Hang Le

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Bachelor's Thesis
Spring 2019
International Business
Oulu University of Applied Sciences

ABSTRACT

Oulu University of Applied Sciences
International Business Degree, Bachelor of Business Administration

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Title of Bachelor´s thesis: How to enhance search engine optimization in accommodation website on Google search engine.
Supervisor(s): Jaakko Sinisalo
Term and year of completion: Spring 2019   Number of pages:59

When it comes to choosing informational resources for trip booking, tourists rely heavily on search engine to perform research about accommodation choices for their destination. Research has shown that 71% of travelers chose search engine as the most used information source in the beginning of travel planning process. This thesis aims to design Search Engine Optimization (SEO) guidelines for an international website, Porontimatuvat, a cottage business located in Kuusamo, Finland, with the hope of increasing traffic to the site, achieving highest possible ranking position on Google search engine, and enhancing user experience level, to reach to the primary goal which is maximizing number of bookings.

Case study analysis was employed in this research work to analyze and identify the key issues, as well as to propose solutions and discuss recommendations for the website of the commissioner. Moreover, qualitative methods such as Strength, Weakness, Opportunity, Threat (SWOT) analysis, initial search engine optimization audit, keyword research, etc. were also used in this project work.

The research results propose a set of recommendations for the site of Porontimatuvat in terms of accessibility and site structure, technical, on-page SEO and analytical method. Clearly, the site needs a fresh approach and continuous improvement of search engine optimization since the nature of search engines is evolving and changing constantly.

Keywords:

Search Engine Optimization, SEO, Cottage business, Ruka, SEO in accommodation website, Trip planning process, Google search engine.

CONTENTS

1 INTRODUCTION

In this day and age, to gain exposure in the online world, businesses rely heavily on digital marketing to reach to the right customer at the right time on digital platforms. Search engine optimization is one typical example of digital marketing, that involves website content adjustment and optimization for achieving a higher ranking in search engine result pages. Search engines like Google, Bing, or Yahoo! are the platforms where prospective customers visit to perform researches of products or services carefully before making purchase decisions. The higher-ranking position on search engine, the more traffic the website will obtain.

This project thesis is a case study focus on Search Engine Optimization in the website of Porontimatuvat, an accommodation provider, i.e. holiday cottages, for tourists in Ruka, where it is famous for ski resort in Finland. The primary goal of the thesis is to create a Search Engine Optimization plan for Porontimatuvat's international website (www.porontimatuvat.fi/english.htm), for foreign visitors for the purpose of increasing its ranking positions in search engines, in order to gain more international visitors and traffic, as well as potential customers to the website.

Search Engine Optimization (SEO), also known as organic or natural technique, involves with the process of optimizing website to achieve possible highest rankings on search engines for certain selected keywords (Stokes, 2013). On the other hand, paid search advertising is for businesses or organizations, which desire their websites to be visible in the top search engine result pages quickly, without investing much effort, by bidding on certain keywords on ad services, typical are Google Ads, Bing Ads, etc. Both techniques fall into the same category of an umbrella term, search engines marketing. However, this project thesis focuses solely on the organic method.

A research was conducted by StatCounter, to study the leading search engines global market share, the data was collected from users worldwide (as the target users in this thesis project are international visitors) between March 2018 to March 2019 in 4 different device types: desktop, mobile, tablet, and console. The result in figure 1 indicates Google had the enormous majority global market share of search engine with 92.5%. Bing had the second highest market share, comprising 2.5%. Yahoo, Baidu, Yandex hold market share with only 1.8%, 0.9% and 0.5, respectively.

Figure 1 - Global Search Engine Market Share between 03/2018 and 03/2019.

Based on the result above, the author decided to choose Google as a target search engine in this thesis project, since it is the most used search engine for users all around the world, and also it is the most target platform of SEO specialists when it comes to optimizing website for search engines.

1.1 Research Problem

The research problem was discovered when the commissioner received feedbacks from their customers, who claimed that the company website was not visible on Google search engine result pages. Instead, the customers learned about the company through a third-party cottage rental site named "Lomarengas", where direct contacts to Porontimatuvat's staff could not be found, as well as an extra fee has to be paid to book the service through Lomarengas, while they wish to book directly from Porontimatuvat.

The aims of this thesis are to create SEO guidelines to a website of a vacation rental business based on the research question, which is:

"How to enhance Search Engine Optimization in the site of Porontimatuvat on Google search engine?"

1.2 Research Method

In this project thesis, the author chooses case study analysis as a research method. In the opinion of Ashford University (2015), it explains that case study analysis is a methodology that researchers

1. Analyze a situation in a case company
2. Identify key problems
3. Summarize the outcomes

4. Propose alternatives and solutions

5. Discuss recommendations for implementation plan

Also, qualitative methods such as Strength, Weakness, Opportunity, Threat (SWOT) analysis, initial SEO audit, keyword research, etc. will also be used in this project work.

1.3 Porontimatuvat as a vacation rental business

Lomamökit Porontimatuvat is a sole trader company, which was founded in 1998 in Ruka, with the aim to provide cottage accommodations for travelers throughout the years. The company owns 2 main cottages locate in nature, and both lie next by the lake, therefore tourists can enjoy water activities such as swimming, standup paddle boarding or fishing. The cottages located around 12 kilometers away from Ruka ski resort in Kuusamo, tourists visit Ruka to enjoy their holidays with spectacular natural sights like Riisitunturi national park, Karhunkierros hiking trail, Ruka holiday resort, as well as other activities such as mushroom and berry picking.

Each cottage is furnished with 6 to 7 beds, one family kitchen, and a sauna, which is not only a perfect place for couple, but also for family and group of friends. The two cottages are named as Revontuli and Ruskatupa, that receive up to a hundred reservations each year.

1.4 Content Structure

This research thesis is composed of 5 main chapters. Each of them contributes to different aspects of the whole SEO picture.

The first chapter of the thesis includes a brief introduction of SEO concept, the commissioner, as well as the research method and its problem.

