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# SEO service Sydney

## Google Analytics setup

Google Analytics setup

Niche-specific link building"Niche-specific link building focuses on acquiring backlinks from websites that are closely related to your industry. By targeting relevant sites, you ensure that your backlinks carry more weight and improve your authority in your field."

No-follow links"No-follow links are backlinks that include a specific HTML attribute telling search engines not to pass link equity. Best [SEO Sydney Agency](#). While they may not directly impact rankings, they can still drive referral traffic and contribute to a natural-looking link profile."

off-page SEO"Off-page SEO involves activities that take place outside of the website to boost its authority and visibility. Best [SEO Agency Sydney Australia](#).

## SEO service Sydney - Content authority signals

1. Featured snippets
2. Content authority signals
3. User experience metrics

This includes building high-quality backlinks, engaging in social media marketing, and promoting content through various online channels to improve the sites overall reputation and ranking."

## Google Analytics site speed —

- [Google Analytics setup](#)
- [Google Analytics site speed](#)
- [Google Analytics tags](#)
- [Google Analytics time on page](#)
- [Google Analytics tracking code](#)
- [Google Analytics user explorer](#)
- [Google Analytics user segmentation](#)

on-page audit"An on-page audit evaluates the elements of a web page, such as meta tags, headings, and content quality. By identifying areas for improvement, an audit helps refine on-page optimization efforts and boosts search engine performance."

on-page audit tools"On-page audit tools help identify optimization opportunities, such as missing meta tags, broken links, or keyword usage gaps. By using these tools, you can streamline your optimization efforts and improve overall page performance."

on-page content freshness"On-page content freshness refers to how current and updated the content is. Best Search Engine Optimisation Services. Regularly refreshing and expanding content signals to search engines that the page is up-to-date, which can improve rankings and keep users coming back."

## Google Analytics tags

on-page content optimization"On-page content optimization refers to the process of improving individual web pages to increase visibility and relevance. This includes optimizing meta tags, headers, and images, as well as ensuring that the content is keyword-rich and user-friendly."

on-page engagement signals"On-page engagement signals include metrics like time on page, bounce rate, and click-through rate. Best Local SEO Sydney. Improving these signals by enhancing content quality and user experience can positively impact search rankings and attract more traffic."

on-page keyword research"On-page keyword research involves identifying the most relevant and valuable keywords for a specific page. By targeting the right keywords, you increase the pages relevance, attract more qualified traffic, and improve its search rankings."

# HOW SEARCH ENGINE MARKETING HELPS BUSINESS GROW OVER TIME

SYDNEY WEBSITE DESIGN AGENCY  
SUITE 87, LEVEL 33, AUSTRALIA SQUARE,  
265 GEORGE ST, SYDNEY NSW 2000  
PHONE: 1300 684 339





Google Analytics time on page



on-page keyword variation"On-page keyword variation involves using different forms and synonyms of your target keyword throughout the content. This helps avoid keyword stuffing, provides a more natural reading experience, and increases the pages relevance for multiple search terms."

on-page keywords"On-page keywords are the targeted search terms included within the content, headings, and meta tags of a web page. By using these keywords strategically and naturally, you help search engines understand the pages topic and improve its relevance in search results."

on-page link optimization"On-page link optimization ensures that internal and external links are relevant, functional, and properly anchored. Effective link optimization improves site navigation, enhances user experience, and helps search engines crawl and understand your site."

SEO Packages Sydney .

## Google Analytics tracking code

on-page readability checks"On-page readability checks ensure that your content is easy to read, comprehend, and navigate. By improving readability, you enhance user engagement, reduce bounce rates, and increase the pages relevance in search results."

on-page relevance"On-page relevance refers to how closely your content aligns with the keywords youre targeting. By creating high-quality, targeted content, you increase the pages relevance, improve user engagement, and boost search rankings."

on-page SEO"On-page SEO refers to the practice of optimizing individual web pages to improve search rankings and drive organic traffic. This involves using relevant keywords in content, ensuring proper heading structure, adding meta tags, and improving URL formats for better readability and indexing."

# KEY ADVANTAGES LOCAL SEO





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SUITE 87, LEVEL 33, AUSTRALIA SQUARE,  
265 GEORGE ST, SYDNEY NSW 2000  
PHONE: 1300 684 339

# CONTENT MARKETING TYPES FOR SMALL BUSINESS AND BRAND BUILDING

Google Analytics user explorer



on-page SEO"On-page SEO refers to optimizing individual web pages to rank higher in search engine results. It involves improving content quality, optimizing meta tags, using appropriate headings, and structuring the sites internal links to enhance both user experience and search engine visibility."

on-page SEO checklist"An on-page SEO checklist outlines all the key elements to optimize, including meta tags, headings, content quality, and internal links.

## SEO service Sydney - Content authority signals

- Crawling and indexing
- Meta tags optimization

By following a checklist, you ensure that every aspect of the page is optimized for better rankings." on-page SEO improvements"On-page SEO improvements focus on optimizing elements like meta tags, headings, and content structure. Making these adjustments enhances the pages relevance, increases search engine visibility, and improves overall performance."

# Google Analytics user segmentation

optimized image alt attributes"Alt attributes provide descriptive text for images, helping search engines and screen readers understand their content. Optimizing these attributes with relevant keywords improves accessibility and boosts search visibility."

optimized image backup solutions"Optimized image backup solutions store compressed and resized versions of your files, ensuring you always have access to efficient, web-ready images. Reliable backups help maintain site quality and improve recovery times if issues arise."

optimized image delivery networks"Delivery networks, such as CDNs, distribute image files to servers closer to users, improving load times and reliability. Optimized delivery ensures that images load quickly and consistently, enhancing user experience and search performance."



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SUITE 87, LEVEL 33, AUSTRALIA SQ  
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**SEO SERVICES EXPERT'S MAIN  
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About Local search

Local search may refer to:

- [Local search \(constraint satisfaction\)](#), a method for problem solving in constraint satisfaction
- [Local search \(Internet\)](#), web searching for web sites relevant to a given place
- [Local search \(optimization\)](#), a method for problem solving in optimization
- [Local authority search](#), in the UK a search for information about a particular property and the surrounding area undertaken as part of conveyancing

#### Disambiguation icon

image not found or type unknown

This [disambiguation](#) page lists articles associated with the title **Local search**.

If an [internal link](#) led you here, you may wish to change the link to point directly to the intended article.

### About Local search engine optimisation

- [v](#)
- [t](#)
- [e](#)

Part of a series on

#### Internet marketing

- [Search engine optimization](#)
- [Local search engine optimisation](#)
- [Social media marketing](#)
- [Email marketing](#)
- [Referral marketing](#)
- [Content marketing](#)
- [Native advertising](#)

#### Search engine marketing

- [Pay-per-click](#)
- [Cost per impression](#)
- [Search analytics](#)
- [Web analytics](#)

#### Display advertising

- Ad blocking
- Contextual advertising
- Behavioral targeting

### Affiliate marketing

- Cost per action
- Revenue sharing

### Mobile advertising

**Local search engine optimization (local SEO)** is similar to (national) SEO in that it is also a process affecting the visibility of a website or a web page in a web search engine's unpaid results (known as its SERP, search engine results page) often referred to as "natural", "organic", or "earned" results.[1] In general, the higher ranked on the search results page and more frequently a site appears in the search results list, the more visitors it will receive from the search engine's users; these visitors can then be converted into customers.[2] Local SEO, however, differs in that it is focused on optimizing a business's online presence so that its web pages will be displayed by search engines when users enter local searches for its products or services.[3] Ranking for local search involves a similar process to general SEO but includes some specific elements to rank a business for local search.

For example, local SEO is all about 'optimizing' your online presence to attract more business from relevant local searches. The majority of these searches take place on Google, Yahoo, Bing, Yandex, Baidu and other search engines but for better optimization in your local area you should also use sites like Yelp, Angie's List, LinkedIn, Local business directories, social media channels and others.[4]

## The birth of local SEO

[edit]

The origin of local SEO can be traced back[5] to 2003-2005 when search engines tried to provide people with results in their vicinity as well as additional information such as opening times of a store, listings in maps, etc.

Local SEO has evolved over the years to provide a targeted online marketing approach that allows local businesses to appear based on a range of local search signals, providing a distinct difference from broader organic SEO which prioritises relevance of search over a distance of searcher.



## Local search results

[[edit](#)]

Local searches trigger search engines to display two types of results on the [Search engine results page](#): local organic results and the 'Local Pack'.<sup>[3]</sup> The local organic results include web pages related to the search query with local [relevance](#). These often include directories such as [Yelp](#), Yellow Pages, [Facebook](#), etc.<sup>[3]</sup> The Local Pack displays businesses that have signed up with [Google](#) and taken ownership of their '[Google My Business](#)' (GMB) listing.

The information displayed in the GMB listing and hence in the Local Pack can come from different sources:<sup>[6]</sup>

- The owner of the business. This information can include opening/closing times, description of products or services, etc.
- Information is taken from the business's website
- User-provided information such as reviews or uploaded photos
- Information from other sources such as social profiles etc.
- Structured Data taken from [Wikidata](#) and [Wikipedia](#). Data from these sources is part of the information that appears in Google's [Knowledge Panel](#) in the search results.

Depending on the searches, Google can show relevant local results in [Google Maps](#) or Search. This is true on both mobile and desktop devices.<sup>[7]</sup>

## Google Maps

[[edit](#)]

Google has added a new Q&A features to [Google Maps](#) allowing users to submit questions to owners and allowing these to respond.<sup>[8]</sup> This Q&A feature is tied to the associated Google My Business account.

