

Czech University of Life Sciences Prague
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Bachelor Thesis

How can a company improve its SEO ranking?

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Declaration

I declare that I have worked on my bachelor thesis titled "How can a company improve its SEO ranking?" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break any copyrights.

In Prague on date of submission

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Thesis statement: How can a company improve its SEO ranking?

Abstract

SEO - is a search optimization, the result of which helps improve the position(ranking) of the website in the search engines like Google. The optimisation in its core meaning is a complex of internal and external works with a website that includes developing a strategy of promoting a website, technical works on the website, improving the user's experience, etc

Keywords: SEO, optimization, ranking, search, website, SMM, promote

Thesis: Jak může společnost zlepšit své hodnocení SEO?

Abstrakt

SEO - je optimalizace pro vyhledávání, jejímž výsledkem je zlepšení pozice (hodnocení) webu ve vyhledávačích jako je Google. Optimalizace ve svém základním významu je komplex interních a externích prací s webem, který zahrnuje vypracování strategie propagace webu, technické práce na webu, zlepšování uživatelské zkušenosti atd.

Klíčová slova: SEO, optimalizace, hodnocení, vyhledávání, webové stránky, SMM,

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1. Introduction

SEO promotion is essential for the website for getting first positions in the search systems according to requests, connected to the topic. This helps to attract more visitors, which are going to make purchases and help promote the website. The absence of work at the SEO optimisation leads to the site being shown improperly on the page of search outcomes and potential clients can't find it.

According to Safari Digital, approximately 61% of marketers believe that SEO is the key to online success, which is why modern businesses allocate an average of 41% of their marketing budget to it. In short, taking the time to outline a proper SEO strategy can revolutionize not just your online traffic but your business as a whole.

Danny Jones is a Content & SEO Executive at ActiveWin Media

As a result of SEO promotion of the website its positions will be constantly growing and it will be capable of getting to the top of requests. The majority of users prefer to visit websites, which are shown in results and not advertisements, therefore it's important to try to increase the position of the resource. Those websites which are located on the first page get maximum traffic and biggest volume of sales in comparison with different competitors in the niche. Thus, a proper SEO-optimisation helps a company to increase its popularity and demand of customers, as well as to compete with other companies on the market.

SEO-promotion of a website is mainly focused at work, focusing on increasing the quality, informativeness and benefits of the project for users. To do this, it is necessary to remove technical errors on the site in a timely manner, ensure compliance with the requirements of search engines, and regularly publish unique useful content on the resource. Also of great importance are external links to the site from other high ranked sites of the same or related subject matter

2. Objectives and Methodology

2.1 Objectives

SEO optimization of a website as a promotional technology

The goal of this bachelor thesis is focusing on developing a superior strategy of how a company can improve its SEO ranking using the fundamental knowledge of modern day SEO practices, and their implementation such as page loading speed, metadata, tags, suitable content, etc in a particular website.

The achievement of the upper mentioned goals is ensured by solving the following main tasks:

1. Describing the main approaches of SEO-optimization and its characteristics
2. Studying marketing approaches of promoting different websites.
3. Tracing the history of development of SEO-optimization
4. Determining the characteristics of the language and technical aspects of language optimization

2.2 Methodology

The methodology **will be based** on the review of the literature and the practical part analysis.

Initially an assessment of the most notable Google algorithm changes over the past decade will be made, followed by research and analysis on the SEO techniques & current strategies used and how they can improve a company's SEO ranking. Then I will do a literature review on why companies are using SEO media tools and implementing them on their company websites.

The second part on the analysis of the practical part.

Based on the outcomes of the literature review and practical work, final conclusions will be made.

3. Literature Review

3.1 Basic information about algorithms

How does Google determine which pages to return in response to what people are looking for? How to get all this valuable traffic to your website?

Most companies understand the importance of measuring the performance of their websites, and lots of useful tools are available to help you do just that. Adoption of web analytics programs has grown enormously between 2005 and 2010, but in our experience, many companies - especially the small ones - aren't taking the best advantage of this data. A 2009 study found that 52 percent of those who use analytics tools "fail to effectively use more than half of all capabilities offered by their tools." Why are so many companies missing out? Experts think the cause is a combination of factors:

Google's algorithm is extremely complex, and here are the basic principles it uses to rank websites:

- Google looks for pages that contain quality and relevant information about the user's query.
- It determines relevancy by "scanning" your site's content and evaluating (using algorithms) whether that content matches what the user is looking for, typically based on the keywords it contains.
- Google defines the "quality" of a site in many different ways, but it's still important to Google the quantity and quality of other websites that link to your page and to your site as a whole.

The Google algorithm also evaluates additional elements to determine where your site will rank, such as:

- How do people interact with your site (do they find the information they need and stay on the site, or do they return to the search page and follow another link? Or do they just ignore you in the search results?)
- Your website's loading speed and mobile friendliness

- How much unique content do you have (versus low value content or duplicate content)
- The Google algorithm considers hundreds of ranking factors in response to search queries, and they are constantly updating and improving their process.

Relevant ranking algorithms of Google

According to "SEO for Growth: The Ultimate Guide for Marketers, Web Designers & Entrepreneur" by JOHN JANTSCH, Google currently uses the following search query ranking algorithms.

Google YMYL Algorithm (Your money — your life, E-A-T)

- **Release year: 2018**
- **What it's tracking:** The placement of expert materials.

This algorithm focuses on sites with information that may affect physical or financial well-being. These are the following topics:

- the medicine;
- legal services;
- financial operations;
- purchases;
- official sources of information;
- safety.