The second chapter deals with the analysis of the commissioner's website condition in terms of SEO and presents an evaluation of Strength, Weakness, Opportunity, and Threats (SWOT) of the commissioner's SEO condition.

The third chapter illustrates an SEO strategy map, and examines the commissioner's target customers, along with how they make use of search engines in the trip planning process.

The fourth and most important chapter concentrates on the SEO implementation plan, which is subdivided into 4 parts. Part 1 focuses on accessibility and site structure's elements, while part 2 addresses the issues of on-page factors. Part 3 explains how the technical aspect of SEO affects the site, and part 4 proposes suggestions of how to measure and track SEO results with analytics tools.

Conclusion and recommendations are drawn in **the fifth chapter**. Furthermore, limitations of the thesis and career development of the author are also mentioned.

2 SITUATIONAL ANALYSIS

Before optimizing SEO strategy to Porontimatuvat's website, a situational analysis will be performed to study carefully the current state of the business. Particularly, an SEO initial audit and SWOT analysis will be conducted in this chapter.

To identify the key problems, the tools will be used for SEO audit process are Alexa, Moz Pro, SEOmator, SEMrush, and Google PageSpeed Insight, since there is no single platform can serve precisely many purposes in SEO audit.

2.1 Initial SEO Analysis

An initial SEO analysis, also known as an initial website SEO audit. It is defined as a process of analyzing and evaluating how well a website performs at the beginning of a project in terms of search engine optimization. The purposes of a SEO audit are to identify what are the site's problems and weaknesses, as well as best practices, in order to provide guidance and roadmaps for improvement, to eliminate mistakes that negatively affect search ranking health, and to understand a full picture of the whole website's health (Alexa, 2016).

As stated by SEMrush, 2017, there are 14 important elements which are critical for marketers to analyze in an SEO site audit. SEMrush carefully organized them into 3 categories, which can be seen as follow:

Table 1. The SEO audit categories.

Category	Meaning	Main Factors
Accessibility and Site Architecture	Factors affect search engines' ability to access and crawl content on a page.	Robots.txt, XML sitemap, URL structure, Links & Redirects.

On-page SEO	Factors related to website content and how well it is optimized for relevant keywords.	Content, Title tag, Meta descriptions, Headings, Images Alt Text.
Technical SEO	Factors represent for website performance and user experience, e.g. secure connection, responsive design, or fast loading time.	Page speed, Old Technology, Mobile-friendly, HTTPS Implementation

2.1.1   Accessibility and Site Structure

To make Porontimatuvat's website to be visible on SERPs, the site has to be accessible to search engine bots, or in this case, Googlebot. For this reason, all important pages on the website that want to be shown to readers should not be hidden away from search engine bots. In other words, the pages must be indexable, otherwise, search engine bots cannot retrieve the data. There are two components play crucial roles of a website's crawlability, which are "robots.txt" file and XML sitemap.

Firstly, HubSpot, 2017, explained a "robots.txt." is a text file that is stored on a website's server. This file giving instructions for search engine bots specifically which pages can be crawled and which can be not. About XML Sitemap, HubSpot defines it as a machine-readable list of all a website's important URLs, which gives a reference of all URLs to search engines. A website's sitemap should be submitted to Google Search Console in order to help bots to navigate the site faster, the indexing process becomes easier, and for updating edited or new content.

Concerning about Porontimatuvat's crawlability, a site audit was performed on 4 different tools which are SEOmator, Alexa, SEMrush, and Moz Pro to measure precisely the SEO health condition of the site. Both of "robots.txt." and XML sitemap files of the website are missing or broken, according to the report result, as can be seen in figure 2. Nevertheless, if a site does not have any private content that needs to be blocked from search engines, the site is simple, and every file needs to be indexed, then it is okay to not have a robots.txt file or XML sitemap yet.
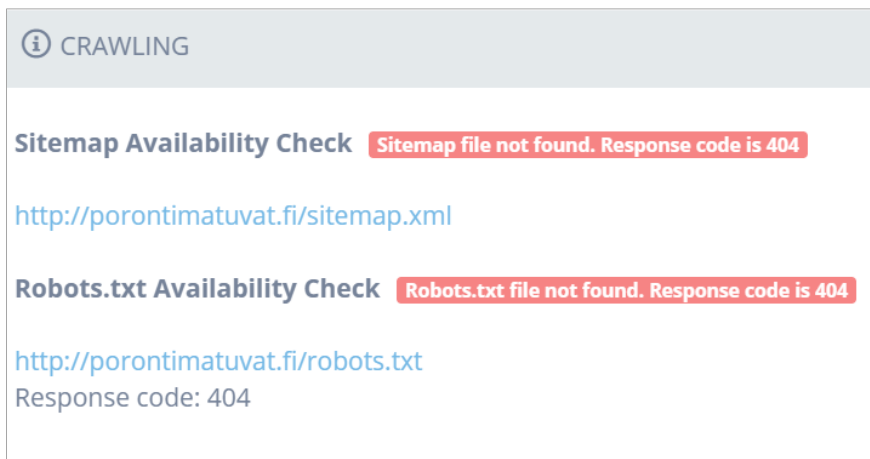
Figure 2. Crawling result of Porontimatuvat' site. Source: SEOmator.com

Secondly, links and redirects are the elements represent for a site architecture in SEO. Several mistakes in a site's internal linking and external linking, as well as incorrect redirects, can affect a website's SEO health condition. In total, Porontimatuvat's site is having 4 internal broken links (figure 3). One of the broken links is a Contact Page, which contains the most useful information, in case customers need to reach to the staff. Therefore, this page should be in high priority in the maintenance process. The broken internal links may affect badly not only to the usability of users on the website but also SEO ranking.

Figure 3. Porontimatuvat's broken links. Source: SEMrush.com

Thirdly, duplicate pages with the same content, that appears on more than one URL across the website can lead to dilute ranking ability in search results (Moz, 2017a). For example, duplicate pages can be described as the following hostname:

- http://example.com

- https://example.com
- http://www.example.com
- https://www.example.com

For the human, all of these URLs appear for a single page. Moz asserts that for search engines, every unique URL is a separate page. In Porontimatuvat's situation, Alexa program has found there are 13 duplicate pages in the site, which are shown in figure 4. Consequently, this can put the website in poor placement in the search engine results page.