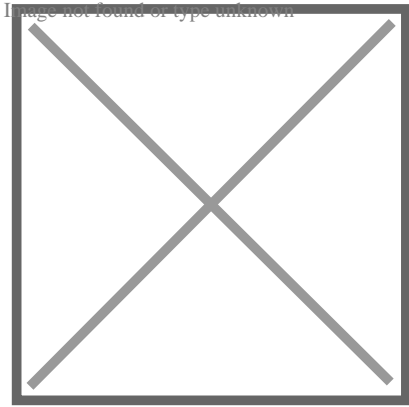
## Google Business Profile

[[edit](#)]

Google Business Profile (GBP), formerly [Google My Business](#) (GMB) is a free tool that allows businesses to create and manage their Google Business listing. These listings must represent a physical location that a customer can visit. A Google Business listing appears when customers search for businesses either on Google Maps or in Google SERPs. The accuracy of these listings is a local ranking factor.

## Ranking factors

[edit]



## Local Online Marketing

Major search engines have algorithms that determine which local businesses rank in local search. Primary factors that impact a local business's chance of appearing in local search include proper categorization in business directories, a business's name, address, and phone number (NAP) being **crawable** on the website, and citations (mentions of the local business on other relevant websites like a chamber of commerce website).[9]

In 2016, a study using statistical analysis assessed how and why businesses ranked in the Local Packs and identified positive correlations between local rankings and 100+ ranking factors.[10] Although the study cannot replicate Google's algorithm, it did deliver several interesting findings:

- **Backlinks** showed the most important correlation (and also Google's Toolbar **PageRank**, suggesting that older links are an advantage because the Toolbar has not been updated in a long time).
- Sites with more content (hence more **keywords**) tended to fare better (as expected).
- Reviews on GMB also were found to strongly correlate with high rankings.
- Other GMB factors, like the presence of photos and having a verified GMB page with opening hours, showed a **positive correlation** (with ranking) albeit not as important as reviews.
- The quality of **citations** such as a low number of duplicates, consistency and also a fair number of citations, mattered for a business to show in Local Packs. However, within the pack, citations did not influence their ranking: "citations appear to be foundational but not a competitive advantage."
- The authors were instead surprised that **geotargeting** elements (city & state) in the title of the GMB landing page did not have any impact on GMB rankings. Hence the authors suggest using such elements only if it makes sense for usability reasons.
- The presence of a keyword in the business name was found to be one of the most important factors (explaining the high incidence of **spam** in the Local Pack).
- Schema structured data is a ranking factor. The addition of the 'LocalBusiness' markup will enable you to display relevant information about your business to Google. This includes

- opening hours, address, founder, parent company information and much more.[11]
- The number of reviews and overall star rating correlates with higher rankings in the Google map pack results.

## Local ranking according to Google

[edit]

Prominence, relevance, and distance are the three main criteria Google claims to use in its algorithms to show results that best match a user's query.[12]

- Prominence reflects how well-known is a place in the offline world. An important museum or store, for example, will be given more prominence. Google also uses information obtained on the web to assess prominence such as review counts, links, articles.
- Relevance refers to Google's algorithms attempt to surface the listings that best match the user's query.
- Distance refers to Google's attempt to return those listings that are the closest the location terms used in a user's query. If no location term is used then "Google will calculate distance based on what's known about their location".

## Local ranking: 2017 survey from 40 local experts

[edit]

According to a group of local SEO experts who took part in a survey, links and reviews are more important than ever to rank locally.[13]

## Near Me Queries

[edit]

As a result of both Google as well as Apple offering "near me" as an option to users, some authors[14] report on how Google Trends shows very significant increases in "near me" queries. The same authors also report that the factors correlating the most with Local Pack ranking for "near me" queries include the presence of the "searched city and state in backlinks' anchor text" as well as the use of the " 'near me' in internal link anchor text"

## Possum Update

[edit]

An important update to Google's local algorithm, rolled out on the 1st of September 2016.[15]  
Summary of the update on local search results:

- Businesses based outside city physical limits showed a significant increase in ranking in the Google Local Pack
- A more restrictive filter is in place. Before the update, Google filtered listings linking to the same [website](#) and using the same phone number. After the update, listings get filtered if they have the same address and same categories though they belong to different businesses. So, if several dentists share the same address, Google will only show one of them.

## Hawk update

[\[edit\]](#)

As previously explained (see above), the Possum update led similar listings, within the same building, or even located on the same street, to get filtered. As a result, only one listing "with greater organic ranking and stronger relevance to the keyword" would be shown.[\[16\]](#) After the Hawk update on 22 August 2017, this filtering seems to apply only to listings located within the same building or close by (e.g. 50 feet), but not to listings located further away (e.g. 325 feet away).[\[16\]](#)

## Fake reviews

[\[edit\]](#)

As previously explained (see above), reviews are deemed to be an important ranking factor. Joy Hawkins, a Google Top Contributor and local SEO expert, highlights the problems due to fake reviews:[\[17\]](#)

- Lack of an appropriate process for business owners to report fake reviews on competitors' sites. GMB support will not consider requests about businesses other than if they come from the business owners themselves. So if a [competitor](#) nearby has been collecting fake reviews, the only way to bring this to the attention of GMB is via the Google My Business Forum.
- Unlike Yelp, Google does not show a label warning users of abnormal review behavior for those businesses that buy reviews or that receive unnatural numbers of negative reviews because of media attention.
- Current Google algorithms do not identify unnatural review patterns. Abnormal review patterns often do not need human gauging and should be easily identified by algorithms. As a result, both fake listings and rogue reviewer profiles should be suspended.

## See also

[\[edit\]](#)

- [Local search \(optimization\)](#)



## References

[[edit](#)]

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17. ^ ["Dear Google: 4 suggestions for fixing your massive problem with fake reviews". Search Engine Land. 2017-06-15. Retrieved 2017-07-16.](#)

## External links

[[edit](#)]

- [Google Search Engine Optimization \(SEO\) Starter Guide](#)
- [Google Local Businesses Guide](#)

## About World Wide Web

This article is about the global system of pages accessed via HTTP. For the worldwide computer network, see [Internet](#). For the web browser, see [WorldWideWeb](#).

"WWW" and "The Web" redirect here. For other uses, see [WWW \(disambiguation\)](#) and [The Web \(disambiguation\)](#).

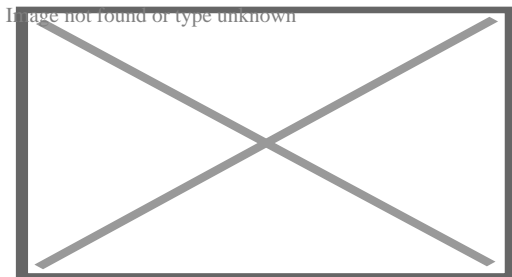
## World Wide Web

**Abbreviation** WWW

**Year started** 1989; 36 years ago by [Tim Berners-Lee](#)

**Organization**

- [CERN](#) (1989–1994)
- [W3C](#) (1994–current)



A [web page](#) from [Wikipedia](#) displayed in [Google Chrome](#)

The **World Wide Web** (**WWW** or simply **the Web**) is an [information system](#) that enables [content](#) sharing over the [Internet](#) through user-friendly ways meant to appeal to users beyond [IT](#) specialists and hobbyists.<sup>[1]</sup> It allows documents and other [web resources](#) to be accessed over the Internet according to specific rules of the [Hypertext Transfer Protocol](#) (HTTP).<sup>[2]</sup>

The Web was invented by English computer scientist [Tim Berners-Lee](#) while at [CERN](#) in 1989 and opened to the public in 1993. It was conceived as a "universal linked information system"<sup>[3]</sup><sup>[4]</sup><sup>[5]</sup> Documents and other media content are made available to the network through [web servers](#) and can be accessed by programs such as [web browsers](#). Servers and resources on the World Wide Web are identified and located through character strings called [uniform resource locators](#) (URLs).

The original and still very common document type is a [web page](#) formatted in [Hypertext Markup Language](#) (HTML). This markup language supports [plain text](#), [images](#), embedded [video](#) and [audio](#) contents, and [scripts](#) (short programs) that implement complex user interaction. The HTML language also supports [hyperlinks](#) (embedded URLs) which provide immediate access to

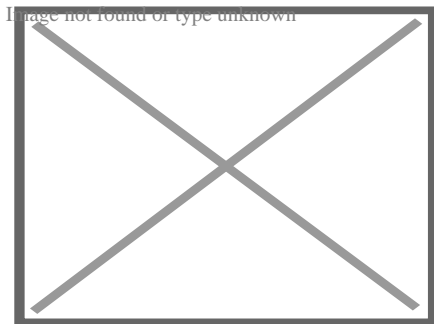
other web resources. **Web navigation**, or web surfing, is the common practice of following such hyperlinks across multiple websites. **Web applications** are web pages that function as **application software**. The information in the Web is transferred across the Internet using HTTP. Multiple web resources with a common theme and usually a common **domain name** make up a **website**. A single web server may provide multiple websites, while some websites, especially the most popular ones, may be provided by multiple servers. Website content is provided by a myriad of companies, organizations, government agencies, and **individual users**; and comprises an enormous amount of educational, entertainment, commercial, and government information.