The content posted on such sites should be compiled on the basis of three main principles: authority, expertise, integrity. The algorithm is aimed at eliminating from the issuance of those sites that publish low-quality and inaccurate information, the use of which carries risks to life and well-being. With its introduction, articles with little useful SEO texts that do not pass an examination before publication began to fall out of the index.

For what you can get restrictions:

- lack of authorship of articles;
- no expertise in content;
- irrelevant content;

- lack of documents confirming expertise - diplomas, certificates, licenses;
- poor quality pages.

Assessors are specially trained people who help the neural network identify sites with expert content. It is worth taking care in advance to provide information on confirmation of expertise in advance.

How to convert the site according to YMYL algorithm:

| Violation | Verification and elimination | Prophylaxis |
|-----------------------------------|--|---|
| Absence of authorship | Check all publications for the indication of the authors of the articles, indicate their expertise, provide links to their social networks | Immediately generate expert cards and use them when publishing material |
| Irrelevant content | Regularly update and supplement articles if there is new information on the topic of publication | When creating content, check the relevance of information |
| Absence of confirmation documents | Go through the cards of experts, check the "About us" blocks for certificates and permits | Add documents and licenses when creating a site |

Hummingbird algorithm

- **Release year:** 2013
- **What it's tracking:** Keywords matching the user's intent.

Hummingbird is part of the algorithm that helps improve the delivery of informative content. It evaluates the natural occurrence of key phrases, finds

distortions in the density of the text, checks the use of LSI (synonyms, highlights and hints from the issue). If the content is off topic, the site will rank lower and pages may be flagged as low value.

How to convert the site according to Hummingbird:

| Violation | Verification and elimination | Prophylaxis |
|-------------------------------------|--|--|
| Unnatural text, that's hard to read | Analyze the content for naturalness. If needed, to replace the content for one with naturalness of more than 80% | To check all the published content for naturalness. Collecting the semantics, use not only the keywords, but also synonyms, highlights |

Pigeon algorithm:

- **Year of release:** 2014.
- **What it's tracking:** Local search optimization.

This algorithm helps regional sites rank higher than non-geographic sites. One of the first filters that improved the results of resources in the issue, and did not pessimize them. Initially, it was used only within the United States, then it began to be applied to all English-language resources. Now applied to all sites where there is a regionality.

How to use it:

- fill out the organization's card in Google My Business;
- make regional contacts on the site: number, postal address;
- use of local content - local portfolio, reviews;
- use local links.

HTTPS

- **Year of release:** 2014.

- What it's tracking: the presence of an SSL certificate on the site.

In an announcement on August 6, 2014, Google representatives officially announced that they would give priority in the issuance of those sites that use a secure connection. This is necessary not only for resources that collect and transmit personal data - through feedback forms, phones and personal accounts. A site that does not have an SSL certificate may be marked as potentially dangerous, and this will reduce the number of clicks to the resource.

This algorithm not only artificially reduces the position of the site in the search results, but the presence of the window from the example above negatively affects behavioral factors. Users simply close the tab and immediately return to the search.

How to make your site compliant with HTTPS:

| Violation | Verification and elimination | Prophylaxis |
|-------------------------|-------------------------------------|---|
| Lack of SSL-certificate | Check via SSL-checker | Connect the certificate as soon as website goes into indexing |

Mobilegeddon (for mobile devices)

- Year of release: 2015.
- What it's tracking: Responsiveness of the mobile version of the site.

With the spread of mobile devices, Google began to downgrade those sites that do not have an adapted mobile version. Owners often take advantage of the savings on adaptivity, because it is necessary to optimize the content, therefore they are launching a separate mobile version of the site.

This approach is not welcome. Therefore, now it is better to immediately use the content and explore its display on mobile devices.

How to optimize a site according to the "Mobilegeddon" algorithm:

| Violation | Verification and elimination | Prophylaxis |
|------------------|-------------------------------------|--------------------|
|------------------|-------------------------------------|--------------------|

| | | |
|----------------------------|---|--|
| Absence of adapted version | Evaluation of mobile version being shown through the browser console or through GSC | Immediately give a task to the programmer to layout the adaptive version of the site |
|----------------------------|---|--|

RankBrain

- **Year of release:** 2015.
- **What it's tracking:** compliance of the content with the user's request.

This algorithm is aimed at determining what the user meant, if it is not obvious on request. He assesses the quality of the content on the site and its compliance. Under the influence of the algorithm, the site also loses its position in the issue, and the pages can be marked as low-value.

How to convert the site according to the "RankBrain" algorithm:

| Violation | Verification and elimination | Prophylaxis |
|--|---|---|
| Insufficient depth of disclosure of topics on the site | Involve experts to verify the completeness and reliability of information | Involve experts in writing articles before publication. In the texts, cover the topics in the most complete and informative way |

BERT

- **Year released:** 2019.
- **What it's tracking:** natural language in the content and working with the context of the site.

This is an improved analogue of Rank Brain. The algorithm affected about 10% of sites. He learns to understand the language the way people understand it.

Google representatives called this update one of the largest in 5 years. With its help, the PS learns to better understand the context of the request and the compliance of the content on the site.

Possum/Hawk

- **Year of release:** 2017.
- **What it's tracking:** spam in local issuance.

How to use: Fill in the organization card in Google My Business as fully as possible: address, phone numbers, website, photos.

3.2 Search, definition and distribution of keywords

The first step in search engine optimization is to correctly identify what one is actually optimizing for. This means identifying the queries people are searching for or the keywords you want your site to rank for in search engines.