Pages with Duplicate Content	Count
1. http://porontimatuvat.fi/revontuli_kuvat.htm	4
http://www.porontimatuvat.fi/revontuli_kuvat.htm	
https://porontimatuvat.fi/revontuli_kuvat.htm	
https://www.porontimatuvat.fi/revontuli_kuvat.htm	
2. http://porontimatuvat.fi/info.htm	4
http://www.porontimatuvat.fi/info.htm	
https://porontimatuvat.fi/info.htm	
https://www.porontimatuvat.fi/info.htm	

Figure 4. Duplicate pages in Porontimatuvat's site. Source: Alexa.com

Next, in the related subject of site structure, Alexa (2018) reveals that SEO marketers need to pay attention to a site's reachability status because sites with good reachability are more visible in search engine results, hence the search engine crawler is able to find more pages. Regarding Porontimatuvat's reachability status, Alexa has found that there 56 HTML pages (figure 5) in the site. However, there are only 14 pages are easy to find or user can access in a small number of clicks, the rest of 42 pages are unreachable or hard to find, which can decrease the level of user experience in navigation.

Figure 5. Reachable and unreachable pages of Porontimatuvat's site. Source: Alexa.com

Finally, in the site architecture category, a web page's URL, or a web address, is just as important as other elements, which is designed to guide a web browser how and where to retrieve a source. In Porontimatuvat's URLs' audit, the length was relatively short (under 100 characters) and descriptive, which is a good sign of SEO practice. However, there are still a few URLs that contain some underscores, which can be improved (figure 6).

Figure 6. URLs structure of Porontimatuvat's site. Source: XML-sitemaps.com

2.1.2 On-Page SEO

In this section, the elements related to on-page SEO which are content, title tag, headings, meta descriptions, and images will be audited and measured. On-page SEO is described by Yoast (2017a) as the practice of enhancing individual web pages including technical set-up, code quality, textual and visual content, and user-friendliness in order to rank higher and earn relevant traffic in search engines.

In terms of content in SEO, a website should provide useful, unique and relevant information to readers in order to earn a high-ranking place in search results. According to the report from SEOmator (figure 7) below, Porontimatuvat's website has almost 86% of unique content, and 14% of duplicate content, due to unintentionally duplicate pages with different hostnames, as explained in the previous section (2.1.1). The report also mentions that the website has thin content or low word count, because all 14 content pages have only between 27 to 172 words/page. In the author's point of view, a site with long content or high number of words has a tendency to rank higher in search results, because it requires the reader to spend more time to read, which increase the time spend on site. And it has been stated by Busche (2017, 246), that high visitor engagement such as longer time on site, lower bounce rate, and high page views has a positive impact on ranking position in search engines.

DUPLICATE CONTENT
- Unique: 85.71%
- Similar: 0%
- Almost Duplicate: 0%
- Duplicate: 14.29%

NUMBER OF WORDS PER PAGE
- 0-150 Words: 100%
- 150-300 Words: 0%
- 300-500 Words: 0%
- 500-1000 Words: 0%
- 1000+ Words: 0%
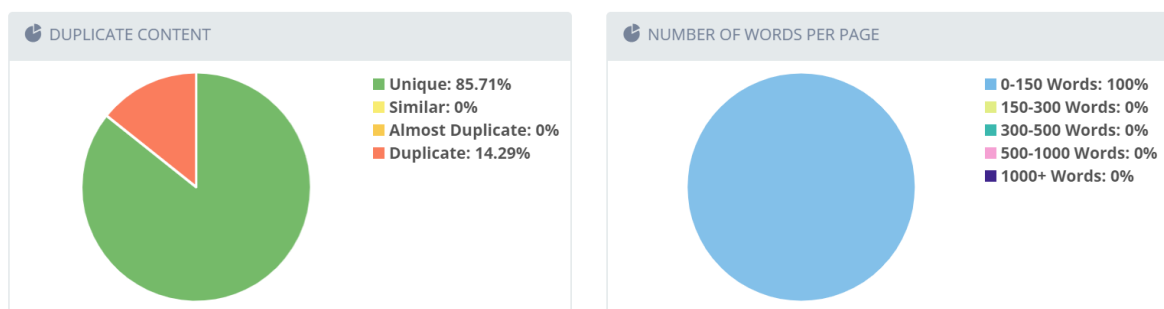
Figure 7. Content Quality of Porontimatuvat's site. Source: SEOmator.com

Considering title tags and meta descriptions in SEO, it is obvious that they are the first impression to the users who browse results page. Compelling title tags and meta descriptions help to increase click-through rate dramatically. According to Busche (2017, 241), it was stated that an ideal title length lies between from 50 to 65 characters, and the most important keywords should be at the beginning of the title so both human and search engines can see the initial words first. In figure 8, the title description of Porontimatuvat's homepage could not show completely on search engine results page because it was too long. The whole length of the site's tile description is 94 character (with spaces), whereas Google has automatically cropped the title and only able to show 66 characters (with spaces).

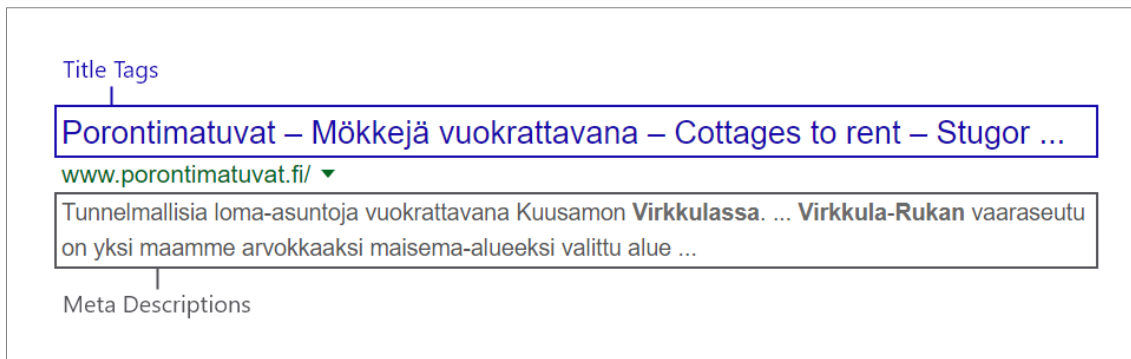*Figure 8. Title tags and Meta description of Porontimatuvat's homepage on Google search results.*

Meta description serves a purpose as informing searchers the content of a page precisely and displaying targeted keywords in SERPs. Meta description content should be constructed carefully about what searchers are going to find when click on search engine results, a well-described meta description can gain visitors to the site.