The Web has become the world's dominant **information systems platform**.<sup>[6][7][8][9]</sup> It is the primary tool that billions of people worldwide use to interact with the Internet.<sup>[2]</sup>

## History

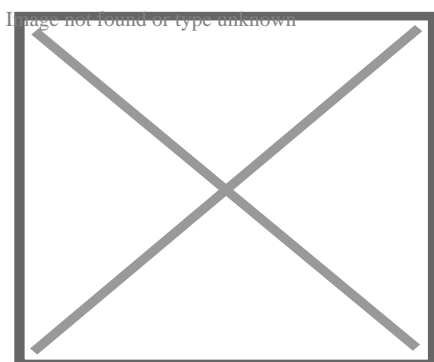
<sup>[edit]</sup>

Main article: **History of the World Wide Web**



This **NeXT Computer** was used by **Sir Tim Berners-Lee** at **CERN** and became the world's first **Web server**.

The Web was invented by English computer scientist **Tim Berners-Lee** while working at **CERN**.<sup>[10][11]</sup> He was motivated by the problem of storing, updating, and finding documents and data files in that large and constantly changing organization, as well as distributing them to collaborators outside CERN. In his design, Berners-Lee dismissed the common **tree structure** approach, used for instance in the existing CERNDOC documentation system and in the **Unix filesystem**, as well as approaches that relied in tagging files with **keywords**, as in the VAX/NOTES system. Instead he adopted concepts he had put into practice with his private **ENQUIRE** system (1980) built at CERN. When he became aware of **Ted Nelson's** **hypertext** model (1965), in which documents can be linked in unconstrained ways through **hyperlinks** associated with "hot spots" embedded in the text, it helped to confirm the validity of his concept.<sup>[12][13]</sup>



The historic World Wide Web logo, designed by [Robert Cailliau](#). Currently, there is no widely accepted logo in use for the WWW.

The model was later popularized by [Apple's HyperCard](#) system. Unlike Hypercard, Berners-Lee's new system from the outset was meant to support links between multiple databases on independent computers, and to allow simultaneous access by many users from any computer on the Internet. He also specified that the system should eventually handle other media besides text, such as graphics, speech, and video. Links could refer to mutable data files, or even fire up programs on their server computer. He also conceived "gateways" that would allow access through the new system to documents organized in other ways (such as traditional computer [file systems](#) or the [Usenet](#)). Finally, he insisted that the system should be decentralized, without any central control or coordination over the creation of links.[\[4\]\[14\]\[10\]\[11\]](#)

Berners-Lee submitted a proposal to CERN in May 1989, without giving the system a name.[\[4\]](#) He got a working system implemented by the end of 1990, including a browser called [WorldWideWeb](#) (which became the name of the project and of the network) and [an HTTP server](#) running at CERN. As part of that development he defined the first version of the HTTP protocol, the basic URL syntax, and implicitly made HTML the primary document format.[\[15\]](#) The technology was released outside CERN to other research institutions starting in January 1991, and then to the whole Internet on 23 August 1991. The Web was a success at CERN, and began to spread to other scientific and academic institutions. Within the next two years, [there were 50 websites created](#).[\[16\]\[17\]](#)

CERN made the Web protocol and code available royalty free in 1993, enabling its widespread use.[\[18\]\[19\]](#) After the [NCSA](#) released the [Mosaic web browser](#) later that year, the Web's popularity grew rapidly as [thousands of websites](#) sprang up in less than a year.[\[20\]\[21\]](#) Mosaic was a graphical browser that could display inline images and submit [forms](#) that were processed by the [HTTPd server](#).[\[22\]\[23\]](#) [Marc Andreessen](#) and [Jim Clark](#) founded [Netscape](#) the following year and released the [Navigator browser](#), which introduced [Java](#) and [JavaScript](#) to the Web. It quickly became the dominant browser. Netscape [became a public company](#) in 1995 which triggered a frenzy for the Web and started the [dot-com bubble](#).[\[24\]](#) Microsoft responded by developing its own browser, [Internet Explorer](#), starting the [browser wars](#). By bundling it with Windows, it became the dominant browser for 14 years.[\[25\]](#)

Berners-Lee founded the [World Wide Web Consortium](#) (W3C) which created [XML](#) in 1996 and recommended replacing HTML with stricter [XHTML](#).[\[26\]](#) In the meantime, developers began exploiting an IE feature called [XMLHttpRequest](#) to make [Ajax](#) applications and launched the [Web 2.0](#) revolution. [Mozilla](#), [Opera](#), and Apple rejected XHTML and created the [WHATWG](#) which developed [HTML5](#).[\[27\]](#) In 2009, the W3C conceded and abandoned XHTML.[\[28\]](#) In 2019, it ceded control of the HTML specification to the WHATWG.[\[29\]](#)

The World Wide Web has been central to the development of the [Information Age](#) and is the primary tool billions of people use to interact on the [Internet](#).[\[30\]\[31\]\[32\]\[9\]](#)

## Nomenclature



[[edit](#)]



This section **needs additional citations for verification**. Please help [improve this article](#) by [adding citations to reliable sources](#) in this section. Unsourced material may be challenged and removed. (August 2023) ([Learn how and when to remove this message](#))

Tim Berners-Lee states that *World Wide Web* is officially spelled as three separate words, each capitalised, with no intervening hyphens.<sup>[33]</sup> Nonetheless, it is often called simply *the Web*, and also often *the web*; see [Capitalization of Internet](#) for details. In Mandarin Chinese, *World Wide Web* is commonly translated via a [phono-semantic matching](#) to *wàn wéi wǎng* (万维网, *wàn wéi wǎng*), which satisfies *www* and literally means "10,000-dimensional net", a translation that reflects the design concept and proliferation of the World Wide Web.

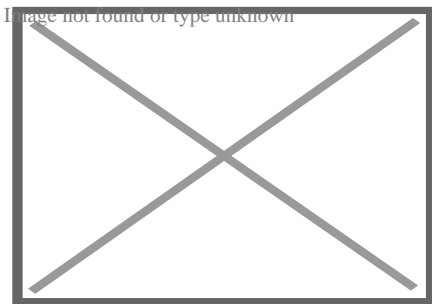
Use of the *www* prefix has been declining, especially when [web applications](#) sought to brand their domain names and make them easily pronounceable. As the [mobile Web](#) grew in popularity,<sup>[[citation needed](#)]</sup> services like [Gmail.com](#), [Outlook.com](#), [Myspace.com](#), [Facebook.com](#) and [Twitter.com](#) are most often mentioned without adding "*www.*" (or, indeed, ".com") to the domain.<sup>[34]</sup>

In English, *www* is usually read as *double-u double-u double-u*.<sup>[35]</sup> Some users pronounce it *dub-dub-dub*, particularly in New Zealand.<sup>[36]</sup> [Stephen Fry](#), in his "Podgrams" series of podcasts, pronounces it *wuh wuh wuh*.<sup>[37]</sup> The English writer [Douglas Adams](#) once quipped in *The Independent on Sunday* (1999): "The World Wide Web is the only thing I know of whose shortened form takes three times longer to say than what it's short for".<sup>[38]</sup>

## Function

[[edit](#)]

Main articles: [HTTP](#) and [HTML](#)



The World Wide Web functions as an [application layer protocol](#) that is run "on top of" (figuratively) the Internet, helping to make it more functional. The advent of the [Mosaic](#) web browser helped to make the web much more usable, to include the display of images and moving images ([GIFs](#)).

The terms *Internet* and *World Wide Web* are often used without much distinction. However, the two terms do not mean the same thing. The Internet is a global system of [computer networks](#)

interconnected through telecommunications and **optical networking**. In contrast, the World Wide Web is a global collection of documents and other **resources**, linked by hyperlinks and **URIs**. Web resources are accessed using **HTTP** or **HTTPS**, which are application-level Internet protocols that use the Internet transport protocols.[2]

Viewing a **web page** on the World Wide Web normally begins either by typing the **URL** of the page into a web browser or by following a hyperlink to that page or resource. The web browser then initiates a series of background communication messages to fetch and display the requested page. In the 1990s, using a browser to view web pages—and to move from one web page to another through hyperlinks—came to be known as 'browsing,' 'web surfing' (after **channel surfing**), or 'navigating the Web'. Early studies of this new behaviour investigated user patterns in using web browsers. One study, for example, found five user patterns: exploratory surfing, window surfing, evolved surfing, bounded navigation and targeted navigation.[39]

The following example demonstrates the functioning of a web browser when accessing a page at the URL `http://example.org/home.html`. The browser resolves the server name of the URL ( `example.org` ) into an **Internet Protocol address** using the globally distributed **Domain Name System** (DNS). This lookup returns an IP address such as `203.0.113.4` or `2001:db8:2e::7334`. The browser then requests the resource by sending an **HTTP** request across the Internet to the computer at that address. It requests service from a specific TCP port number that is well known for the HTTP service so that the receiving host can distinguish an HTTP request from other network protocols it may be servicing. HTTP normally uses **port number 80** and for HTTPS it normally uses **port number 443**. The content of the HTTP request can be as simple as two lines of text:

```
GET /home.html HTTP/1.1  
Host: example.org
```

The computer receiving the HTTP request delivers it to web server software listening for requests on port 80. If the web server can fulfil the request it sends an HTTP response back to the browser indicating success:

```
HTTP/1.1 200 OK  
Content-Type: text/html; charset=UTF-8
```

followed by the content of the requested page. Hypertext Markup Language (**HTML**) for a basic web page might look like this:

```
<html>  
<head>
```

```
<title>Example.org – The World Wide Web</title>
</head>
<body>
  <p>The World Wide Web, abbreviated as WWW and commonly known ...</p>
</body>
</html>
```

The web browser **parses** the HTML and interprets the markup (<title>, <p> for paragraph, and such) that surrounds the words to format the text on the screen. Many web pages use HTML to reference the URLs of other resources such as images, other embedded media, **scripts** that affect page behaviour, and **Cascading Style Sheets** that affect page layout. The browser makes additional HTTP requests to the web server for these other **Internet media types**. As it receives their content from the web server, the browser progressively **renders** the page onto the screen as specified by its HTML and these additional resources.