For example, we want the company to show up in searches when people search for “dvrs”, and perhaps when they type “buy a dashcam”. But in fact, not everything is as simple as it seems. There are several key factors to consider when determining the keywords for which you want to promote your site:

- **Search volume.** The first factor to consider is the number of people who search for a given keyword. The more people who search for a keyword, the wider the audience you want to reach. Conversely, if no one searches for a key, then there is no audience that could find your content using the search.
- **Relevance.** If a product or a service is often searched for, that's great. But what if that query isn't fully relevant for your potential customers?

Relevance seems obvious at first: if you're selling enterprise email marketing automation software, you don't want to show up for search terms that have

nothing to do with your business, like "pet products." But apart from that you should take into account for which companies you sell your product, in which territory and other equally important factors.

In SEO, too, you must consider the potential costs and likelihood of success. For SEO, this means understanding the relative competition (and likelihood of ranking) for specific terms.

First you need to understand who your potential customers are and what they are most likely to be looking for. If you don't yet understand who your audience is, think about it. This is a good start not only for SEO, but for business in general.

To better understand your audience, ask a few questions:

- What interests them?
- What are their problems?
- What language do they use to describe needs, enter a request?
- Who else do they buy things or services from?

Once you've answered these questions, you'll have an initial list of possible keywords and domains. This list will help you get more keywords, search volume, and competition metrics.

According to *SEO for Growth: The Ultimate Guide for Marketers, Web Designers & Entrepreneur* by JOHN JANTSCH, keywords and tags are most valuable in search engine optimization tasks because they are as concise as possible but meaningful:

- “When asking for feedback, make sure to ask your client to mention the product or service they used. Detailed reviews containing keywords are far more valuable than generic ones. They read well and give you additional ranking credit for the content of the review”

- You can use various keyword suggestion tools, but the basic idea is that at the initial stage, you will need to try to collect the maximum number of the most relevant keywords and expressions.
- If you already have an active site, then most likely you are already receiving some traffic from search engines.
Query statistics can also be tracked in Google Search Console
- For extended collection of semantics, not only for high-frequency queries, but also for mid- and low-frequency queries, Key Collector is perfect. In addition to collecting keywords, you can safely use this program for clustering.
- After you understand who your potential customers are, what they are looking for and how they enter a request; Having analyzed the keywords that bring traffic to competitors and studied the queries that attract traffic, you need to determine by what criteria your site can rank and where to focus your SEO efforts

3.3 Analysis of search query ranking factors

Below is a brief overview of search query sorting factors according to ENGE, Eric, 2015. *The Art of SEO: Mastering Search Engine Optimization*.

Moz periodically conducts surveys of leading SEOs to determine what they think are the most important ranking factors. Here is a high-level summary of the top nine results, in priority order (as suggested by the referenced study):

Domain-level link authority features

The domain-level link authority is determined by analyzing all links pointing to a domain. The evaluation takes into account various factors, such as the number of domains linking to the site, the level of trust and authority of these domains, the rate at which new links are added, and the relevance of the linking domains.

Page-level link metrics

This pertains to the links in connection with a particular page, which includes the quantity of links, the significance of the links, and the level of trust and authority of the links obtained by the page.

Page-level keywords and content

This refers to the utilization of a specific keyword or phrase in specific sections of the HTML code on a page. (<title> tag, <h1>, alt attributes, etc.).

Page-level features other than keywords

The factors taken into account in this instance include elements of a page, such as the quantity of links present, both internal and external, the quantity of followed links versus "nofollow" links, as well as other comparable factors.

Domain-level brand metrics

This particular factor encompasses the search frequency of a website's brand name, references to the brand, its existence on social media, and other related measures pertaining to the brand.

Page-level traffic/query data

Elements of this factor are click-through rate to the page in the search results, bounce rate of visitors to the page, and other alike measurements.

Page-level social metrics

The social factors taken into consideration include mentions, links, shares, likes, and other metrics related to social media sites. Despite studies indicating otherwise and Google representatives clarifying that social signals are not incorporated in their algorithm, many SEO professionals believe that this still affects the ranking.

Domain-level keyword usage

This refers to how keywords are used in the root or subdomain name, and how impactful that might be on search engine rankings.

Domain-level keyword-agnostic features

The significant components of this factor in the survey consist of the quantity of hyphens present in the domain name, the length of the domain name in characters, and the overall length of the domain name.

According to the above search query ranking factors according to ENGE, Eric, 2015. The Art of SEO: Mastering Search Engine Optimization. ISBN: 9781491903643 the WEB page is marked up using the following HTML markup language tools:

3.3.1 Markup in search results

As previously mentioned, markup is sometimes used by search engines to create a rich snippet.

«Based on the markup that Google found in the HTML, it has enhanced the result by

showing the recipe reviews (the number of stars), the required cooking time, and the calories of the meal.

Supported types of markup

There are a few different standards for markup.

The most common ones are microdata, microformats, and RDFa.

The search engines have implemented rich snippets based on some (but not all) aspects of microformats prior to the announcement of Schema.org, and they will likely continue support for these for some period of time.

It is likely that any new forms of rich snippets implemented by the search engines will be based off of Schema.org (microdata), not microformats or RDFa. Some of the formats already supported by Google include:

- People
- Products
- Events
- Business and organizations
- Video

A. Title

This tag helps search engines understand the actual meaning of the page, what it is about, and also recognizes the queries you want to rank for. And this is the most effective place to place your keywords. But do not forget that Google still punishes aggressive and manipulative use of keywords.