From the result of Porontimatuvat's audit report, it has been found that its meta description tags were left blank or not found in all 14 content pages. Therefore, Google automatically showed a relevant text from the page in the snippet (figure 9).

Figure 9. Porontimatuvat's meta description tags was left blank. Sources: SEMrush.com

Headings and subheadings in a webpage play an essential role in informing readers about the subject of an article. Not to mention, those are an important element in on-page SEO which provides structure and context for articles, help to break up text, and for navigation when visually impaired people wants to listen to the articles (Yoast, 2017b). In this subject, Porontimatuvat' site did not treat their articles' header as heading tags <H1>, instead, it was treated as paragraph tags

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<p> (figure 10). This mistake can decrease the user experience level in readability and clarity and affect Google's ability to index.

```
70    <tr valign="top">
71      <td colspan="2"><blockquote>
72        <p class="style6">REVONTULI</p>
73        <p>          <br />
74   Hirsim&ouml;kki, jossa on tilaa 2 - 7 hengelle.
     paris&auml;nky
75
```

Figure 10. Heading error in Porontimatuvat' site. Source: from the page source

Lastly, not only black and white text on the page gets crawled by search engine bots, but also images and multimedia get special care in the crawling process as well. Image description and the Alt attribute help to inform search engine bots the content of the images and its function, since search bots cannot understand the image itself (Patel, 2017a). Therefore, having image description and alt attribute is strongly necessary for search engine optimization, to help search engines index better and rank the image higher. Alt attribute also useful for visually impaired users because it helps to inform the image content and for other users who have disabled images in their browsers. Another key point to consider in image SEO is the image's size, the smaller the image size, the faster the site loading time.

Return to Porontimatuvat's image SEO, figure 11 indicates that in all 376 images has been found, there was neither image description nor Alt attributes put inside the images. On the positive side, the size of the images are considered quite light, which can bring faster page loading time to the readers.

Figure 11. Image description and alt attribute issues of Porontimatuvat's site. Source: SEMrush.com

2.1.3   Technical SEO

SEMrush (2017) defines technical SEO related to elements that apart from content, focusing on site performance, which affects user experience and rankings. In this category, the important components of technical SEO like page speed, outdated technology, mobile-friendly, HTTPS implementation, and international SEO of Porontimatuvat's website will be monitored and discussed.

Page speed indicates a page loading time, in other words, it shows how much time a page takes to fully display the content on a specific page (Moz, 2017b). It was announced by Google in 2010 that page speed became a ranking factor, but it was focused on desktop searches. In January 2018, Google officially updated that mobile page speed is also a ranking factor for mobile searches, and it has come into effect in July 2018 (Search Engine Land, 2018). Page speed affects strongly to user experience. The longer loading time of a page, the higher bounce rate, and the number of average time users spend on the page will also decrease. Page speed is measured on a scale from 0 (extremely slow) to 100 (extremely fast). Porontimatuvat's home page was measure by Google PageSpeed Insights and has earned a score of 97, which indicates the page speed is extremely fast (figure 12).
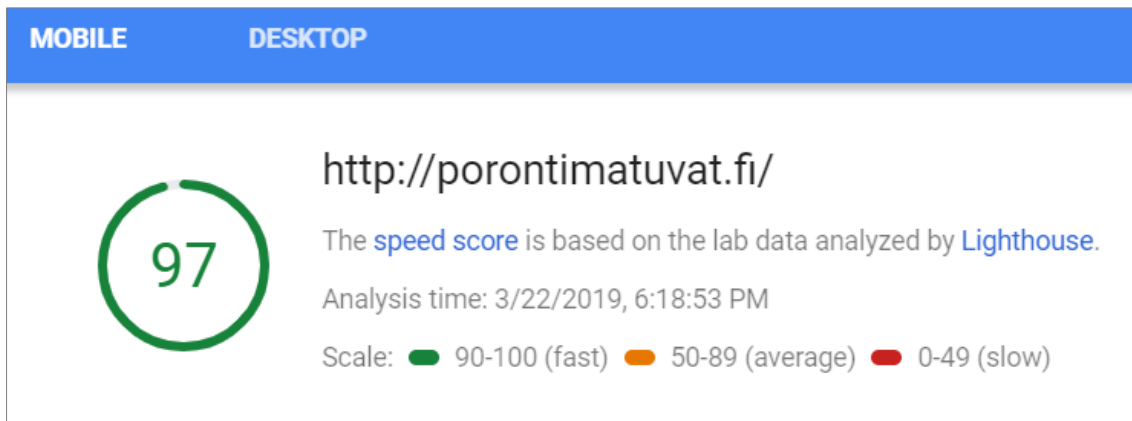
Figure 12 . Page speed score of Porontimatuvat. Source: Google PageSpeed Insights.

