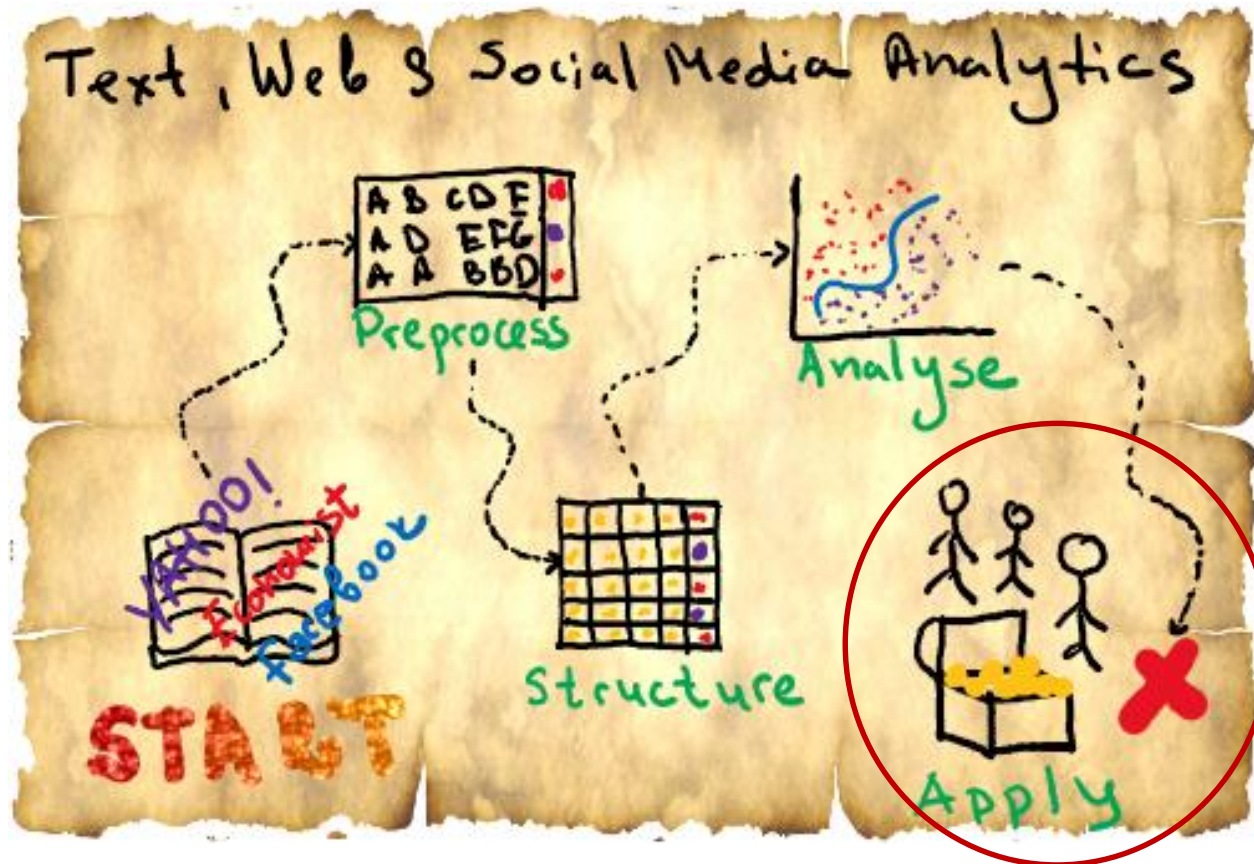
**Text, Web and Social Media Analytics Lab**

**Prof. Dr. Diana Hristova**



## What did we learn last week?

# Social Media Analytics: Treasury map



# Course structure



Date	Lecture	Exercise
12.04.2021	Introduction	Technical Installation
19.04.2021	Text Preprocessing	Projects kick-off
26.04.2021	Text Representation	Preprocessing Newsgroups
03.05.2021	Text Representation (2)	Text Representation Newsgroups
10.05.2021	Text Classification	Text Representation Newsgroups (2)
17.05.2021	Text Clustering	Newsgroups Topic Classification
31.05.2021	Text Mining in Social Media	Newsgroups Topic Clustering
07.06.2021	Mining Social Graphs	Sentiment Analysis and Time Series in Twitter
14.06.2021	Projects Status Update	Projects Status Update
<b>21.06.2021</b>	<b>Web Analytics</b>	<b>Mining Social Graphs in Twitter</b>
28.06.2021	Mock Exam	Web Analytics in E-commerce
05.07.2021	Final Presentation	Final Presentation
19.07.2021	Submit Code & Written report	
t.b.a.	Exam	