The Title tag is not the main title of your page. The title you see on the page is usually an H1 (or possibly H2) HTML element. The Title tag is what you see at the very top of the browser, and it's populated with the page's source code in the meta tag:

The length of a Title that is shown on Google will vary (it's based on pixels, not character count), but 55-60 characters on average is the ideal size in practice.

When composing the Title, remember that this is what the user sees in the search results, what gets into the snippet.

The title should give an answer to the main intent of the user, not break off in half a word and be written in human language, and not “Buy camera Prague”.

B. Description

While the Title tag is actually your site's title in the SERPs, the Description (another HTML meta element that can be updated in the site's code but not appear on the page) is actually additional advertising for the site.

Google takes some liberties with what to display in a snippet, so your meta description may not always appear. Instead, Google's crawler can rip out the piece of content that it thinks best fits the description of the page.

But if you can write an attractive page description that convinces people to click on the link, then you can significantly increase traffic to the site.

(Remember: appearing in search results is only the first step! You still need search engines to come to your site.)

C. Body (Page content)

Of course, in addition to the meta description (Title and Description), the actual content of the page itself is also important. Different pages serve different purposes.

Google is increasingly favoring certain types of content, and there are a few things to keep in mind when creating any of the pages on your site:

- Extensive and unique content. There is no magic number in terms of word count, and if you have multiple pages of content on your site with a few hundred words, you won't lose favor with the search engines. But more often, longer unique content is preferred.

If you have a large number of very short 50-200 word pages or a lot of duplicate content where nothing changes except for the title tag of the page, this can negatively affect the position of the site. Is a large percentage of your pages duplicated, and of little value or low demand?

If so, try to find a way making these pages better, full of content. Check your analytics to see how much traffic these pages are getting, and simply exclude them (using the no-index meta tag) from search results so that search engines don't think you're trying to flood their index with lots of low-value pages in an attempt to rank them up.

- **Involvement.** Search engines, especially Google, are paying more and more attention to engagement and user experience metrics. You can positively influence these indicators by making sure that your content responds to the user's request, it (the content) is really useful, interesting and can be interacted with. Make sure the pages load quickly and don't contain unnecessary design elements or, for example, overly aggressive ads above the content.
- **“Shareability”** or the ability to share this specific content on social networks.

3.3.2 Alt Attributes

The way you mark up your images can affect not only how search engines perceive your page, but also the amount of search traffic generated by image searches on your site. The alt attribute is an HTML element that allows you to provide alternative information for an image if the user cannot view it. Your images can break over time (files get deleted, users can't connect to the site, etc.), so a useful image description can be important in terms of overall usability. It also gives you another opportunity - beyond the content - to help search engines understand what the page is about.

It is not at all necessary to “stuff” with Alt keywords. It is enough not to skip it and try to give a complete and accurate description of the image.

3.3.3 URL structure

The URL structure (URL is an abbreviation that stands for Uniform Resource Locator, or "uniform resource locator", i.e. the address of a site hosted on the Internet) of your site can be important both in terms of tracking (you can more easily segment data in reports using a segmented URL logical structure) and in terms of being able to share a page's URL (shorter descriptive URLs are easier to copy and paste and tend to get truncated less frequently). Once again: don't try to cram in as many keywords as possible; create a short, descriptive URL.

What's more, if you don't have to, don't change your URLs. Even if your URLs aren't "beautiful", if you don't see them negatively impacting users and businesses in general, don't change them to be more keyword-focused for "better SEO".

3.4 Organic traffic optimization

Organic traffic is the volume of Internet users who come to the site from organic search results. Organic traffic is the most important as it is targeted. For this reason, it is important to bring the resource to organic search results.

When a person needs to find something on the Internet, he enters the appropriate request. And if the answers are on your site, then you will be able to get the user into your clients or buyers. The main thing is that he switched to this resource. And this requires its high-quality SEO-optimization. Well-designed sites are highly valued by search engines, and they give them good positions. Consequently, the resource will catch the eye of users more often than others, and they will follow the link and increase organic traffic.

Visitors from organics are partly free for a company. Partly because there are costs for the optimization itself. They don't pay anything for a click. In any case, investment in promotion pays off perfectly. Sites in top places will bring buyers for a long term, increasing profits.

When is organic traffic good? Usually in the event that it accounts for 60% of visits. Smaller numbers often indicate problems with the site. For example, the presence of sanctions from search engines. It is necessary to check the resource for the presence of filters and correct the shortcomings.

According to Effective SEO and Content Marketing: The Ultimate Guide for Maximizing Free Web Traffic Book by Nicholas Papagiannis

“Organic traffic is the best indicator of your search engine optimization efforts. By analyzing organic traffic to a site, you can estimate the actual volume of visitors coming to your site and where they are going.

You can easily measure your organic traffic with most analytics tools - they're free and the most commonly used.”

When conducting a marketing policy, companies make near-standard errors, leading to insufficiently inefficient business conduct.

As a result of the foregoing, the following main problems arise, the classification and methods for solving which are indicated below according to Nicholas Papagiannis. “Effective SEO and Content Marketing”.

3.5 Poor SEO and Content

Although the content on your site doesn't have to be highly sophisticated, you still want it to provide solutions for your visitors' most common problems. Prioritizing SEO (search engine optimization) will help your website rank for the services you provide and increase the chance of people landing on your website.

How To Fix: think about some of the main questions and concerns potential customers typically have for you. Whether it's obtaining a quote, learning about your services, inquiring about your availability, or all of the above, make sure your site has these answers.