Having a website optimized for mobile devices is extremely crucial, since travelers are not performing trip planning online research only on computers anymore, but also on smartphones and tablets. In an article that was written by Yoast (2018a), it clarifies characteristics indicate if a site is mobile-friendly are:

- Responsive design
- Fast site speed
- Concentrate on user experience
- Optimized for local

Websites are not mobile optimized can induce negative user experience and difficulty in navigation. Concerning Porontimatuvat's mobile optimization, figure 13 stated that mobile-friendly layout was missing. Particularly, the viewport meta tags which help the site responsive to smartphone or tablets are not visible in Porontimatuvat's page source. This means mobile browsers will have to zoom in or pinch out to view texts and images.
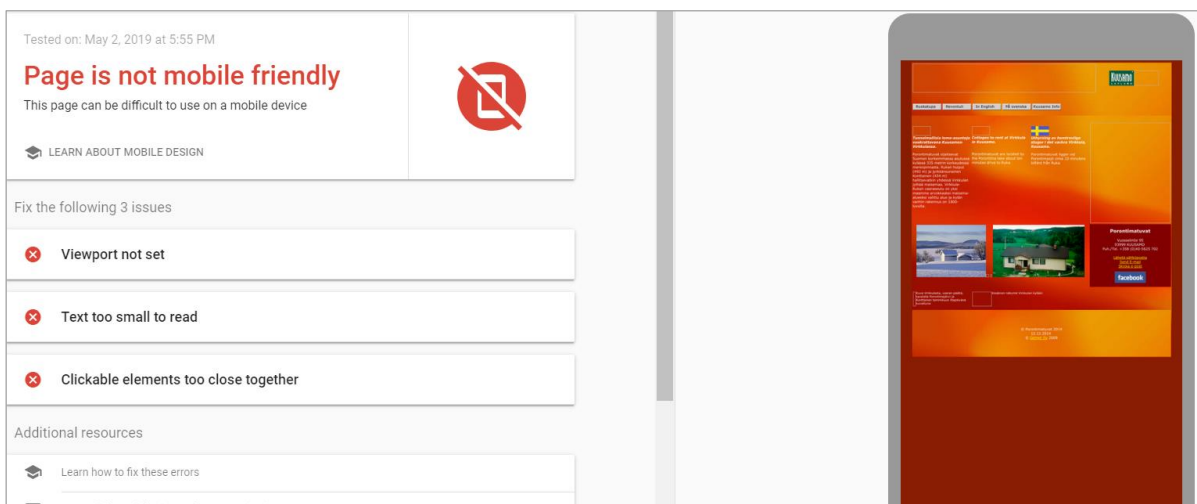
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Outdated technology in SEO involves tremendously with Flash content using. There are many reasons explain why using Flash content is not healthy for SEO. Firstly, Flash content affects badly on a website's visibility because they interrupt search engine bots in the crawling and indexing process. Secondly, Flash content is also harmful to a website's performance, which can send signals to search engines as a negative point. And lastly, Flash content does not function properly on mobile devices, this can negatively affect user experience. Results taking from audit report (figure 14) stated that Porontimatuvat's website does not contain any Flash content, which is a positive sign since Porontimatuvat's search result rankings and site performance will not be damaged by it.
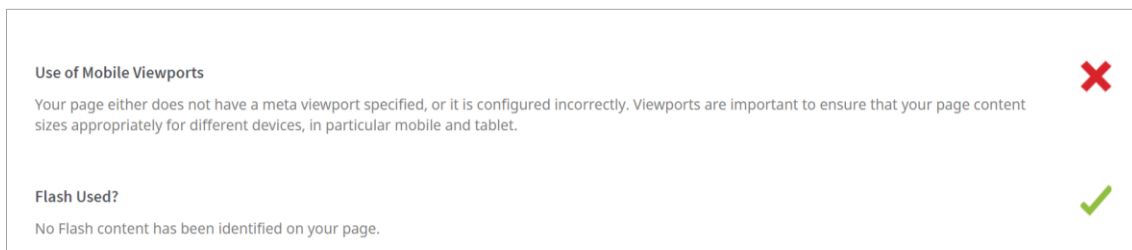
Figure 14. Description of flash used in Porontimatuvat's site.

Another component in technical SEO related to user experience and site performance is HTTPS (Hyper Text Transfer Protocol Secure) implementation, in other words, HTTPS encryption. Google (2018) asserted that HTTP sites are not safe. Beginning in July 2018, with the launch of Chrome 68, the new version marks all HTTP sites as "not secure" (figure 15).

Figure 15. Example of HTTP sites are marked as "Not secure", and HTTPS sites are marked as a padlock icon. Source: sangfroidwebdesign.com

In the matter of Porontimatuvat's HTTPS implementation, audit report in figure 16 asserted that the site possesses an SSL (Secure Sockets Layer) certificate. However, the site has not redirected from HTTP to HTTPS version (figure16).
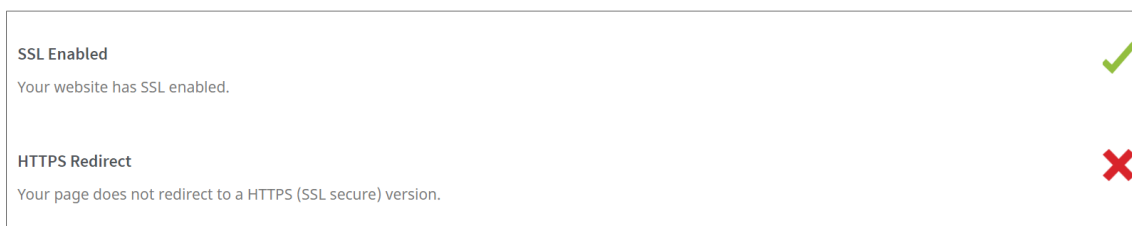
Figure 16. HTTPS version is not redirected in Porontimatuvat's site. Source: SEOptimer.com

There are other elements that indirectly affect the ranking position of a website, for example, domain authority, social media promotion and backlink, which belong to off-page SEO field. Because those elements are not part of the website, the author will not define them in this research, but still, Porontimatuvat's off-page situation needs to be reported in the SWOT analysis.

Given these points, it is clear to assume that Porontimatuvat' site is outdated and has not optimized for search engines. Consequently, the site needs a new approach of search engine optimization, by drawing a specific plan in terms of targeting the most relevant keywords in English language, optimizing on-page, off-page, technical elements, as well monitoring and measuring the result.