# What will we learn today?

## At the end of this lecture, you will:

1. Understand the motivation behind web analytics
2. Learn what are the different steps in web analytics
3. Know the definition and aim of important web metrics

# Motivation: Why do we need Web Analytics? (2)



## Traditional Marketing



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## Modern Marketing

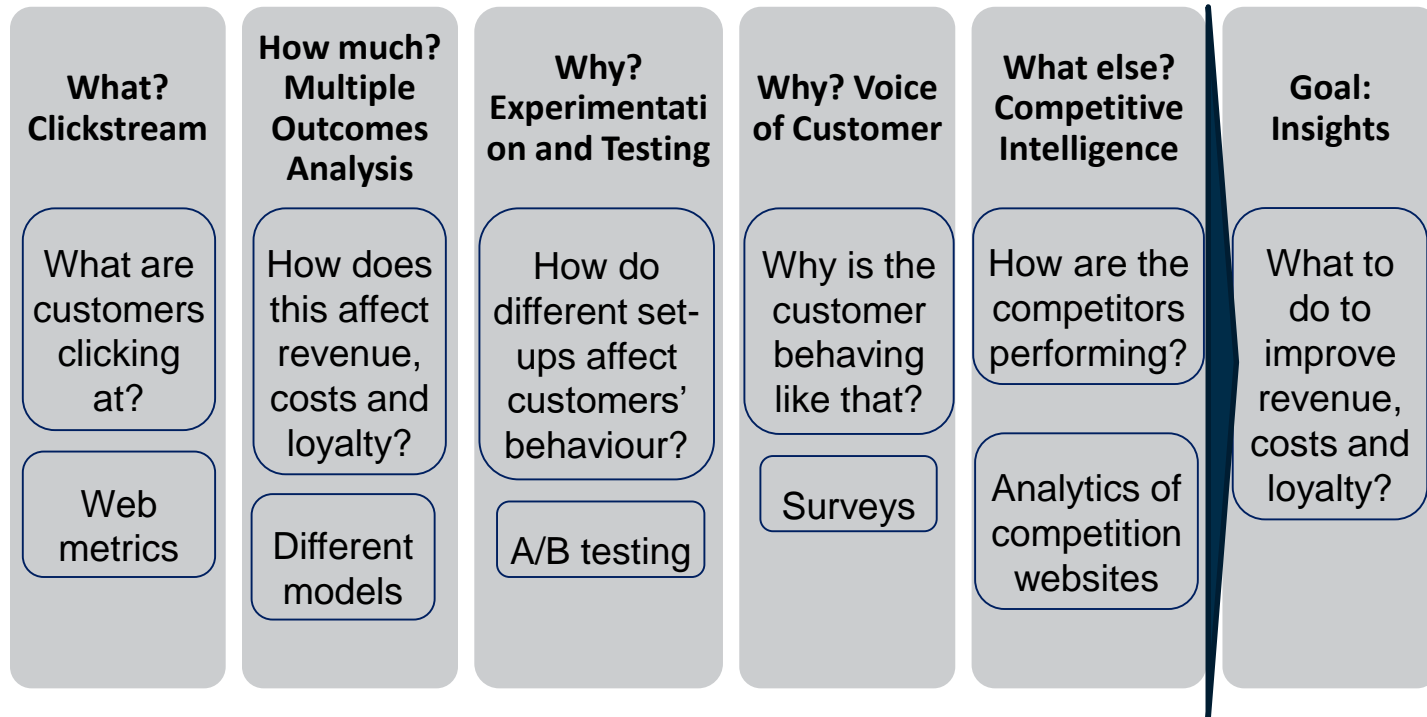


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# What is Web Analytics doing?



- Web Analytics is the analysis of **customer website data** (i.e. clickstreams) to determine and improve business **outcomes** (e.g. customer buys a product).