Focus on content that's straightforward and that uses relevant keywords for your services. Double-check that your NAP (name, address, and phone number) is prominently displayed on your site and that it matches your local listings.

3.5.1 Not Optimized for Mobile

Nearly 60% of all online searches are on mobile devices, and this percentage is even higher for industries like food and beverage—so having a mobile-friendly website is a must.

A mobile-friendly website functions and looks just as good, if not better, than when it's viewed on a desktop. Prioritizing a mobile-first design can help lower your site's bounce rate and in turn, improve your local search rankings.

How To Fix: to check if your website is mobile-friendly, make sure your images, fonts, buttons, and navigation menu appear proportionally on different mobile screens. If you're in the process of building or updating your website, go for a flexible, responsive layout that renders well on different devices and orientations.

3.5.2 Presence Of Broken Links

Broken links are links on your site that don't work, whether they are links directing visitors to a page off of your website or that exists on your website. When you click on a broken link, you'll be taken to a 404 page, which displays a message indicating that the page could not be found. There are

several issues with having broken links. Visitors will be frustrated if they click on a link and it doesn't take them to where they're expecting to go. This reflects poorly on your site and on your brand. If you can't maintain your website, how can visitors be expected to trust in the quality of your brand?

Broken links also indicate to Google and other search engines that you're not keeping your website up to date. This can hurt your search engine rankings. When your rankings decline, so will your website's exposure, resulting in fewer visitors.

3.6 Black and White Hat SEO

It's impossible not to mention the types of SEO optimization in some sources. Under the types means methods of search engine optimization. According to the book ENGE, Eric, 2015. *The Art of SEO: Mastering Search Engine Optimization*, there are 2 types of SEO optimization: White Hat and Black Hat. The use of White Hat tactics is consistent with the recommendations of search engine developers for website promotion. The Black Hat tactic is based on tricks and gimmicks that may provide short-term benefits and boost search engine rankings quickly, but tend to have negative long-term effects on the site.

3.6.1 What is the Black Hat SEO?

"Black hat" tactic breaks the rules and regulations set by search engines, but allows you to quickly get a high ranking in the SERPs.

Black hat methods are focused only on search engine algorithms and do not take into account how users will perceive the site. Black hat SEO practices are attractive for short-term gains but come with significant long-term risks.

Methods that are used in black hat SEO:

- stuffing the page with irrelevant keywords – adding keywords to random posts is a good way to show search engines the poor quality of the page content;
- buying link mass - this can be both buying external links and exchanging links with sites that have nothing to do with the subject of your site;
- publication of someone else's content without the permission of the author or the use of automatically generated content;
- masking or cloaking - a method in which search robots and users are shown different versions of the page. Users see a page with plain text, and search robots see content oversaturated with keywords;
- Hidden Text or Links - A technique where text is placed on a page that matches the color of the page in tone. There is text filled with keywords visible to the Google bot, but the user does not see it. Links are hidden in the same way;
- spam in comments and blogs - a method in which users add comments with a link to a site in order to get a backlink from this site. It is worth noting that search robots already ignore such links;
- page redirect - this method is usually used in case of problems on the site, then the user is redirected to a correctly working page. But black hat SEOs use a similar method to redirect the user to a resource that the user did not intend to visit;
- over-optimization of the page. Headlines and descriptions with a lot of keywords, too many internal links, overly complicated navigation with many jumps, etc. work to the detriment.

Using black hat methods is not illegal, but it violates search engine developer policies and is simply unethical. Their use will sooner or later lead to the fact that the site will be blocked by the search engine or, at best, downgraded in search engine rankings.

3.6.2 What is a White Hat SEO?

White Hat SEO, on the other hand, uses tactics that aim to create a positive reader experience, rather than trying to bypass search engine algorithms. An

effective SEO campaign is always focused on legal methods, first of all, it is high-quality content and the creation of high-quality link mass.

Methods that are used in white hat SEO:

- creating unique, relevant and useful content increases the trust of both visitors and search engines, helping the site to rank high in search results;
- research, analysis and use of precise keywords. Words that users search for most often on your topic
- the use of metadata shows search engine algorithms the relevance and value of the content of the site;
- site optimization for all devices, from PCs to smartphones;
- creating landing pages to reach your audience;
- quality backlinks: search engines evaluate the relevancy of backlinks. Finding irrelevant backlinks can cause a site to be lowered in search engine rankings;
- Image optimization also helps to increase the ranking of the site. The size and weight of the image matters, as they affect the speed of the site. Keywords in an image caption help search algorithms understand the content more easily.
- comments and reposts of site materials in social networks. A large number of comments contributes to the growth of the page rank;
- The availability of the site is taken into account by search engines. Crawlers do not index inaccessible pages and sites, so the inaccessibility of a page even during the day can negatively affect site traffic and rating;
- short URLs containing a couple of keywords also work for the benefit of the site;
- ease of navigation is convenient for users and is taken into account by search engines as a factor in the usefulness of the site. Use title tags to improve the structure of your site. If the user can easily find what they need on the site, you have good navigation.

3.6.3 Summarizing analysis of both tactics

White hat SEO is seen as a long-term investment in a website, and while it may take longer to rank higher, the results will be more sustainable, as will the site's reputation.

Thus, each site owner chooses his own methods of site promotion.

White Hat SEO has certain benefits such as:

- improving the site's rating in the long term;
- protection of business reputation;
- sustainability of results.

Google guidelines state that having quality content and backlinks is the main key to higher search engine rankings.

Black Hat SEO tactics are usually associated with short-term improvements and possible penalties.