## HTML

[[edit](#)]

Main article: [HTML](#)

Hypertext Markup Language (HTML) is the standard **markup language** for creating **web pages** and **web applications**. With **Cascading Style Sheets** (CSS) and **JavaScript**, it forms a triad of **cornerstone** technologies for the World Wide Web.<sup>[40]</sup>

**Web browsers** receive HTML documents from a **web server** or from local storage and **render** the documents into multimedia web pages. HTML describes the structure of a web page **semantically** and originally included cues for the appearance of the document.

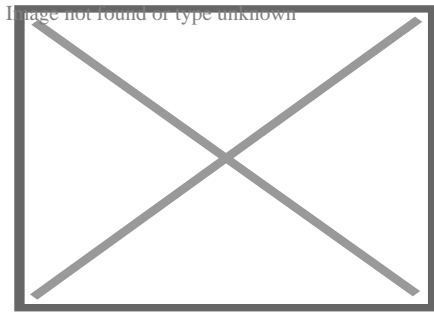
**HTML elements** are the building blocks of HTML pages. With HTML constructs, **images** and other objects such as **interactive forms** may be embedded into the rendered page. HTML provides a means to create **structured documents** by denoting structural **semantics** for text such as headings, paragraphs, lists, **links**, quotes and other items. HTML elements are delineated by *tags*, written using **angle brackets**. Tags such as <img /> and <input /> directly introduce content into the page. Other tags such as <p> surround and provide information about document text and may include other tags as sub-elements. Browsers do not display the HTML tags, but use them to interpret the content of the page.

HTML can embed programs written in a **scripting language** such as **JavaScript**, which affects the behaviour and content of web pages. Inclusion of CSS defines the look and layout of content. The **World Wide Web Consortium** (W3C), maintainer of both the HTML and the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1997<sup>[41]</sup>

## Linking

[edit]

Most web pages contain hyperlinks to other related pages and perhaps to downloadable files, source documents, definitions and other web resources. In the underlying HTML, a hyperlink looks like this: `<a href="http://example.org/home.html">Example.org Homepage</a>`.



Graphic representation of a minute fraction of the WWW, demonstrating **hyperlinks**

Such a collection of useful, related resources, interconnected via hypertext links is dubbed a *web* of information. Publication on the Internet created what Tim Berners-Lee first called the *WorldWideWeb* (in its original **CamelCase**, which was subsequently discarded) in November 1990.[42]

The hyperlink structure of the web is described by the **webgraph**: the nodes of the web graph correspond to the web pages (or URLs) the directed edges between them to the hyperlinks. Over time, many web resources pointed to by hyperlinks disappear, relocate, or are replaced with different content. This makes hyperlinks obsolete, a phenomenon referred to in some circles as link rot, and the hyperlinks affected by it are often called "**dead**" **links**. The ephemeral nature of the Web has prompted many efforts to archive websites. The **Internet Archive**, active since 1996, is the best known of such efforts.

## WWW prefix

[edit]

Many hostnames used for the World Wide Web begin with *www* because of the long-standing practice of naming **Internet** hosts according to the services they provide. The **hostname** of a **web server** is often *www*, in the same way that it may be *ftp* for an **FTP server**, and *news* or *nntp* for a **Usenet news server**. These hostnames appear as Domain Name System (DNS) or **subdomain** names, as in *www.example.com*. The use of *www* is not required by any technical or policy standard and many websites do not use it; the first web server was *nxoc01.cern.ch*. [43] According to Paolo Palazzi, who worked at CERN along with Tim Berners-Lee, the popular use of *www* as subdomain was accidental; the World Wide Web project page was intended to be published at *www.cern.ch* while *info.cern.ch* was intended to be the CERN home page; however the DNS records were never switched, and the practice of prepending *www* to an institution's website domain name was subsequently copied. [44] **better source needed** Many established websites still use the prefix, or they employ other subdomain names such as *www2*, *secure* or



en for special purposes. Many such web servers are set up so that both the main domain name (e.g., example.com) and the *www* subdomain (e.g., www.example.com) refer to the same site; others require one form or the other, or they may map to different web sites. The use of a subdomain name is useful for **load balancing** incoming web traffic by creating a **CNAME record** that points to a cluster of web servers. Since, currently<sup>[*as of?*]</sup>, only a subdomain can be used in a CNAME, the same result cannot be achieved by using the bare domain root.<sup>[45]</sup><sup>[*dubious – discuss*]</sup>

When a user submits an incomplete domain name to a web browser in its address bar input field, some web browsers automatically try adding the prefix "www" to the beginning of it and possibly ".com", ".org" and ".net" at the end, depending on what might be missing. For example, entering "microsoft" may be transformed to *http://www.microsoft.com/* and "openoffice" to *http://www.openoffice.org*. This feature started appearing in early versions of **Firefox**, when it still had the working title 'Firebird' in early 2003, from an earlier practice in browsers such as **Lynx**.<sup>[46]</sup><sup>[*unreliable source?*]</sup> It is reported that Microsoft was granted a US patent for the same idea in 2008, but only for mobile devices.<sup>[47]</sup>

## Scheme specifiers

[[edit](#)]

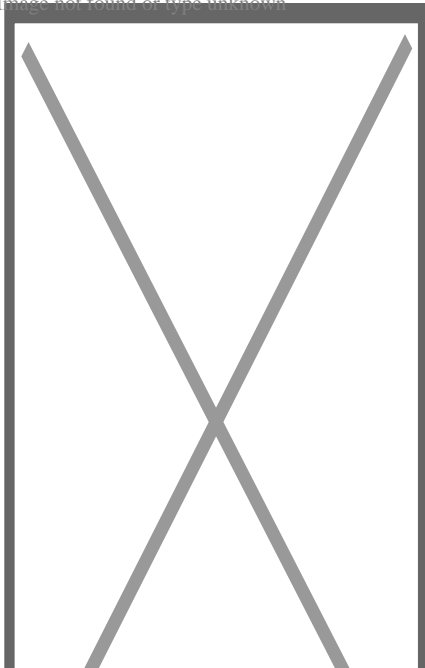
The scheme specifiers *http://* and *https://* at the start of a web **URI** refer to **Hypertext Transfer Protocol** or **HTTP Secure**, respectively. They specify the communication protocol to use for the request and response. The HTTP protocol is fundamental to the operation of the World Wide Web, and the added encryption layer in HTTPS is essential when browsers send or retrieve confidential data, such as passwords or banking information. Web browsers usually automatically prepend *http://* to user-entered URIs, if omitted.

## Pages

[[edit](#)]

Main article: **Web page**

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## A screenshot of the home page of Wikimedia Commons

A *web page* (also written as *webpage*) is a document that is suitable for the World Wide Web and **web browsers**. A web browser displays a web page on a **monitor** or **mobile device**.

The term *web page* usually refers to what is visible, but may also refer to the contents of the **computer file** itself, which is usually a **text file** containing **hypertext** written in **HTML** or a comparable **markup language**. Typical web pages provide **hypertext** for browsing to other web pages via **hyperlinks**, often referred to as *links*. Web browsers will frequently have to access multiple **web resource** elements, such as reading **style sheets**, **scripts**, and images, while presenting each web page.

On a network, a web browser can retrieve a web page from a remote **web server**. The web server may restrict access to a private network such as a corporate intranet. The web browser uses the **Hypertext Transfer Protocol** (HTTP) to make such requests to the **web server**.

A **static web page** is delivered exactly as stored, as **web content** in the web server's **file system**. In contrast, a **dynamic web page** is generated by a **web application**, usually driven by **server-side software**. Dynamic web pages are used when each user may require completely different information, for example, bank websites, web email etc.

## Static page

[**edit**]

Main article: **Static web page**

A *static web page* (sometimes called a *flat page/stationary page*) is a **web page** that is delivered to the user exactly as stored, in contrast to **dynamic web pages** which are generated by a **web application**.

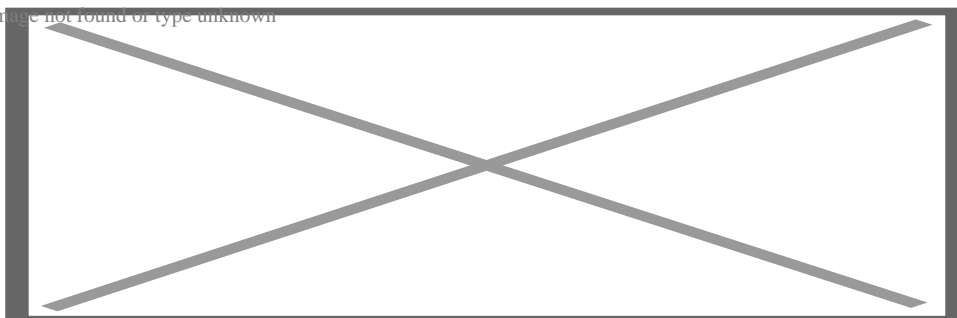
Consequently, a static web page displays the same information for all users, from all contexts, subject to modern capabilities of a **web server** to **negotiate content-type** or language of the document where such versions are available and the server is configured to do so.