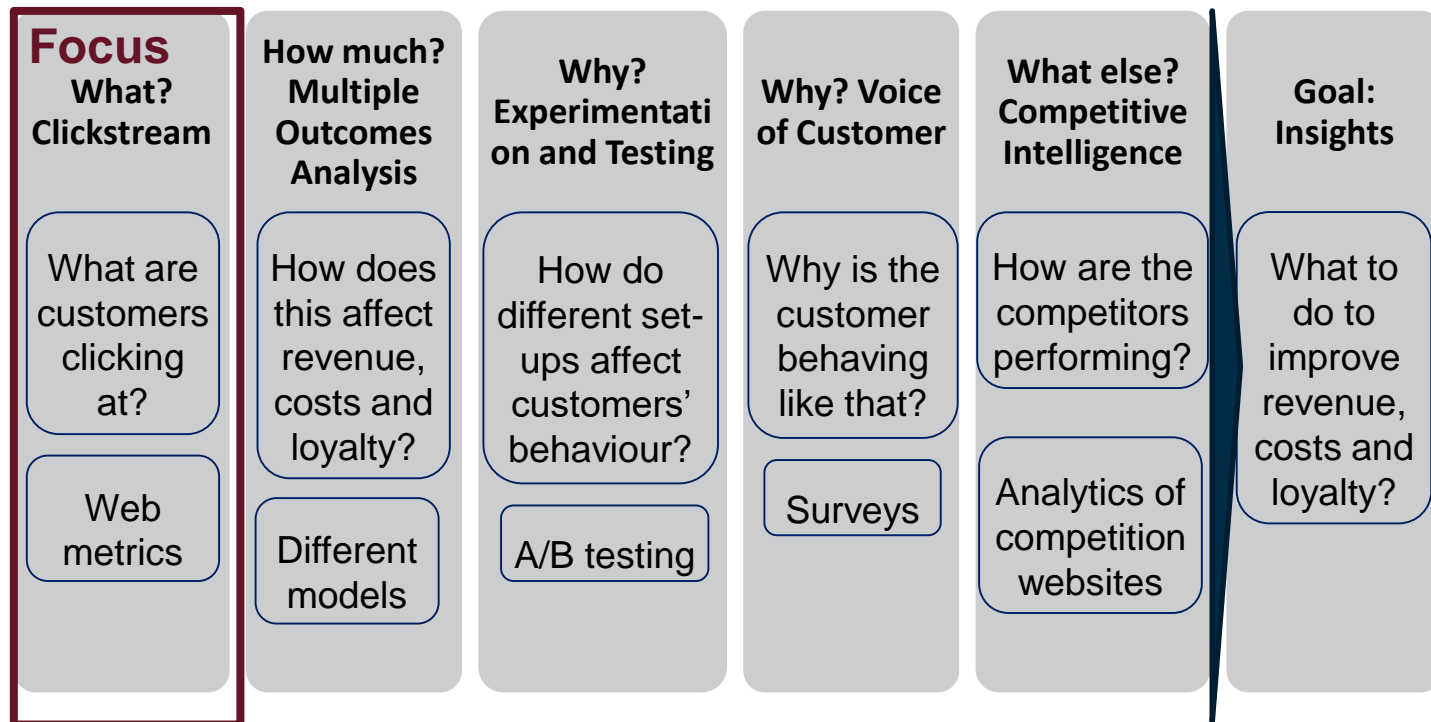


Based on Kaushik, A. (2009): Web Analytics 2.0: The Art of Online Accountability and Science of Customer Centricity: Wiley. Online.



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- A **web metric** is: “...a quantitative measure of statistics describing trends or events on a website.”, (Kaushik, A. 2009, p. 37).

## Main metrics:

- **Visits:** how many times a user came to your website. Each time is called session.
- **Unique visitors:** how many unique users visited the website in a given period of time. Uniqueness is captured by browser cookies.
- **Time on page:** time spent on a given page during a session.
- **Time on side:** total time spent on your website during a session.

# Basic Web Metrics (2)



- **Bounce rate:** „the percentage of sessions on your website with only one page view.“ (Kaushik, A. 2009, p. 51).  
→ Visitors don't click anywhere, simply leave the website after the starting page. High bounce rate points to some issues with the starting page.
- **Exit rate for a given page:** the number of sessions ending at a given page i.e. at which page users left your website. It is important to have high exit rates at pages with an outcome (i.e., shopping cart).
- **Conversion rate:** (business) outcomes/(unique) visits i.e. what percentage of the visits resulted in benefits for your company.
- **Engagement:** the number of repeated visits by a visitor. This demonstrates loyalty.

# Basic Web Metrics (3)



- **Page Value:** “the average value for a page that a user visited before landing”<sup>1</sup> on a goal page or an outcome page generating revenue (or both).
- A **goal page** represents an activity that contributes to your business (e.g., submitting a contact information). It doesn't have to directly generate revenue.
- Goal pages and their value are set by the **web analytics manager**.

$$Page_{value} = \frac{Total\ Revenue + Total\ Goal\ Value}{Number\ of\ unique\ visits\ per\ page\ per\ session}$$



Page value shows which pages contribute to value generation.

<sup>1</sup><https://support.google.com/analytics/answer/2695658?hl=en>

## Summary:

- Modern marketing is based on data analytics rather than direct customer communication and creativity.
- Web analytics deals with the phases of Clickstream Analytics, Multiple Outcomes Analytics, Experimentation and Testing, Voice of Customer, Competitive intelligence and Insight derivation
- The most common web metrics are:
  - Visitors and visits
  - Time spent on page and site
  - Bounce rate, exit rate, conversion rate, engagement
  - Page value



# Questions?