2.2   SEO SWOT Analysis

SWOT (**S**trengths, **W**eaknesses, **O**pportunities, and **T**hreats) analysis is a framework used to determine a business's competitive position, and to develop strategic planning by investigating carefully internal and external factors, along with current and future potential (Investopedia, 2019).

From the initial audit above, it is feasible to apply the results to assemble a SWOT analysis for Porontimatuvat in the context of SEO, as can be seen in table 2.

Table 2. SWOT analysis of Porontimatuvat's website.

Strengths	Weaknesses
- Homepage size is light (6.12 KB), provide fast loading time (0.2 s). - Possesses 5 Finnish organic keywords in top 10 rankings. - Website obtains interesting, useful local traveling content.	- No English organic keywords in top 100 rankings. - Critical issues in on-page, technical and off-page elements. - No analytics tracking and monitoring. - No interaction with social media channels (Instagram, YouTube, LinkedIn). - Low engagement rate on Facebook. - Complicated domain name. - Web site's user interface is outdated. - No direct booking system on the site. - English keywords are poorly targeted. - Low numbers of backlink (5 backlinks)
Opportunities	**Threats**
- Numbers of guests visit Ruka and use search engines for info research are increasing. - On-page, off-page, and technical SEO's improvement are achievable. - Numbers of traffic and conversion can increase by investing more effort into	- Moz domain authority score is low (2). - Competitors have many high-ranking common keywords. - High traffic volume (click-through rate, search volume, existing rankings) in competitors. - Competitors hold the majority of organic keywords and paid keywords.

social media channels, SEO, and website's user interface/user experience.	

3 SEO STRATEGY

This chapter will mainly concentrate on SEO strategy of the website, the business objectives, as well as its target customers and traveler's behavior in search engines of the trip planning process.
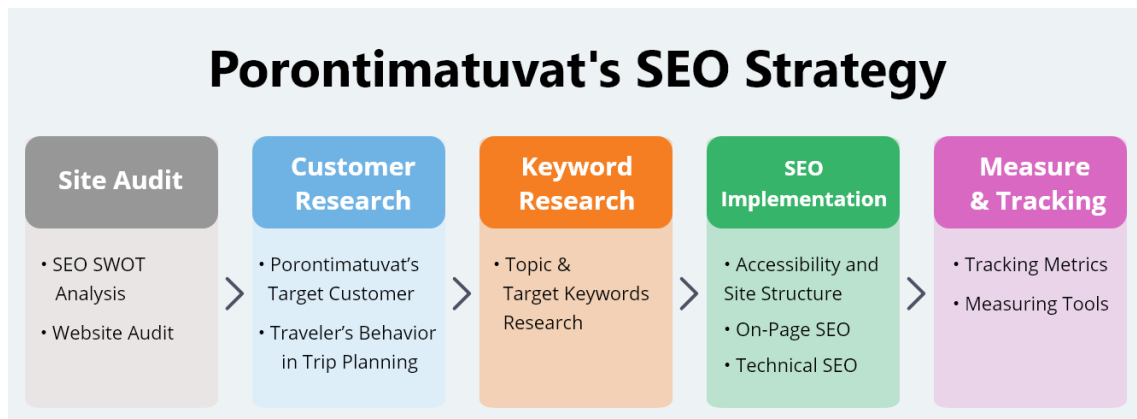
Figure 17. Porontimatuvat's SEO Strategy

3.1 Commissioner's objectives

The commissioner anticipates that travelers in this day and age rely heavily on search engine to look for the best options regarding accommodations, and the number of users will be increasing in the near future due to the rise of smartphone and tablet device. The primary objective of the commissioner is to increase the number of bookings, especially during low season time. However, the business should break down the big goal into a plan with guidelines to be easier to achieve. In 1981, Doran introduced a S.M.A.R.T guideline with the aim to instruct managers to plan meaningful and realistic objectives that be used also for marketing purposes, which is explained more in table 3.

Table 3 - S.M.A.R.T goal meanings and examples.

	Meaning	Example of Cottage Pages Traffic Goal
Specific	What specific area should the business targets for improvement?	Increase cottage page traffic by uploading professional, detailed

		cottage's images and descriptions. Target at relevant keywords on the pages
Measurable	What metric or key performance indicator can be measured?	An 8% increase number of visitors.
Achievable	Are the objectives within the scope? Is it possible to achieve?	It's attainable because the keywords are low and medium-competitive.
Realistic	What can be achieved from the given available resource?	By increasing the cottage's pages traffic, the business can boost brand awareness and generate conversions, lead to more revenue.
Timebound	How long to reach the results?	2 months is the timeline.

Plus, the website has not been updating for many years, and it is missing the trend of travelers' behavior. Consequently, the website needs a new approach in connection with SEO, also to:

- Deliver relevant and valuable content to potential customers,
- Enhance user experience (responsive website, fast loading time, enabling direct booking),
- Raise traffic, engagement, and conversion to the website,
- Increase brand awareness,
- And overall, to get a greater number of bookings.

On that account, a well-planned SEO strategy is extremely necessary for the case of Porontimatuvat to achieve those goals.

3.2 Target Customers

In the situation of this work, the target customers are international leisure travelers, male and female, which are categorized into different age groups as young people (15-25), adults (25-60), elderly people (over 60 years old). The audience is English preferred language users, who visit Ruka resort as a family, couple, or as a group of friends.

The purposes for the trip of target customers generally are to enjoy Finnish nature, winter sports (e.g. downhill skiing, cross-country skiing, snowboarding), dog/reindeer safaris, health and fitness

spa services, summer activities, active nightlife, and local cuisine (Komppula & Laukkanen, 2016). For that reason, the target groups can be concluded as winter ski enthusiasts, parents with kids, senior tourists, and young travelers.

3.3 Trip Planning Behavior in Search Engines

Search engines have become solid tools for many travelers regarding the sources of information that is used for trip planning. Tourists rely on search engine for the purpose of travel planning including accommodation searching, transportation, local activities and booking of the destinations. To generate conversions through search engine marketing effectively, tourism marketers need to understand travelers' behavior thoroughly on search engines as a part of trip planning process. Travelers behave differently in many stages during the planning cycle in terms of the amount of usage, source of information, search terms, and devices.

