

VISITORS TO WEBSITE

A. TYPES OF VISITORS

1. Browsing visitors

- Who just surf the site for information.
- Heavily influenced by elements of design
- Normally engage in impulse buying

2. Focused Research visitors

- Do not intend to purchase in the current visit, looking for product information
- Engage in doing research, comparing sites to make informed decision later
- Almost indifferent to the design features except for navigation feature

3. Background research visitors

- Simply interested in the product area in general and visit the website to increase their overall knowledge.
- Typically show repeat visit patterns but the time between visits is likely to be much greater than visitors doing research in order to buy
- Similar to browsing visitors in terms of perception of website features

4. Focused visitor

- Intend to make a purchase on this visit itself
- Majority of these visitors are repeat visitors coming directly to the site

B. MODES THROUGH WHICH A VISITOR MAY REACH A WEBSITE

1. Through search engine query- reach a website via search engine query
2. Direct Traffic- visit the website directly
3. Referral Traffic- visit the website by clicking on a link from another site

C. WEBSITE PROMOTION TOOLS

1. Content- should be good, interesting, relevant, innovative, and of high quality
2. Using social media for promotion- can help in building a network of potential audience and customer for the brand
3. Build associative meaning- use of hypertext to link related information
4. Focus on user needs- using purpose statement and audience information to make decisions about page organization and layout
5. Recognize porousness- recognizing the fact that a user may enter a web from any point.

6. Create a consistent, pleasing, efficient look and feel
7. Support interactivity
8. Support user navigation
9. Recovery from error
10. Customer Service Option
11. Feedback procedure

D. WEB ANALYTICS

Web analytics involves measuring, collecting, analyzing, and reporting web site traffic and behavior with the end goal of optimizing the success of a website. Whether one is looking to boost e-commerce sales, generate more leads, or enhance brand awareness, analytics data can be used to learn a wealth of information about the business and customers. This type of information includes how customers find the website and what they do when they get there. Analytics help one figure out how much time the customers spend on website and can give clues that point to why they leave. This in turn can help in attracting more visitors to a website and convert those visitors into paying customers.

Metrics to track: Following key metrics can be used to measure the web performance.

1. **Visitors:** The number of visitors to a site will give the general idea of how well one is getting the word out about his business.
2. **Page Views:** Looking at page views can tell what content on a website is the most popular. It is to be noted that certain pages are very popular with visitors, think about why that might be the case and use

that same strategy for pages that may not be drawing as many views.

- 3. Referring Sites:** Looking at referring sites will give an excellent snapshot of the type of people who are visiting a particular website. For example, if one sells kitchen gadgets and he notices that one of the top referring sites is a recipe site, then it is clear that visitors from that site are in target audience. Referring sites are also useful in helping boost traffic, especially for small business owners. Many small businesses partner with business associations to generate more visits. Using an analytics tool, one can see which partnerships are bringing in the most visitors and invest more in those that provide better results.
- 4. Bounce rate/Exit pages:** A bounce rate measures something different than an exit page, but both can give an important insights into why people are leaving a site. In most analytics programs, a “bounce” is recorded when a person visits and leaves within a second or two, usually before the page is even done loading. Top exit pages show which pages people visit immediately before they leave. If the page contains a “thank you” message after a customer places an order, a high exit or bounce rate would be expected. However, if the product pages are some of the top exit pages, it may be because the descriptions are unclear, or maybe prices are too high.
- 5. Keywords and Phrases:** Keywords and phrases tell what terms people are using to find a particular site in search engines like Google and Yahoo. This can give some idea of how to add different content to appeal to even more customers. For example, if you are a florist and many people find your web site by typing in “flowers for Mother’s Day,” that’s perfect. However, you can also consider adding content to your site about buying flowers for anniversaries that will help your site rank highly when people search for “flowers for anniversaries.”

6. **Demographic Information-** Different demographic variables help the marketer to make a strategy for the target audience.
7. **Traffic Sources-** It measures the source of traffic such as organic traffic, social traffic, referral traffic, direct traffic
8. **Landing Pages-** These are the pages where the visitors land first, generally the home page of the website. This helps to find out the top visited page of the website and in turn know which type of content is working for them.
9. **Site Speed-** This is used to check the page load timing i.e. average page load time. This will help the marketer to find the page of the website that is taking more time to load.