There will always be a temptation to make quick decisions, but as with any successful business, honesty always brings the best results.

3.7 SEO Advantages:

- Makes it easier for the user to find the goods, services and information he needs;
- It does not require large economic expenses, and also with a low qualification of a SEO specialist, it gives tangible results in the promotion of goods and services;
- Most fully covers the target audience of a particular site / business / company
...
- The possibility of round-the-clock almost automated promotion of the site / company / services, etc.

- Competent SEO increases the confidence of potential customers in the site / company / service, and can also indirectly increase profits;
- SEO has a high ROI(Return on investment);

3.8 Cons of SEO:

- Significantly non-linear dependence of the volume of financial investments and the quality of promotion of the site / company / services, etc.;
- When unskillfully using "black" optimization, there is a risk of triggering "penalty algorithms" that lower the priority of issuing a site;
- SEO becomes profitable only after about six months (but Google does not recognize this fact);
- SEO works on the principles of a "black box": it is not known for certain what, how and why Google's search query ranking algorithms do - only approximate patterns obtained by SEO specialists are known;
- There is no guarantee that even a competent SEO will help the site consistently appear in the first lines of search results for a specific query;
- When search ranking algorithms are changed, all your past achievements in SEO are useless;
- During the emergence of a certain trend, with the stereotyped use of SEO "services" by various sites with similar topics, competition increases many times over and, automatically, the cost of qualified SEO also increases to achieve the desired results of promoting the site/company

After the literature review I'd like to conclude general topic information

From the point of view of a man and algorithms there are disagreements, due to the limitations of algorithms, which perceive information exclusively using its templates, written by man. While humans can flexibly perceive any kind of information, which leads to potential loopholes and methods how algorithms may be bypassed in order to push up any kind of information for one's own benefit.

Thus, the views on information may be completely opposite, and there is a need for more advanced automatisations, that could work without the help of a human. Such enhancements and technologies are not yet applied in the field of SEO. Since the middle of the last decade, the interest for AI integration has dramatically increased,

implementing it into cars, smart assistants, manufacturing, production and healthcare.

Therefore, with the help of AI, sorting and the processing of the information may be increased, resulting in more relevant information shown in the first order, increased accuracy and lack of fraud and tricks that allow to manipulate with the relevancy of search results

4. Practical Part

As a practical part of the work, I want to formulate a list of certain recommendations, which are going to help improve SEO-ranking of a particular website/company product, etc.

The purpose of the examples is to show how a company's ranking can be increased using SEO.

4.1 Case 1. Online store of medical supplies

Promotion of an online store of medical supplies

The RadugaMed company specializes in the sale of household medical equipment for home use and professional medical equipment.

Work on the project began with a comprehensive audit of the site, analysis of competitors in search results, research and collection of semantics. Based on the data received, we formed an action plan for the modernization and promotion of the site.

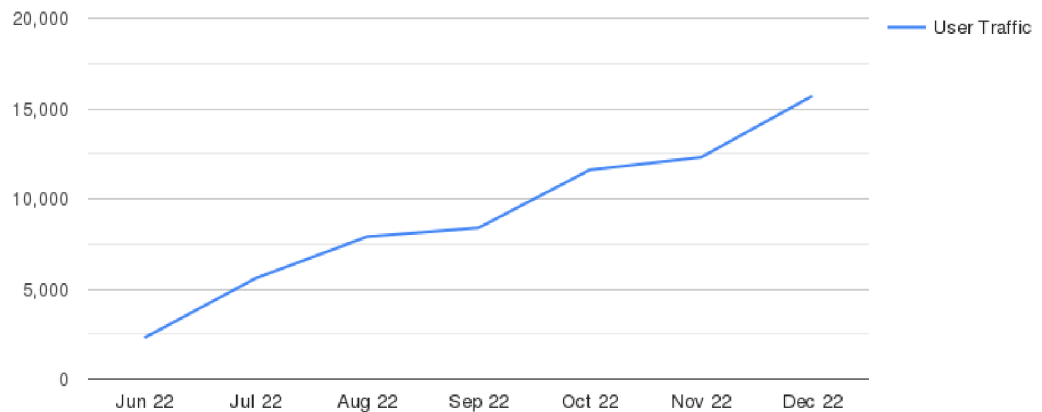


Image 1. - Dynamics of traffic growth

First of all, we eliminated the existing errors and shortcomings: broken links, duplicate pages, set up robots.txt, 404 error page, prescribed meta tag rules. Having completed the initial work, we proceeded to the direct modernization of the site, during which: we changed the menu structure in accordance with search results and usability principles; introduced new templates for the main page and category pages; changed product cards, adding the ability to publish ratings and reviews, information about delivery, availability, technical specifications; upgraded the basket; added and configured product filtering