## Dynamic pages

[**edit**]

Main articles: **Dynamic web page** and **Ajax (programming)**

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Dynamic web page: example of server-side scripting (PHP and MySQL)

A *server-side dynamic web page* is a **web page** whose construction is controlled by an **application server** processing server-side scripts. In server-side scripting, **parameters** determine how the assembly of every new web page proceeds, including the setting up of more client-side processing.

A *client-side dynamic web page* processes the web page using JavaScript running in the browser. JavaScript programs can interact with the document via **Document Object Model**, or DOM, to query page state and alter it. The same client-side techniques can then dynamically update or change the DOM in the same way.

A dynamic web page is then reloaded by the user or by a **computer program** to change some variable content. The updating information could come from the server, or from changes made to that page's DOM. This may or may not truncate the browsing history or create a saved version to go back to, but a *dynamic web page update* using **Ajax** technologies will neither create a page to go back to nor truncate the **web browsing history** forward of the displayed page. Using Ajax technologies the end **user** gets *one dynamic page* managed as a single page in the **web browser** while the actual **web content** rendered on that page can vary. The Ajax engine sits only on the browser requesting parts of its DOM, *the DOM*, for its client, from an application server.

Dynamic HTML, or DHTML, is the umbrella term for technologies and methods used to create web pages that are not **static web pages**, though it has fallen out of common use since the popularization of **AJAX**, a term which is now itself rarely used. **citation needed** Client-side-scripting, server-side scripting, or a combination of these make for the dynamic web experience in a browser.

**JavaScript** is a **scripting language** that was initially developed in 1995 by **Brendan Eich**, then of **Netscape**, for use within web pages.[48] The standardised version is **ECMAScript**. [48] To make web pages more interactive, some web applications also use JavaScript techniques such as **Ajax** (**asynchronous JavaScript and XML**). **Client-side script** is delivered with the page that can make additional HTTP requests to the server, either in response to user actions such as mouse movements or clicks, or based on elapsed time. The server's responses are used to modify the current page rather than creating a new page with each response, so the server needs only to provide limited, incremental information. Multiple Ajax requests can be handled at the same time, and users can interact with the page while data is retrieved. Web pages may also regularly **poll** the server to check whether new information is available.[49]

## Website

[edit]

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The [usap.gov](https://www.usap.gov) website

Main article: [Website](#)

A *website*<sup>[50]</sup> is a collection of related web resources including [web pages](#), [multimedia](#) content, typically identified with a common [domain name](#), and published on at least one [web server](#). Notable examples are [wikipedia.org](https://www.wikipedia.org), [google.com](https://www.google.com), and [amazon.com](https://www.amazon.com).

A website may be accessible via a public [Internet Protocol](#) (IP) network, such as the [Internet](#), or a private [local area network](#) (LAN), by referencing a [uniform resource locator](#) (URL) that identifies the site.

Websites can have many functions and can be used in various fashions; a website can be a [personal website](#), a corporate website for a company, a government website, an organization website, etc. Websites are typically dedicated to a particular topic or purpose, ranging from entertainment and [social networking](#) to providing news and education. All publicly accessible websites collectively constitute the World Wide Web, while private websites, such as a company's website for its employees, are typically a part of an [intranet](#).

Web pages, which are the building blocks of websites, are [documents](#), typically composed in [plain text](#) interspersed with [formatting instructions](#) of Hypertext Markup Language ([HTML](#), [XHTML](#)). They may incorporate elements from other websites with suitable [markup anchors](#). Web pages are accessed and transported with the [Hypertext Transfer Protocol](#) (HTTP), which may optionally employ encryption ([HTTP Secure](#), HTTPS) to provide security and privacy for the user. The user's application, often a [web browser](#), renders the page content according to its HTML markup instructions onto a [display terminal](#).

[Hyperlinking](#) between web pages conveys to the reader the [site structure](#) and guides the navigation of the site, which often starts with a [home page](#) containing a directory of the site [web content](#). Some websites require user registration or [subscription](#) to access content. Examples of [subscription websites](#) include many business sites, news websites, [academic journal](#) websites, gaming websites, file-sharing websites, [message boards](#), web-based [email](#), [social networking](#) websites, websites providing real-time price quotations for different types of markets, as well as sites providing various other services. [End users](#) can access websites on a range of devices, including [desktop](#) and [laptop computers](#), [tablet computers](#), [smartphones](#) and [smart TVs](#).

## Browser

[[edit](#)]

Main article: [Web browser](#)

A *web browser* (commonly referred to as a *browser*) is a [software user agent](#) for accessing information on the World Wide Web. To connect to a website's [server](#) and display its pages, a user needs to have a web browser program. This is the program that the user runs to download, format, and display a web page on the user's computer.

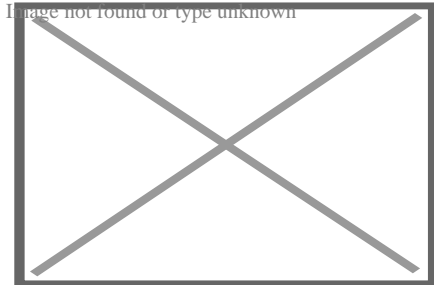
In addition to allowing users to find, display, and move between web pages, a web browser will usually have features like keeping bookmarks, recording history, managing cookies (see below), and home pages and may have facilities for recording passwords for logging into websites.

The most popular browsers are [Chrome](#), [Safari](#), [Edge](#), [Samsung Internet](#) and [Firefox](#).<sup>[51]</sup>

## Server

[\[edit\]](#)

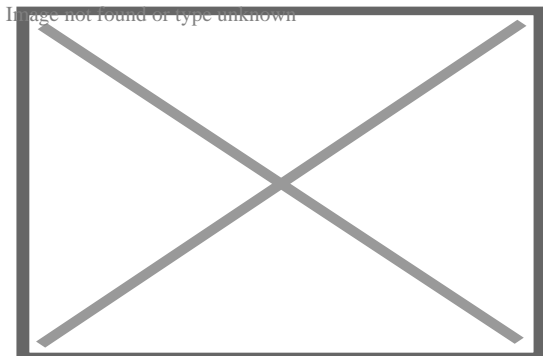
Main article: [Web server](#)



The inside and front of a [Dell PowerEdge](#) web server, a computer designed for [rack mounting](#)

A *Web server* is [server software](#), or hardware dedicated to running said software, that can satisfy World Wide Web client requests. A web server can, in general, contain one or more websites. A web server processes incoming network requests over [HTTP](#) and several other related protocols.

The primary function of a web server is to store, process and deliver [web pages](#) to [clients](#).<sup>[52]</sup> The communication between client and server takes place using the [Hypertext Transfer Protocol \(HTTP\)](#). Pages delivered are most frequently [HTML documents](#), which may include [images](#), [style sheets](#) and [scripts](#) in addition to the text content.



Multiple web servers may be used for a high traffic website; here, [Dell](#) servers are installed together to be used for the [Wikimedia Foundation](#).

A [user agent](#), commonly a [web browser](#) or [web crawler](#), initiates communication by making a [request](#) for a specific resource using HTTP and the server responds with the content of that



resource or an **error message** if unable to do so. The resource is typically a real file on the server's **secondary storage**, but this is not necessarily the case and depends on how the webserver is **implemented**.

While the primary function is to serve content, full implementation of HTTP also includes ways of receiving content from clients. This feature is used for submitting **web forms**, including **uploading** of files.

Many generic web servers also support **server-side scripting** using **Active Server Pages** (ASP), **PHP** (Hypertext Preprocessor), or other **scripting languages**. This means that the behaviour of the webserver can be scripted in separate files, while the actual server software remains unchanged. Usually, this function is used to generate HTML documents **dynamically** ("on-the-fly") as opposed to returning **static documents**. The former is primarily used for retrieving or modifying information from **databases**. The latter is typically much faster and more easily **cached** but cannot deliver **dynamic content**.

Web servers can also frequently be found **embedded** in devices such as **printers**, **routers**, **webcams** and serving only a **local network**. The web server may then be used as a part of a system for monitoring or administering the device in question. This usually means that no additional software has to be installed on the client computer since only a web browser is required (which now is included with most **operating systems**).

