

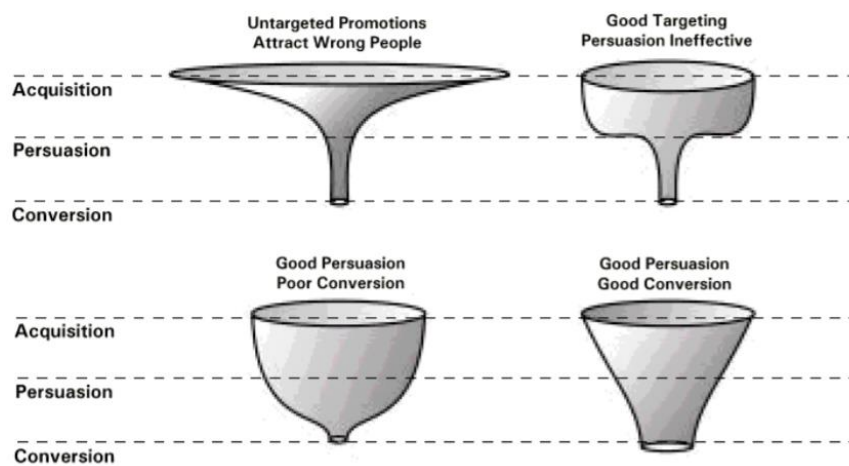
Lecture 3: Web analytics

Analytics and the conversion funnel

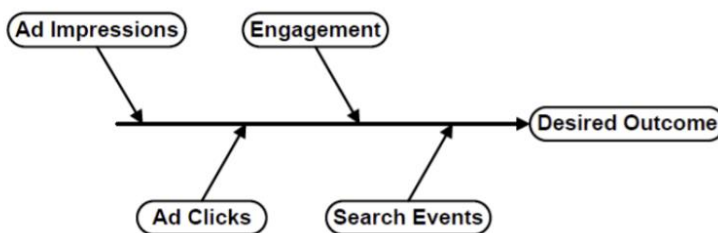
- Early: Social media shares, email list sign-ups, return visits, fans, followers, new visitors, inbound links.
- Mid: Time on site
- End: Orders, revenues, sales, average order value, repeat purchases, customer referrals

Customer life cycle funnel

The *Customer Life Cycle Funnel* (Figure 18) is a powerful visualization technique that can help you quickly determine the roadblocks and bottlenecks that your customers encounter.



Attribution is the process of identifying a set of user actions (“events”) that contribute in some way to a desired outcome, and assigning a value to these events



Attribution models

- Last touch lead to purchase (inaccurate)
 - Event Value = 100 if last, else 0
- Simple
 - Ad clicks = 500, ad impressions = 100, views = 250
- Complex
 - Ad clicks = 500, ad impressions = 100, views = 250
 - Values are reduced by 10 points according to time decay (-10 for every 24h)

- Values are reduced by 25 points for repetition
- +50 points if event occurred within 30 minutes of conversion
- Algorithmic
 - Values are determined by relationships to event with all events

How the Web Works and How Data are Collected

- Servers host websites
- The computer finds where that website is, and returns the web page you're requesting. Also sends cookie of a record of when you accessed it, what page you ask for, what browser you're on.
- Each computer has an IP address (related to location), which is recorded by the server

Definitions

- **Log File Analyzers**
 - Logfile analysers only analyse interactions on the server. They count IP addresses as visitors
 - AWStats • Webalyzer • W3Perl
- **JavaScript Analytics**
 - JavaScript tracks visitors when the page has completed being drawn in a browser and the code executes. They track anything in the browser, as long as JavaScript is executed. JavaScript and Cookies can be blocked by corporate policy or home security suites.
 - Google • Analytics • Piwik • WebTrends • Coremetrics
- **JavaScript/Cookies:** Collection happens client---side; in the Web browser
- **Log Files:** Data collection happens server---side; only when visitor interacts with your site
- **Visitor:** Someone who visits your site
- **Returning Visitor:** anyone with a cookie (opposite of "new visitor")
- **Unique Visitor:** Non---repeat visitors for a particular time period
- **Visit:** The start---to---finish browsing of your site by a visitor (session)
- **Bounce:** Visit that lasted one page view. Bounce rate: bounces/visits
- **Landing (Entrance) Page:** The first page viewed in a visit
- **Exit Page:** The last page viewed in a visit. Exit rate: exits after this pageview/page views for this page

A metric can apply to three different universes:

- **Aggregate** — Total site traffic for a defined period of time.
- **Segmented** — A subset of the site traffic for a defined period of time, filtered in some way to gain greater analytical insight: e.g., by campaign (e-mail, banner, PPC, affiliate), by visitor type (new vs. returning, repeat buyers, high value), by referrer.
- **Individual** — Activity of a single Web visitor for a defined period of time.

Segmenting visitors into meaningful groups

- Measuring aggregate visitor data provides no insight to your business objectives.