E. COLLECTING WEB DATA

Two prominent methods of collecting web data are: Log File Method and JavaScript Method/Page Tagging.

1. Log File Method

A web server log (file) is a log file, like a text file, that is automatically created by the web server with details of its activities. Every visitor to a website will be tracked or more exactly logged by the server. The server creates an entry for each visit in its log with details about the visitor's IP address, date and time of the visit, the page and files requested, bytes served, referrer, user agent etc. Log files have a wealth of data, and because of this, each log file is pretty big in size (we're talking about tens or hundreds of megabytes per text file). As a result, to analyze log files, one would need a web log analyzer, software that can read/import log files and spit out useful information in a user-friendly way. This technique,

independent of visitor's browsers, is referred to as the server-side data collection.

ClickTracks and Awstats are examples of a web log analyzers. Steps involved are:

Visitors visit a website -> The web server creates entries in its log file -> The host use ClickTracks/Awstats to process the logs and get the reports/metrics

2. JavaScript Method /Page Tagging Method

Page tags, as its name describes, works based on tagging individual web page with some tracking code written in JavaScript. When the webpage is open in a browser (with JavaScript enabled), the tracking code is triggered and starts collecting and sending data to a server. That server has an application that can gather and process the data, then present them in form of useful information – web metrics. This technique is also referred to as the client-side data collection.

Google Analytics is an example of web analytics application that uses page tagging method. Steps involved are:

The website host tags his web pages by inserting the tracking code on each page -> Visitors visit the website -> (Visitors') Web browsers send information to Google Analytics server -> Google Analytics stores and processes data -> Website host accesses Google Analytics to view the metrics

Advantages and disadvantages of each method are described below.

Log File Method / Web log analyzer	JavaScript Method/Page tagging
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Advantages	Advantages
<p>Log files are generated by web servers; even if you don't have your own web server but buy a web hosting package from a hosting company, you can get the log files. Thus, the raw data is readily available, without you having to change or tag your web pages.</p>	<p>Page tagging will collect data no matter where the pages are served from, browser cache or the server. As soon as the browser is open, the tracking code will fire, and data will be collected.</p>
<p>The raw data again is on your/your hosting provider's server, so you can easily access, archive log files, or switch to another web analytic software if want to and still be able to analyze data, including historical data</p>	<p>You can add more (through JavaScript) to your page tagging to collect more data, especially data related to the interaction between your viewers and the site such as how and whether your viewers watch (play, pause) your online movies, how (fully or partially) they fill out online forms, whether they abandon the shopping cart, and if yes, exactly where they leave your cart, whether they follow through the goal channel that you've set up etc. Furthermore, page tagging can collect basic data that mostly misses by the web server such as your users' monitor screen sizes and so on.</p>

<p>Web server logs/records every activity it has, including the number of page view of your document files such as PDF, Word, Excel files.</p>	
<p>Disadvantages</p>	<p>Disadvantages</p>
<p>Web server is usually not able to record the interaction between your web viewers and your web pages such as viewing Flash/movie content or responding to call-to-action items.</p>	<p>To collect data via page tagging, you need to tag your web pages properly. Pages that are not tagged or not tagged properly, won't have data.</p>
<p>The web server only logs an entry if there's a request to the server. If a page is (stored and) served from the browser cache, there's no request to the server, thus there's no activity recorded on the log file. That visit is not counted; and not counting visits from cached pages can really distort your data.</p>	<p>Data is on your web analytics vendor's server. You don't have access to the raw data and can't move or archive them. Thus, if you want to switch vendors, you may have to consider the fact that you're losing historical data. Even if you have historical data, that data may not be raw and can't be used with other vendors.</p>
	<p>Page tagging, by default, won't collect data for document files because you can't insert the tracking code inside a PDF or a Word document. In addition, page tagging won't work properly if</p>

	user's browser doesn't have JavaScript enabled and/or doesn't accept cookies. Firewalls and further security measures on user's side may also block or hinder the performance of the tracking codes.
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Each method has its own strengths and weaknesses. Page tagging, however, is considered the standard of web analytics due to the fact that it can collect and provide data regarding the interaction between web audience and the site. This type of data can help in deciding whether the current layout/model is good enough, or there is a need to change the way a site/page looks and functions to achieve the established goal.