## Optical Networking

[edit]

**Optical networking** is a sophisticated infrastructure that utilizes optical fiber to transmit data over long distances, connecting countries, cities, and even private residences. The technology uses optical microsystems like **tunable lasers**, filters, **attenuators**, switches, and wavelength-selective switches to manage and operate these networks.[53][54]

The large quantity of optical fiber installed throughout the world at the end of the twentieth century set the foundation of the Internet as it's used today. The information highway relies heavily on optical networking, a method of sending messages encoded in light to relay information in various telecommunication networks.[55]

The **Advanced Research Projects Agency Network** (ARPANET) was one of the first iterations of the Internet, created in collaboration with universities and researchers 1969.[56][57][58][59] However, access to the ARPANET was limited to researchers, and in 1985, the **National Science Foundation** founded the **National Science Foundation Network** (NSFNET), a program that provided supercomputer access to researchers.[59]

Limited public access to the Internet led to pressure from consumers and corporations to privatize the network. In 1993, the US passed the **National Information Infrastructure Act**, which dictated that the National Science Foundation must hand over control of the optical capabilities

to commercial operators.<sup>[60][61]</sup>

The privatization of the Internet and the release of the World Wide Web to the public in 1993 led to an increased demand for Internet capabilities. This spurred developers to seek solutions to reduce the time and cost of laying new fiber and increase the amount of information that can be sent on a single fiber, in order to meet the growing needs of the public.<sup>[62][63][64][65]</sup>

In 1994, Pirelli S.p.A.'s optical components division introduced a wavelength-division multiplexing (WDM) system to meet growing demand for increased data transmission. This four-channel WDM technology allowed more information to be sent simultaneously over a single optical fiber, effectively boosting network capacity.<sup>[66][67]</sup>

Pirelli wasn't the only company that developed a WDM system; another company, the **Ciena Corporation** (Ciena), created its own technology to transmit data more efficiently. **David Huber**, an optical networking engineer and entrepreneur **Kevin Kimberlin** founded Ciena in 1992.<sup>[68][69][70]</sup> Drawing on laser technology from **Gordon Gould** and William Culver of **Optelecom, Inc.**, the company focused on utilizing optical amplifiers to transmit data via light.<sup>[71][72][73]</sup> Under chief executive officer Pat Nettles, Ciena developed a dual-stage optical amplifier for dense wavelength-division multiplexing (DWDM), patented in 1997 and deployed on the Sprint network in 1996.<sup>[74][75][76][77][78]</sup>

## Cookie

<sup>[edit]</sup>

Main article: **HTTP cookie**

An *HTTP cookie* (also called *web cookie*, *Internet cookie*, *browser cookie*, or simply *cookie*) is a small piece of data sent from a website and stored on the user's computer by the user's **web browser** while the user is browsing. Cookies were designed to be a reliable mechanism for websites to remember **stateful** information (such as items added in the shopping cart in an online store) or to record the user's browsing activity (including clicking particular buttons, **logging in**, or recording which pages were visited in the past). They can also be used to remember arbitrary pieces of information that the user previously entered into form fields such as names, addresses, passwords, and credit card numbers.

Cookies perform essential functions in the modern web. Perhaps most importantly, *authentication cookies* are the most common method used by web servers to know whether the user is logged in or not, and which account they are logged in with. Without such a mechanism, the site would not know whether to send a page containing sensitive information or require the user to authenticate themselves by logging in. The security of an authentication cookie generally depends on the security of the issuing website and the user's **web browser**, and on whether the cookie data is encrypted. Security vulnerabilities may allow a cookie's data to be read by a **hacker**, used to gain access to user data, or used to gain access (with the user's credentials) to the website to which the cookie belongs (see **cross-site scripting** and **cross-site request forgery** for examples).<sup>[79]</sup>

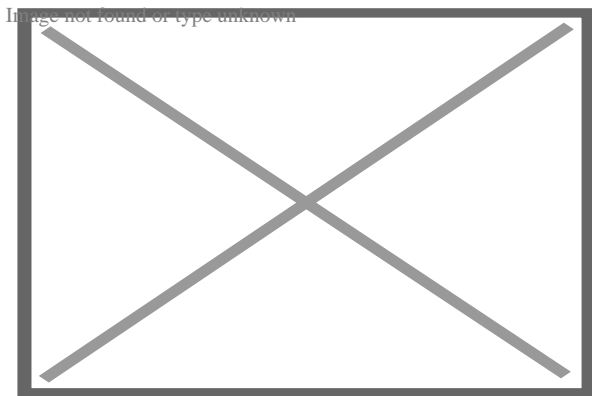
Tracking cookies, and especially third-party tracking cookies, are commonly used as ways to compile long-term records of individuals' browsing histories – a potential **privacy concern** that prompted European<sup>[80]</sup> and U.S. lawmakers to take action in 2011.<sup>[81][82]</sup> European law requires that all websites targeting **European Union** member states gain "informed consent" from users before storing non-essential cookies on their device.

Google **Project Zero** researcher Jann Horn describes ways cookies can be read by **intermediaries**, like **Wi-Fi** hotspot providers. When in such circumstances, he recommends using the browser in **private browsing** mode (widely known as **Incognito mode** in Google Chrome).<sup>[83]</sup>

## Search engine

**[edit]**

Main article: **Search engine**



The results of a search for the term "lunar eclipse" in a web-based **image search** engine

A *web search engine* or *Internet search engine* is a **software system** that is designed to carry out *web search* (*Internet search*), which means to search the World Wide Web in a systematic way for particular information specified in a **web search query**. The search results are generally presented in a line of results, often referred to as **search engine results pages** (SERPs). The information may be a mix of **web pages**, images, videos, infographics, articles, research papers, and other types of files. Some search engines also **mine data** available in **databases** or **open directories**. Unlike **web directories**, which are maintained only by human editors, search engines also maintain **real-time** information by running an **algorithm** on a **web crawler**. Internet content that is not capable of being searched by a web search engine is generally described as the **deep web**.

In 1990, **Archie**, the world's first search engine, was released. The technology was originally an index of **File Transfer Protocol** (FTP) sites, which was a method for moving files between a client and a server network.<sup>[84][85]</sup> This early search tool was superseded by more advanced engines like **Yahoo!** in 1995 and **Google** in 1998.<sup>[86][87]</sup>

## Deep web

[\[edit\]](#)

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### Deep web diagram

Image not found or type unknown



### Deep web vs surface web

Image not found or type unknown



### Surface Web & Deep Web

Main article: [Deep web](#)

The deep web,<sup>[88]</sup> *invisible web*,<sup>[89]</sup> or *hidden web*<sup>[90]</sup> are parts of the World Wide Web whose contents are not **indexed** by standard **web search engines**. The opposite term to the deep web is the **surface web**, which is accessible to anyone using the Internet.<sup>[91]</sup> Computer scientist Michael K. Bergman is credited with coining the term *deep web* in 2001 as a search indexing term.<sup>[92]</sup>

The content of the deep web is hidden behind **HTTP** forms,<sup>[93][94]</sup> and includes many very common uses such as **web mail**, **online banking**, and services that users must pay for, and which is protected by a **paywall**, such as **video on demand**, some online magazines and newspapers, among others.

The content of the deep web can be located and accessed by a direct **URL** or **IP address** and may require a password or other security access past the public website page.

## Caching

[edit]

A **web cache** is a server computer located either on the public Internet or within an enterprise that stores recently accessed web pages to improve response time for users when the same content is requested within a certain time after the original request. Most web browsers also implement a **browser cache** by writing recently obtained data to a local data storage device. HTTP requests by a browser may ask only for data that has changed since the last access. Web pages and resources may contain expiration information to control caching to secure sensitive data, such as in **online banking**, or to facilitate frequently updated sites, such as news media. Even sites with highly dynamic content may permit basic resources to be refreshed only occasionally. Web site designers find it worthwhile to collate resources such as CSS data and JavaScript into a few site-wide files so that they can be cached efficiently. Enterprise **firewalls** often cache Web resources requested by one user for the benefit of many users. Some **search engines** store cached content of frequently accessed websites.

## Security

[edit]

For **criminals**, the Web has become a venue to spread **malware** and engage in a range of **cybercrime**, including (but not limited to) **identity theft**, **fraud**, **espionage**, and **intelligence gathering**.<sup>[95]</sup> Web-based **vulnerabilities** now outnumber traditional computer security concerns,<sup>[96][97]</sup> and as measured by **Google**, about one in ten web pages may contain malicious code.<sup>[98]</sup> Most web-based **attacks** take place on legitimate websites, and most, as measured by **Sophos**, are hosted in the United States, China and Russia.<sup>[99]</sup> The most common of all malware **threats** is **SQL injection** attacks against websites.<sup>[100]</sup> Through HTML and URIs, the Web was vulnerable to attacks like **cross-site scripting** (XSS) that came with the introduction of JavaScript<sup>[101]</sup> and were exacerbated to some degree by **Web 2.0** and Ajax **web design** that favours the use of scripts.<sup>[102]</sup> In one 2007 estimate, 70% of all websites are open to XSS attacks on their users.<sup>[103]</sup> **Phishing** is another common threat to the Web. In February 2013, RSA (the security division of EMC) estimated the global losses from phishing at \$1.5 billion in 2012.<sup>[104]</sup> Two of the well-known phishing methods are Covert Redirect and Open Redirect.

Proposed solutions vary. Large security companies like **McAfee** already design governance and compliance suites to meet post-9/11 regulations.<sup>[105]</sup> and some, like **Finjan Holdings** have recommended active real-time inspection of programming code and all content regardless of its source.<sup>[95]</sup> Some have argued that for enterprises to see Web security as a business opportunity rather than a **cost centre**,<sup>[106]</sup> while others call for "ubiquitous, always-on **digital rights management**" enforced in the infrastructure to replace the hundreds of companies that secure data and networks.<sup>[107]</sup> **Jonathan Zittrain** has said users sharing responsibility for computing safety is far preferable to locking down the Internet.<sup>[108]</sup>



## Privacy

[[edit](#)]

Main article: [Internet privacy](#)

Every time a client requests a web page, the server can identify the request's [IP address](#). Web servers usually log IP addresses in a [log file](#). Also, unless set not to do so, most web browsers record requested web pages in a viewable *history* feature, and usually [cache](#) much of the content locally. Unless the server-browser communication uses HTTPS encryption, web requests and responses travel in plain text across the Internet and can be viewed, recorded, and cached by intermediate systems. Another way to hide [personally identifiable information](#) is by using a [virtual private network](#). A VPN [encrypts](#) traffic between the client and VPN server, and masks the original IP address, lowering the chance of user identification.