- Segment your visitors into meaningful groups.
- Test all your KPIs against visitor subsets, not total visitors
- Determine acquisition cost, if any and value provided (in dollars)
- Segment to determine the true value of a visitor

Segment visitors based on:

- **Origin of visitor**
 - Organic Search / Direct Traffic / Campaigns
 - Individual domains, keywords
- **On-Site Behaviour**
 - Landing Page, Path through site
 - Visitor intent (survey)
 - Micro Conversions
- **Goals and Conversion**
 - Macro Conversions
 - Revenue Generated

Visitor Sources (Referrers)

- Direct Entry in Browser
 - Entered URL directly, bookmark, clicked on application link
- Search Engine
 - Clicked link from a search engine result page (SERP)
- Other Website Referrer
 - Clicked a link from some other site that links to yours
- Campaign
 - Pre-tagged links to your site from anywhere (email, social, PPC, print)

Setting and Tracking Goals

- **Macro Conversion:** The ultimate goal, typically a sale or a lead
- **Micro Conversion:** Smaller **goals** that ultimately lead up to a macro conversion. These are typically for the people who are not ready to commit to a macro goal.

Key Performance Indicators (KPIs)

- Metrics that directly correlate to the business objective of your Web site.
- Simple and uncomplicated
- Pertinent to the business objective
- Timely
- Instantly quantify the objective

Source /medium	Visits	Revenue (KPI)	Cost	Conversion Rate	Average Order	CPS (KPI)
google/cpc	34,189	\$63,378	\$15,000	2%	\$100	\$0.24
google/organic	24,137	\$58,532	\$6,000	2.5%	\$97	\$0.10
facebook/cpc	5,498	\$5,278	\$1,500	1.2%	\$80	\$0.28
yahoo/cpc	1,709	\$3,759	\$600	2%	\$110	\$0.16

Vanity metrics - social proof for your customers

Page analysis

- High Bounce Rate could mean:
 - Wrong people are coming to your site (problems with campaigns, SEO, etc) or;
 - The page is poorly constructed (missing calls to action etc) or otherwise broken.
- High page views could mean:
 - If you have bad navigation, then you will have potentially more page views than if you have good navigation
 - If you have good navigation, then you will have less page views, but perhaps people leave because your prices are too high
- Exit pages
 - It could be that the customer has found what they are looking for, and would like to move on
 - Or maybe they can't find what they're looking for
- Repeat visits
 - You have a beautiful website
 - Can't find what they're looking for last time
 - Waiting for the price to drop (too expensive)
 - Waiting for updated content

Lecture 4: SEO

SEO –Search Engine Optimisation: The process of improving the “free” ranking of a website on web search engines - organic search

SEM –Search Engine Marketing (aka Paid Search): The process of gaining traffic by purchasing ads on search engines (people click and we earn money) - paid search - we pay google money to appear higher on the paid search

User intent to access SERPs (search engine result pages)

- Navigational: Searching for the official website for an organization, company, office, or a person
- Informational: You are searching for information. You want to learn about a subject or how to perform a task
- Transactional: You are searching to get something. Buy a product, hear a song, watch a video, download PDF

Evolution of SERPs

- People follow the pattern of an “F” when looking at SERPs
- Hardly ever look on the right hand side

Importance of search engine ranking

- On average, 71.33% of searches result in an organic click on the first page.
- Page two and three get only 5.59% of the clicks.
- On the first page alone, the first 5 results account for 67.60% of all the clicks and the results from 6 to 10 account for only 3.73%
- People click on organic search more than ads



Position	1	2	3	4	5	6 to 10	2nd page	3rd page+
CTR	31.24	14.04	9.85	6.97	5.50	3.73	3.99	1.60

How Do Search Engines Work?

- Spider “crawls” the web to find new documents (web pages, other documents)
- Search engine indexes (or updates if already indexed) the content into their database
- Search engine ranks resulting documents using an algorithm (mathematical formula) that assigns various weights to various ranking factors
- How many factors in the algorithm? Over 300 factors

Google Rank System

- Algorithms, Quality Raters, Statistics
- 1st Ranking - Official sites
 - Country, government office, organization, company, city, or a person
- 2nd ranking - Pages with Information
 - Comprehensive, high quality, authoritative
 - Neutral, factual
 - Not too broad, not too detailed
 - Think Wikipedia and Encyclopedia articles
- 3rd ranking - Pages that are Relevant
 - Page matches the user’s search
 - Page answers an aspect of search
 - Page has useful details, partial information

Google’s search algorithm structure

- Hummingbird (2007) update is the overall search algorithm, encompassing many parts. including

- Panda, Penguin and Payday designed to fight spam;
- Pigeon designed to improve local results;
- Top Heavy designed to demote ad-heavy, slow loading pages;
- Mobile Friendly designed to reward mobile-friendly pages;
- Pirate designed to fight copyright infringement.
- RankBrain is one of the latest algorithms- Google uses a machine-learning artificial intelligence system called “RankBrain” to help sort through its search results