Concerning the amount of usage of search engine in the trip planning process, it could be changed gradually during the planning process. Expedia, 2016, stated in a study research that 71% of travelers chose search engine as the most used information source at the beginning of travel planning cycle, the categories fell behind the search engine ranking are friends and family recommendation, online travel agencies, and other travel related websites. In the same study, Expedia's research also showed the amount of usage of search engine has shifted in later stages of the trip planning process. Particularly, travelers tended to use search engines less after the options have been narrowed, only 33% of participants answered still in use this source. In the consideration stage, right before booking, the percentage of travelers rely on search engines has dropped to only 21%. Instead, travelers shifted more to Online Travel Agency websites and other travel brand websites in the last stage of the trip planning process.

Another separate study by Naletova, 2017, investigated which sources of information people use to research accommodation, regarding the frequency of usage from always to never. 94% of leisure travelers (highest percentage) chose search engine as an information resource to be used the most often, while 80% (second highest percentage) of business travelers participated in the survey claimed the similar.

On the subject of search terms that tourists perform in search engines, the keywords can also be altered over time during the trip planning process because of traveler's search intent changes. Blue

Magnet Interactive (2017), concludes that in the early stage of travel planning cycle, also known as Awareness stage, traveler's search intent is to look for information with general, inspirational, broad search terms, in this case, for example, "activities in Finland", "things to do in Finland", "winter activities". In the next stage, also known as Consideration stage, searchers have narrowed down his/her options that can make a shift in the search terms as well. The keywords become more destination-relevant term such as "Ruka ski resort", "what to do in Kuusamo", "Kuusamo activities". Finally, in the last stage during the trip planning process, also called as Action stage, searchers tend to pay attention to more specific terms as "RukaJärvi price", or "Porontimatuvat cottage booking", as the searchers have known certain options which can be affordable or achievable.

Regarding the type of devices travel consumer spend time to check for information, both mobile and desktop devices have been both use by searchers during the trip planning cycle. Expedia's number (2016) indicated that between 64% to 82% of international tourists use mobile devices to research about trip planning, while only between 55% to 65% of travelers use desktop devices for the purpose of travel planning (figure 18). While this clearly suggests the essence of mobile devices in the search process, anyway, it does not mean that smartphones have taken over entirely. Google (2016) also claimed the similar that around 70% of travelers have done travel research on their smartphones. However, only 31% of leisure travelers have booked travel on a smartphone, and just 23% of them are confident to able to find all of the same travel information on their smartphone that they can on their desktop. On the other hand, 53 % of business traveler answered that have completed travel reservation on the same platform, which reveals that desktop devices are mostly favorable by leisure travelers, and smartphones are used more by business travelers.
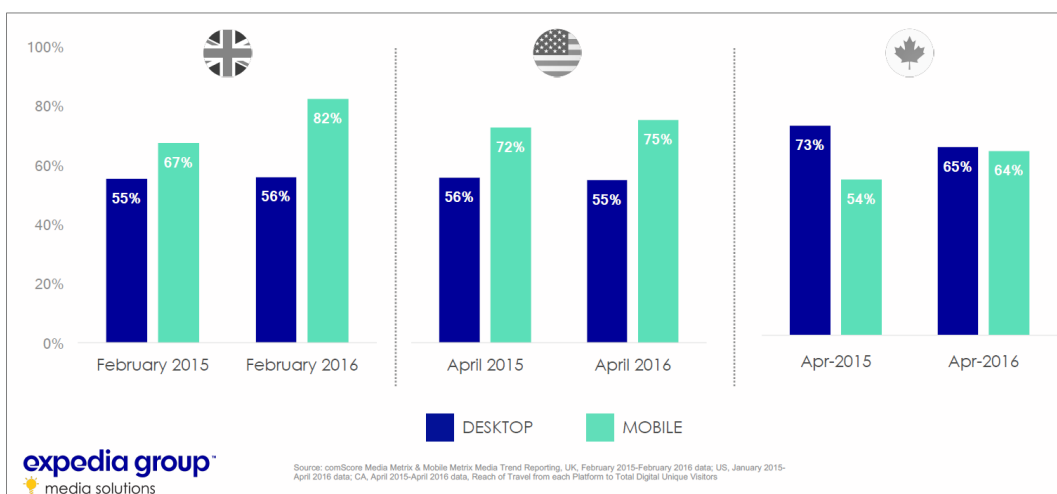
Figure 18. Digital platform consumption of search engines in the trip planning process. Source: Expedia, 2016

In addition, Google asserted 94% of leisure travelers switch between devices as planning or booking a trip, mainly to update the prices since mobile devices are not always giving the best user experiences. As a result, it is not safe for digital marketers to assume that searchers either perform investigation solely smartphones or solely on desktop devices, there is a combination between the two. Above all, because most travelers tend to use some mix, the content of marketer's search strategies should be optimized properly for both devices to gain the best user experiences for travel consumer' path to purchase.

4   SEO IMPLEMENTATION

4.1   Accessibility and Site Architecture

4.1.1   robots.txt

A robots.txt file is a text file, which is scanned by search engine bots or spiders with an accurate syntax. The robots.txt file is located on the root level of the domain (e.g., http://www.porontimatuvat.com/robots.txt). The job of robots.txt is to instruct search engine bots of how to index and store pages of the website in the database of search engines. Specifically, for a new domain that search engine bots have not crawled before, the file robots.txt guide the bots of which URLs in that site is allowed to crawl and which is disallowed (Yoast, 2019a).

For Google search engine, it has its own crawl budget, which is the number of URLs Googlebot can and wants to crawl, based on its crawl rate limit and crawl demand. There are multiple factors that affect crawl budget and weaken crawl activity, like low quality and spam content, duplicate content, hacked pages, etc. For this reason, it is recommended to use robots.txt file properly so Googlebot can spend their crawl budget effectively on value content pages (Patel, 2017c).