When a web page asks for, and the user supplies, personally identifiable information—such as their real name, address, e-mail address, etc. web-based entities can associate current web traffic with that individual. If the website uses [HTTP cookies](#), username, and password authentication, or other tracking techniques, it can relate other web visits, before and after, to the identifiable information provided. In this way, a web-based organization can develop and build a profile of the individual people who use its site or sites. It may be able to build a record for an individual that includes information about their leisure activities, their shopping interests, their profession, and other aspects of their [demographic profile](#). These profiles are of potential interest to marketers, advertisers, and others. Depending on the website's [terms and conditions](#) and the local laws that apply information from these profiles may be sold, shared, or passed to other organizations without the user being informed. For many ordinary people, this means little more than some unexpected emails in their inbox or some uncannily relevant advertising on a future web page. For others, it can mean that time spent indulging an unusual interest can result in a deluge of further targeted marketing that may be unwelcome. Law enforcement, counterterrorism, and espionage agencies can also identify, target, and track individuals based on their interests or proclivities on the Web.

[Social networking](#) sites usually try to get users to use their real names, interests, and locations, rather than pseudonyms, as their executives believe that this makes the social networking experience more engaging for users. On the other hand, uploaded photographs or unguarded statements can be identified to an individual, who may regret this exposure. Employers, schools, parents, and other relatives may be influenced by aspects of social networking profiles, such as text posts or digital photos, that the posting individual did not intend for these audiences. [Online bullies](#) may make use of personal information to harass or [stalk](#) users. Modern social networking websites allow fine-grained control of the privacy settings for each posting, but these can be complex and not easy to find or use, especially for beginners.<sup>[109]</sup> Photographs and videos posted onto websites have caused particular problems, as they can add a person's face to an online profile. With modern and potential [facial recognition technology](#), it may then be possible to relate that face with other, previously anonymous, images, events, and scenarios that have been imaged elsewhere. Due to image caching, mirroring, and copying, it is difficult to remove an image from the World Wide Web.

## Standards

[[edit](#)]

Main article: [Web standards](#)

Web standards include many interdependent standards and specifications, some of which govern aspects of the [Internet](#), not just the World Wide Web. Even when not web-focused, such standards directly or indirectly affect the development and administration of websites and [web services](#). Considerations include the [interoperability](#), [accessibility](#) and [usability](#) of web pages and web sites.

Web standards, in the broader sense, consist of the following:

- *Recommendations* published by the [World Wide Web Consortium](#) (W3C)[110]
- "Living Standard" made by the [Web Hypertext Application Technology Working Group](#) (WHATWG)
- *Request for Comments* (RFC) documents published by the [Internet Engineering Task Force](#) (IETF)[111]
- *Standards* published by the [International Organization for Standardization](#) (ISO)[112]
- *Standards* published by [Ecma International](#) (formerly ECMA)[113]
- *The Unicode Standard* and various *Unicode Technical Reports* (UTRs) published by the [Unicode Consortium](#)[114]
- Name and number registries maintained by the [Internet Assigned Numbers Authority](#) (IANA)[115]

Web standards are not fixed sets of rules but are constantly evolving sets of finalized technical specifications of web technologies.[116] Web standards are developed by [standards organizations](#)—groups of interested and often competing parties chartered with the task of standardization—not technologies developed and declared to be a standard by a single individual or company. It is crucial to distinguish those specifications that are under development from the ones that already reached the final development status (in the case of [W3C](#) specifications, the highest maturity level).

## Accessibility

[[edit](#)]

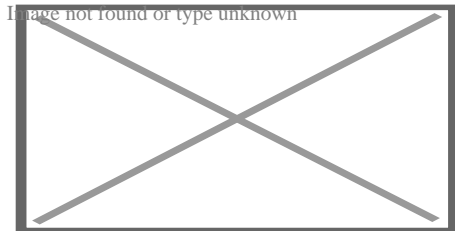
Main article: [Web accessibility](#)

There are methods for accessing the Web in alternative mediums and formats to facilitate use by individuals with [disabilities](#). These disabilities may be visual, auditory, physical, speech-related, cognitive, neurological, or some combination. Accessibility features also help people with temporary disabilities, like a broken arm, or ageing users as their abilities change.[117] The Web is receiving information as well as providing information and interacting with society. The World Wide Web Consortium claims that it is essential that the Web be accessible, so it can provide equal access and [equal opportunity](#) to people with disabilities.[118] Tim Berners-Lee

once noted, "The power of the Web is in its universality. Access by everyone regardless of disability is an essential aspect."<sup>[117]</sup> Many countries regulate web accessibility as a requirement for websites.<sup>[119]</sup> International co-operation in the W3C [Web Accessibility Initiative](#) led to simple guidelines that web content authors as well as software developers can use to make the Web accessible to persons who may or may not be using [assistive technology](#).<sup>[117][120]</sup>

## Internationalisation

[\[edit\]](#)



A global map of the [Web Index](#) for countries in 2014

The W3C [Internationalisation](#) Activity assures that web technology works in all languages, scripts, and cultures.<sup>[121]</sup> Beginning in 2004 or 2005, [Unicode](#) gained ground and eventually in December 2007 surpassed both [ASCII](#) and Western European as the Web's most frequently used [character map](#).<sup>[122]</sup> Originally [RFC 3986](#) allowed resources to be identified by [URI](#) in a subset of US-ASCII.

[RFC 3987](#) allows more characters—any character in the [Universal Character Set](#)—and now a resource can be identified by [IRI](#) in any language.<sup>[123]</sup>

## See also

[\[edit\]](#)

- [Engineering portal](#)
- [Internet portal](#)
- [World portal](#)

- [Decentralized web](#)
- [Electronic publishing](#)
- [Gopher \(protocol\)](#), an early alternative to the WWW
- [Internet metaphors](#)
- [Internet security](#)
- [Lists of websites](#)
- [Minitel](#), a predecessor of the WWW

- Streaming media
- Web 1.0
- Web 2.0
- Web 3.0
- Web3
- Web3D
- Web development tools
- Web literacy

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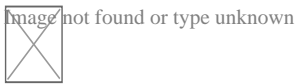
## Further reading

[[edit](#)]

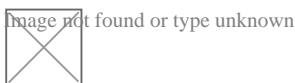
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## External links

[[edit](#)]



Wikimedia Commons has media related to [World Wide Web](#).



Wikibooks has a book on the topic of: [Nets, Webs and the Information Infrastructure](#)

- [The first website](#)
- [Early archive of the first Web site](#)
- [Internet Statistics: Growth and Usage of the Web and the Internet](#)

- **Living Internet** A comprehensive history of the Internet, including the World Wide Web
- **World Wide Web Consortium (W3C)**
- **W3C Recommendations Reduce "World Wide Wait"**
- **World Wide Web Size** Daily estimated size of the World Wide Web
- **Antonio A. Casilli, Some Elements for a Sociology of Online Interactions**
- **The Erdős–Rényi Webgraph Server** Archived 1 March 2021 at the **Wayback Machine** offers weekly updated graph representation of a constantly increasing fraction of the WWW
- **The 25th Anniversary of the World Wide Web** Archived 11 July 2021 at the **Wayback Machine** is an animated video produced by **USAID** and **TechChange** which explores the role of the WWW in addressing extreme **poverty**

- **v**
- **t**
- **e**

Telecommunications

## History

- Beacon
- Broadcasting
- Cable protection system
- Cable TV
- Communications satellite
- Computer network
- Data compression
  - audio
  - DCT
  - image
  - video
- Digital media
  - Internet video
  - online video platform
  - social media
  - streaming
- Drums
- Edholm's law
- Electrical telegraph
- Fax
- Heliographs
- Hydraulic telegraph
- Information Age
- Information revolution
- Internet
- Mass media
- Mobile phone
  - Smartphone
- Optical telecommunication
- Optical telegraphy
- Pager
- Photophone
- Prepaid mobile phone
- Radio
- Radiotelephone
- Satellite communications
- Semaphore
  - Phryctoria
- Semiconductor
  - device
  - MOSFET
  - transistor
- Smoke signals
- Telecommunications history
- Telautograph
- Telegraphy
- Teleprinter (teletype)
- Telephone

## Pioneers

- Nasir Ahmed
- Edwin Howard Armstrong
- Mohamed M. Atalla
- John Logie Baird
- Paul Baran
- John Bardeen
- Alexander Graham Bell
- Emile Berliner
- Tim Berners-Lee
- Francis Blake
- Jagadish Chandra Bose
- Charles Bourseul
- Walter Houser Brattain
- Vint Cerf
- Claude Chappe
- Yogen Dalal
- Donald Davies
- Daniel Davis Jr.
- Amos Dolbear
- Thomas Edison
- Philo Farnsworth
- Reginald Fessenden
- Lee de Forest
- Elisha Gray
- Oliver Heaviside
- Robert Hooke
- Erna Schneider Hoover
- Harold Hopkins
- Gardiner Greene Hubbard
- Bob Kahn
- Dawon Kahng
- Charles K. Kao
- Narinder Singh Kapany
- Hedy Lamarr
- Roberto Landell
- Innocenzo Manzetti
- Guglielmo Marconi
- Robert Metcalfe
- Antonio Meucci
- Samuel Morse
- Jun-ichi Nishizawa
- Charles Grafton Page
- Radia Perlman
- Alexander Stepanovich Popov
- Tivadar Puskás
- Johann Philipp Reis
- Claude Shannon
- Almon Brown Strowger