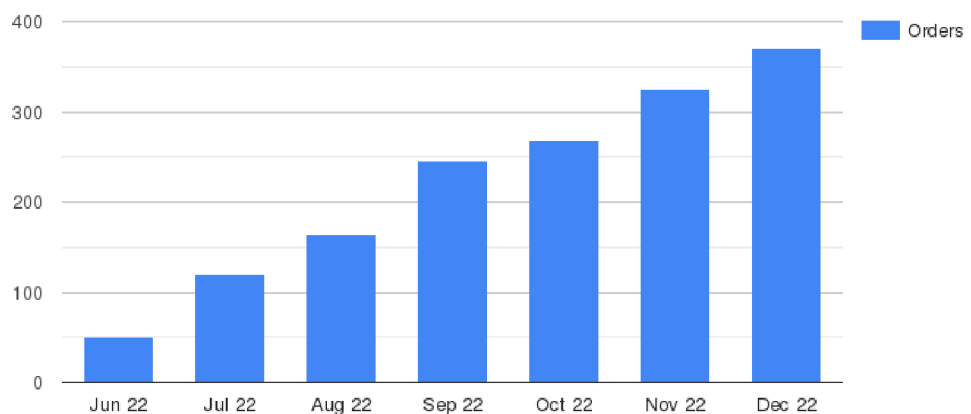


Image 2. - Dynamics of order amount growth

At the next stage, a more detailed study of the client's priority areas was carried out. We registered unique meta tags, changed product names, placed product announcements for product category pages, descriptions, photos, instructions for product cards, set up SEO filters by manufacturer, type, purpose, etc.

According to the results of six months, compared with the initial data, traffic increased by 520%, the number of orders by 640%.



Image 3. - Examples of positions on Yandex

4.2 Case 2. Website for the manufacture of countertops made of artificial stone

Promotion of the company's website for the manufacture of countertops made of artificial stone

The site is promoted by more than 140 key phrases, which allows achieving the most complete coverage of the target audience of the project. 3 months after the start of work, 30% of low- and medium-frequency queries were displayed in the TOP, and after another 6 months, the first results on high-frequency queries were achieved - the most important query for the client was promoted to 6th place in Yandex results - "artificial stone countertops".

At the moment, all the necessary high-frequency requests, as well as most of the low-frequency ones, are displayed in the TOP. Work is regularly carried out to maintain the site in the first positions in the search results.

Due to the maximum coverage of the target audience due to the promotion of a large number of key phrases, already 6 months after the start of work on the project, an increase in traffic by 3 times was recorded, and the required result was several months ahead of schedule.

Program works

- Removed links to pages that gave 404 errors. We did this through setting up a 301 redirect.
- Made changes to the layout of the site pages.
- Increased website speed for mobile and desktop versions.
- Fixed programming errors and html-validator errors.
- Removed/fixed 404 pages.
- Removed/fixed duplicate pages.
- Introduced schema.org micro-markup.

- We set up redirects, corrected links with Cyrillic characters.

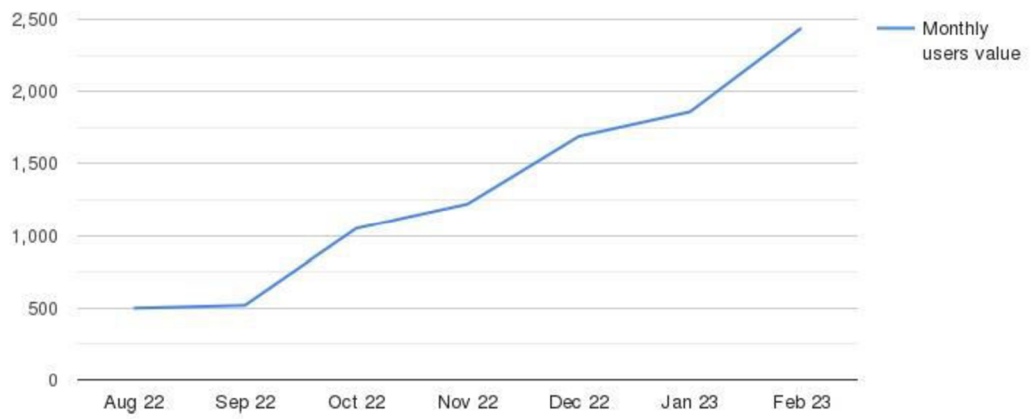


Image 4. - Dynamics of traffic growth

SEO site optimization

- Fixed errors and shortcomings in the robots.
- Updated and adjusted sitemap.xml files.
- We checked and worked out all the recommendations in Yandex Webmaster.
- Fixed formatting on site pages.
- Updated meta tags for almost 100% of pages.
- Set up internal linking.
- Regularly tracked traffic in the online store by clusters and sections of the site.
- Conducted copywriting work for the main promoted pages.