F. WAYS TO BUILD/ INCREASE WEB TRAFFIC

1. Search Engine Optimisation (SEO)

In its simplest form, search engine optimization is anything done to improve the ranking of a website on search engine results pages (SERPs). The goal for most businesses is to increase their website visibility or traffic and ranking high for targeted search terms or phrases on search engines like Google and Bing will do just that.

SEO can be defined as a methodology of strategies, techniques and tactics used to increase the amount of visitors to a website by obtaining a high ranking placement in the search results page of a search engine (SERP) – including Google, Bing, Yahoo and other search engines.

When a user performs a search on Google the order by which the returning results are displayed, is based on complex algorithms. These algorithms (also known as search engine ranking factors) take a number of factors into account before they decide which web page will be shown in the first place, second place, etc.

Optimizing the website for search engines will give businessmen an advantage over non-optimized sites and increases chances of website to rank higher.

SEO is not a static process but rather a framework with rules and processes. For simplicity though, SEO can be broken down into 3 main types:

(a) **Technical SEO:** With technical SEO you can ensure that search engines can crawl and index your website without any issues.

(b) **On-site SEO:** Rules to apply on your site and content to make it search engine friendly.

(c) **Off-site SEO:** Ways to promote your website or blog so that it can rank higher in search results.

2. **Embedding links to the site** in other web pages especially those with content that is likely to interest the customer.
3. **Using marketing and promotion tools** to make the audience aware of the website and to popularize it.
4. **Internet Advertising** using social media, e-mail, mobile advertising or simply displaying ads on third party website or blogs.
5. **Affiliate advertising**- performance based marketing in which a business rewards one or more affiliates for each visitor or customer brought by the affiliate's own marketing efforts. There are three main

types of affiliate ads; pay-per-click, pay-per-lead, and pay-per-sale.

G. RISK MANAGEMENT IN E-PAYMENT SYSTEM

Risks involved in E-payment

1. Fraud: Common frauds involved in e-payment are:
 - Identity theft- unauthorized use of someone's personal data or documents (usually social security card or credit cards) to obtain merchandise, services or credit.
 - Phishing- Phishing is a cybercrime in which a target or targets are contacted by email, telephone or text message by someone posing as a legitimate institution to lure individuals into providing sensitive data such as personally identifiable information, banking and credit card details, and passwords.
 - Skimming- Skimming is the theft of payment card data, which is typically used by criminals to commit fraud. Criminals "skim" payment data directly from payment card machines or from the payment infrastructure at a merchant location or e-commerce site.
 - Denial of Service Attack- A denial-of-service (DoS) attack occurs when legitimate users are unable to access information systems, devices, or other network resources due to the actions of a malicious cyber threat actor. Services affected may include email, websites, online accounts (e.g., banking), or other services that rely on the affected computer or network.
2. Payment Conflict- arises when automated system causes errors
3. The Risk of Impulse Buying- The risk of impulse buying is magnified

when a customer is able to buy things online at the click of a mouse. Impulse buying can become habitual and makes sticking to a budget almost impossible.

4. Disputed Transactions- Fraudulent, unauthorized, and wrong transactions are regular feature these days and may take long time to dispute, investigate and resolve.

Security Controls

1. Virus Control- anti-virus software must be installed and updated regularly.
2. Integrity Control- check sum operation can be performed on downloaded files from a vendor.
3. Control for surfing illegitimate website- digital id may be used which is an attachment to e-mail message or program embedded in a web page that verifies the user of website
4. Integrity of Transaction Information- Integrity violation occurs whenever a message is altered while in transit between sender and receiver. A combination of techniques creates a message that is tamper proof and authenticated. An encryption message using digital signature provides the merchant positive identification of the sender and assures the merchant that the message was not altered.
5. Training the Staff
6. Designing and implementing internal fraud prevention structure
7. Using Fraud prevention tools- such as Address Verification Service (AVS), Card Security Codes, Verified by Visa and MasterCard SecureCode

8. Applying fraud screening of online card transactions.

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