## **Transmission media**

- Coaxial cable
- Fiber-optic communication
  - optical fiber
- Free-space optical communication
- Molecular communication
- Radio waves
  - wireless
- Transmission line
  - telecommunication circuit

## **Network topology and switching**

- Bandwidth
- Links
- Network switching
  - circuit
  - packet
- Nodes
  - terminal
- Telephone exchange

## **Multiplexing**

- Space-division
- Frequency-division
- Time-division
- Polarization-division
- Orbital angular-momentum
- Code-division

## **Concepts**

- Communication protocol
- Computer network
- Data transmission
- Store and forward
- Telecommunications equipment



## Types of network





- Cellular network
- Ethernet
- ISDN
- LAN
- Mobile
- NGN
- Public Switched Telephone
- Radio
- Television
- Telex
- UUCP
- WAN
- Wireless network

## Notable networks

- ARPANET
- BITNET
- CYCLADES
- FidoNet
- Internet
- Internet2
- JANET
- NPL network
- ToasterNet
- Usenet

## Locations

- Africa
- Americas
  - North
  - South
- Antarctica
- Asia
- Europe
- Oceania
- *Global telecommunications regulation bodies*

-  Telecommunication portal
-  Category
-  Outline
-  Commons

- **v**
- **t**
- **e**

Web syndication

## History

Blogging

Podcasting

Vlogging

Web syndication technology

## Types

- Art
- Bloggernacle
- Classical music
- Corporate
- Dream diary
- Edublog
- Electronic journal
- Fake
- Family
- Fashion
- Food
- Health
- Law
- Lifelog
- MP3
- News
- Photoblog
- Police
- Political
- Project
- Reverse
- Travel
- Warblog

Technology	General	<ul style="list-style-type: none"> <li>○ BitTorrent</li> <li>○ Feed URI scheme</li> </ul>
	Features	<ul style="list-style-type: none"> <li>○ Linkback</li> <li>○ Permalink</li> <li>○ Ping</li> <li>○ Pingback</li> <li>○ Reblogging</li> <li>○ Refback</li> <li>○ Rollback</li> <li>○ Trackback</li> </ul>
	Mechanism	<ul style="list-style-type: none"> <li>○ Thread</li> <li>○ Geotagging</li> <li>○ RSS enclosure</li> <li>○ Synchronization</li> </ul>
	Memetics	<ul style="list-style-type: none"> <li>○ Atom feed</li> <li>○ Data feed</li> <li>○ Photofeed</li> <li>○ Product feed</li> <li>○ RDF feed</li> <li>○ Web feed</li> </ul>
	RSS	<ul style="list-style-type: none"> <li>○ GeoRSS</li> <li>○ MRSS</li> <li>○ RSS TV</li> </ul>
	Social	<ul style="list-style-type: none"> <li>○ Inter-process communication</li> <li>○ Mashup</li> <li>○ Referencing</li> <li>○ RSS editor</li> <li>○ RSS tracking</li> <li>○ Streaming media</li> </ul>
	Standard	<ul style="list-style-type: none"> <li>○ OPML</li> <li>○ RSS Advisory Board</li> <li>○ Usenet</li> <li>○ World Wide Web</li> <li>○ XBEL</li> <li>○ XOXO</li> </ul>

- Audio podcast
- Enhanced podcast
- Mobilecast
- Narrowcasting
- Peercasting
- Screencast
- Slidecasting
- Videocast
- Webcomic
- Webtoon
- Web series

## Form

- Anonymous blogging
- Collaborative blog
- Columnist
- Instant messaging
- Liveblogging
- Microblog
- Mobile blogging
- Spam blog
- Video blogging
- Motovlogging

## Media

### Alternative media

- Carnivals
- Fiction
- Journalism
  - Citizen
  - Database
- Online diary
- Search engines
- Sideblog
- Software
- Web directory

### Micromedia

- Aggregation
  - News
  - Poll
  - Review
  - Search
  - Video
- Atom
- AtomPub
- Broadcatching
- Hashtag
- NewsML
  - 1
  - G2
- Social communication
- Social software
- Web Slice

### Related

- Blogosphere
- Escribitionist
- Glossary of blogging
- Pay per click
- Posting style
- Slashdot effect
- Spam in blogs
- Uses of podcasting



- t
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## Semantic Web

<b>Background</b>	<ul style="list-style-type: none"><li>◦ Databases</li><li>◦ Hypertext</li><li>◦ Internet</li><li>◦ Ontologies</li><li>◦ Semantics</li><li>◦ Semantic networks</li><li>◦ World Wide Web</li></ul>
<b>Sub-topics</b>	<ul style="list-style-type: none"><li>◦ Dataspaces</li><li>◦ Hyperdata</li><li>◦ Linked data</li><li>◦ Rule-based systems</li></ul>
<b>Applications</b>	<ul style="list-style-type: none"><li>◦ Semantic analytics</li><li>◦ Semantic broker</li><li>◦ Semantic computing</li><li>◦ Semantic mapper</li><li>◦ Semantic matching</li><li>◦ Semantic publishing</li><li>◦ Semantic reasoner</li><li>◦ Semantic search</li><li>◦ Semantic service-oriented architecture</li><li>◦ Semantic wiki</li><li>◦ Solid</li></ul>

## **Related topics**

- [Collective intelligence](#)
- [Description logic](#)
- [Folksonomy](#)
- [Geotagging](#)
- [Information architecture](#)
- [iXBRL](#)
- [Knowledge extraction](#)
- [Knowledge management](#)
- [Knowledge representation and reasoning](#)
- [Library 2.0](#)
- [Digital library](#)
- [Digital humanities](#)
- [Metadata](#)
- [References](#)
- [Topic map](#)
- [Web 2.0](#)
- [Web engineering](#)
- [Web Science Trust](#)

		<ul style="list-style-type: none"> <li>○ HTTP</li> <li>○ IRI <ul style="list-style-type: none"> <li>○ URI</li> </ul> </li> <li>○ RDF <ul style="list-style-type: none"> <li>○ triples</li> <li>○ RDF/XML</li> <li>○ JSON-LD</li> <li>○ Turtle</li> <li>○ TriG</li> <li>○ Notation3</li> <li>○ N-Triples</li> <li>○ TriX (no W3C standard)</li> </ul> </li> <li>○ RRID</li> <li>○ SPARQL</li> <li>○ XML</li> <li>○ Semantic HTML</li> </ul>
	<b>Syntax and supporting technologies</b>	
	<b>Schemas, ontologies and rules</b>	<ul style="list-style-type: none"> <li>○ Common Logic</li> <li>○ OWL</li> <li>○ RDFS</li> <li>○ Rule Interchange Format</li> <li>○ Semantic Web Rule Language</li> <li>○ ALPS</li> <li>○ SHACL</li> </ul>
<b>Standards</b>	<b>Semantic annotation</b>	<ul style="list-style-type: none"> <li>○ eRDF</li> <li>○ GRDDL</li> <li>○ Microdata</li> <li>○ Microformats</li> <li>○ RDFa</li> <li>○ SAWSDL</li> <li>○ Facebook Platform</li> </ul>
	<b>Common vocabularies</b>	<ul style="list-style-type: none"> <li>○ DOAP</li> <li>○ Dublin Core</li> <li>○ FOAF</li> <li>○ Schema.org</li> <li>○ SIOC</li> <li>○ SKOS</li> </ul>
	<b>Microformat vocabularies</b>	<ul style="list-style-type: none"> <li>○ hAtom</li> <li>○ hCalendar</li> <li>○ hCard</li> <li>○ hProduct</li> <li>○ hRecipe</li> </ul>

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## Frequently Asked Questions

### What should I expect from SEO agencies in Sydney?

SEO agencies in Sydney typically offer comprehensive services such as keyword research, technical audits, on-page and off-page optimization, content creation, and performance

tracking. Their goal is to increase your site's search engine rankings and drive more targeted traffic to your website.

## **Why is keyword research important for SEO?**

Keyword research helps identify the terms and phrases that potential customers are using to search for products or services. By targeting these keywords in your content, you can improve your visibility in search engine results, attract more qualified leads, and drive higher conversion rates.

## **What sets SEO specialists in Sydney apart?**

SEO specialists in Sydney often have deep expertise in the local market. They understand the competitive landscape, know which keywords resonate with Sydney-based audiences, and are skilled at optimizing websites to rank well in local search results.

## **What is SEO?**

SEO, or search engine optimisation, is the practice of improving a website's visibility on search engines like Google. It involves optimizing various elements of a site such as keywords, content, meta tags, and technical structure to help it rank higher in search results.



## How can a digital agency in Sydney help with SEO?

A digital agency in Sydney can offer a comprehensive approach, combining SEO with other marketing strategies like social media, PPC, and content marketing. By integrating these services, they help you achieve a stronger online presence and better ROI.

### SEO service Sydney

#### SEO Sydney

Phone : 1300 684 339

City : Sydney

State : NSW

Zip : 2000

[Google Business Profile](#)

[Google Business Website](#)

Company Website : <https://sydney.website/seo-sydney/>

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