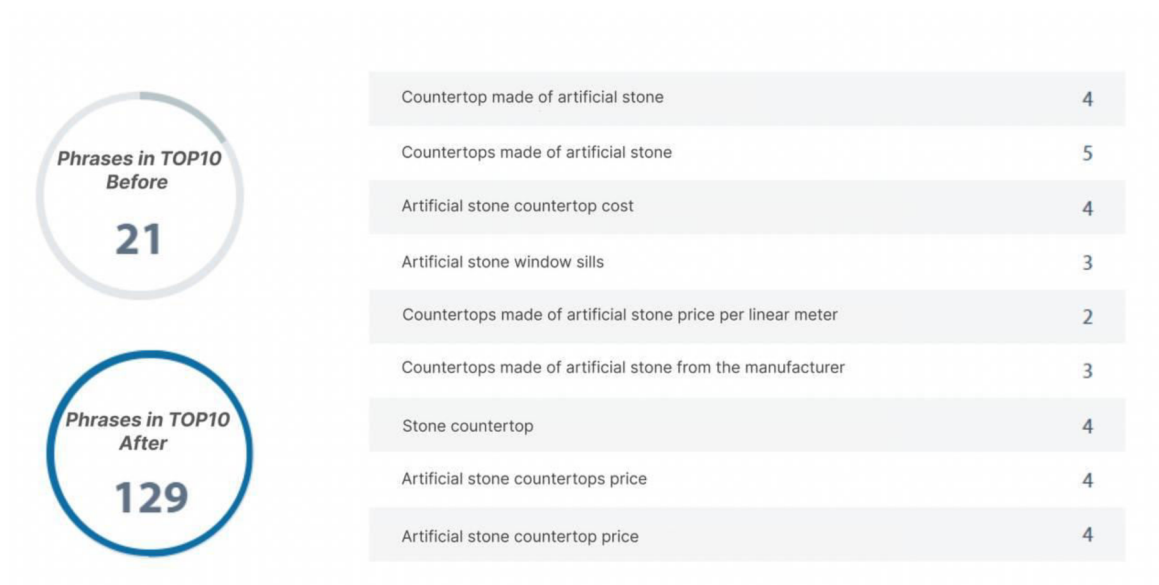


Image 5. - Examples of positions on Yandex

External site optimization

- Work with the link profile of the project: we focused on links from the home region for the site.
- Registration in thematic directories: as a source of eternal links.
- Building a link mass with the help of paid and free thematic resources.

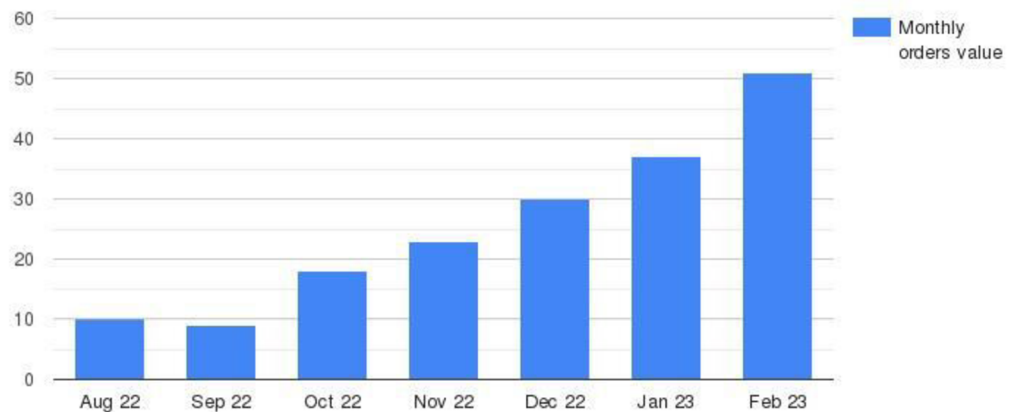


Image 6. - Dynamics of order amount growth

5. Results and Discussion

Summing up both of the cases, different methods of SEO optimization used in the upper mentioned cases gave a visible progress and increase in multiple times of traffic growth and number of orders. Therefore we can conclude that methods of white SEO optimization gave similarly stable results, giving an increase in the number of orders by 640% in the first case and 510% in the second case.

Also the growth of monthly user traffic was successfully increased by over 6 times up to 15 thousand visits of the website per month in the case 1, and over 5 times up until 2500 users monthly. Although having similar outcomes in both cases, in the first one we can see slightly higher results which overall may be explained due to a higher relevance of the case's subject, but not the significant difference in the optimization methods used in them.

6. Conclusion

Thus, I have considered the methodology necessary to carry out my scientific work and reviewed the existing literature on this topic.

I described the general provisions on the issues of search query ranking algorithms and the criteria for such ranking, the process and content of the markup of a web page.

I also formulated standard errors in SEO optimization and methods for solving them, and described "black" and "white" SEO optimizations.

Based on the above theory, I developed recommendations for improving the relevance of search queries.

In conclusion of the theoretical part of the thesis, I formulated conclusions on the data analyzed above on SEO optimization.

As a practical part of my thesis, I want to present the practical part of the work I did during my internship and work in the company.

Thanks to the SEO optimization of the site of a company selling sports nutrition, which I performed, the relevance of the search results of this site, as well as the number of orders and purchases on this site, have significantly increased.

The practical part of the thesis provides statistics on search queries, orders and purchases on the company's website.

7. References

1. ENGE, Eric, 2015. The Art of SEO: Mastering Search Engine Optimization. ISBN: 9781491903643
2. JANTSCH, John, 2016. SEO for Growth: The Ultimate Guide for Marketers, Web Designers & Entrepreneurs. ISBN 978-0692769447
3. ODDEN, Lee, 2012. Optimize: How to Attract and Engage More Customers by Integrating SEO, Social Media, and Content Marketing. ISBN 9781663709394
4. WEBER, Larry, 2007. Marketing to the Social Web: How Digital Customer Communities Build Your Business. ISBN 979-8200548774
5. PAPAGIANNIS, Nicholas, 2020. Effective SEO and Content Marketing. ISBN: 9781119628859
6. AGBOOLA, Olubukola, 2019. Search Engine Optimization: The Art of Mastering SEO and Driving Targeted Traffic to your Website. ISBN: 9781092498227
7. DOVER, Danny, 2011. Search Engine Optimization (SEO) Secrets. ISBN: 9780470554180

8. LEDFORD, Jerry, 2009. Search Engine Optimization Bible 2nd Edition. ISBN: 978-0470452646

8. List of pictures, tables, graphs and abbreviations

8.1. List of pictures

Image 1. - Dynamics of traffic growth

Image 2. - Dynamics of order amount growth

Image 3. - Examples of positions on Yandex

Image 4. - Dynamics of traffic growth

Image 5. - Examples of positions on Yandex

Image 6. - Dynamics of order amount growth

8.2 List of tables

List...

8.3 List of graphs

List...

8.4 List of abbreviations

List...

Appendix

List of Supplements...