Depends on how many pages of Porontimatuvat's site want to be found or what type of search engine bot is allowed to crawl, the robots.txt file can be adjusted to follow the situation. For instance, if the site allows all search engines to crawl the whole site, the text can simply put as:

User-agent: *
Disallow:

Similarly, if the site wants to block search engine bots from Bing to crawl the pdf files, which are stored in the /pdf directory, and everything inside that folder, the text can be typed in as:

User-agent: bingbot
Disallow: /pdf/

However, it should be noted that the robots.txt file must locate in a site's top-level directory. In addition, the file name is all case sensitive, "robots.txt", without any capital letter. Moreover, each subdomain on a root domain must have its own robots.txt file (Moz, 2017f).

4.1.2 URL Structure

A URL, which stands for Uniform Resource Locator, is a unique identifier or a web address used to specify a resource on the internet. A URL is formed of 3 different parts, which are protocol, IP address or domain name, and path or search query (Tech Target, 2014).
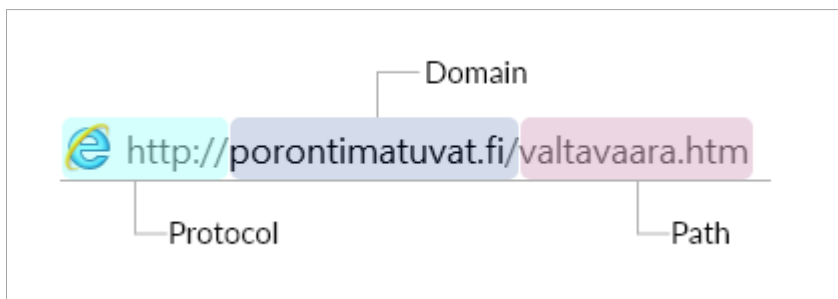
Figure 19. Multiple components of a URL.

A friendly URL structure can bring various benefits for the website. First, a well-structured URL informs clearly the title of a page to readers on SERPs, social media and other online platforms. This is a good chance to increase organic click-through-rate, which is a ranking factor in search engine. Second, a well-organized URL indicates internet user the website's roadmap, or where they are in the website without using the help of breadcrumbs.

According to Backlinko (2019), one of the best practice of URL in search engine is always including the targeted keywords in the URL so the page can rank higher in that particular keywords. It is suggested that an URL should not contain any of capital letters (ABC) or underscore (_). Search bots consider underscores URLs as part of a word. Instead, it is advised to use hyphens (-) because Google treats a hyphen as a word separator but does not treat underscore the same way. In addition, it is recommended to avoid using date in the URLs, (e.g. blog posts) because it can increase the length and cause difficulty for the update.

About Porontimatuvat's URLs, the structure is well-organized, and the length is relatively short. The URLs does not contain any capital letters or dates. Nevertheless, there are still a few URLs that contain some underscores, which should be replaced with hyphens.

4.1.3   Duplicate content (rel=canonical attribute)

Duplicate content is defined as identical pages exist in multiple URLs on the web. This is a problem in SEO because search engines cannot select which page is the original version to rank on SERPs. For this reason, the visibility of the pages' ranking is diluted. Duplicate content happens due to technical reasons such as the site has different version of URL prefix (e.g. "WWW" vs "non-"WWW"; HTTP vs HTTPS); session IDs from analytic programs change the URL for each visitor; or also because of printer-friendly, where a web page has to change to another version formatted for printing (Moz, 2017g).

As mentioned in the previous chapter, Porontimatuvat's site has many duplicate pages, mainly due to URL prefix. This kind of issue can be solved with the rel=canonical attribute, which is an HTML element, that is stored in the <head> section of a page, to indicates search engines the preferred URL to index (Google Search Console, 2019).
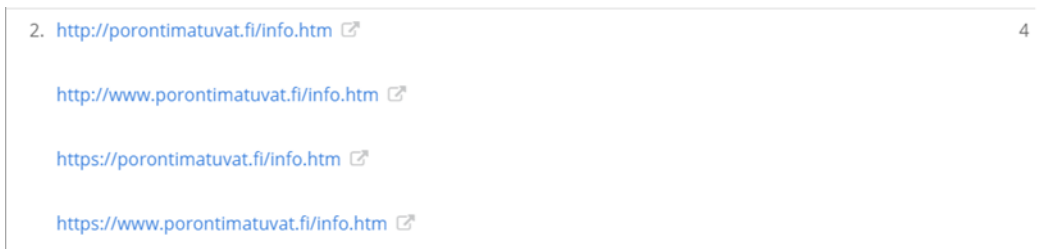
Figure 4 - Duplicate pages in Porontimatuvat's site. Source: Alexa.com

For example, suppose Porontimatuvat's info page choose https://porontimatuvat.fi/info.htm as the canonical version (the page that Google believes is most representative from a series of duplicate pages), a rel=canonical attribute should be added in the <head> section of 3 other duplicate pages (figure 4), pointing to the canonical page like this:

```
<link rel="canonical" href="https://porontimatuvat.fi/info.htm" />
```

4.2 On-Page Optimization Strategy

4.2.1 Keyword Research

Keyword research is explained as a process of identifying popular words and phrases that searchers use to find for information on search engines, to determine what the website ranks for (Moz, 2017d). Keyword research result can help businesses to comprehend customers' need, anticipate future demand, respond to the market change, and target the right potential customers by providing relevant content (on-page SEO, blog post) on the website that is useful for searchers (Enge, Spencer & Stricchiola, 2015, 193). For those reasons, keyword research becomes a crucial and inseparable task in every SEO implementation plan.

As mentioned above, the business purpose of Porontimatuvat is providing accommodations for tourists, who spend time on their vacations in Ruka, Kuusamo. Consequently, the website topic should be relevant and aligned with Porontimatuvat's business. The relevant topics, for example are: "Ruka ski resort", "cottage rental" , "hotel accommodation", "summer cottage", "vacation activities", "Ruka, Kuusamo", etc. In each topic, there are certain keywords phrases that people might type in related to that topic. For instance, in the topic of "Ruka, Kuusamo", the relevant terms can be demonstrated as in figure 20:
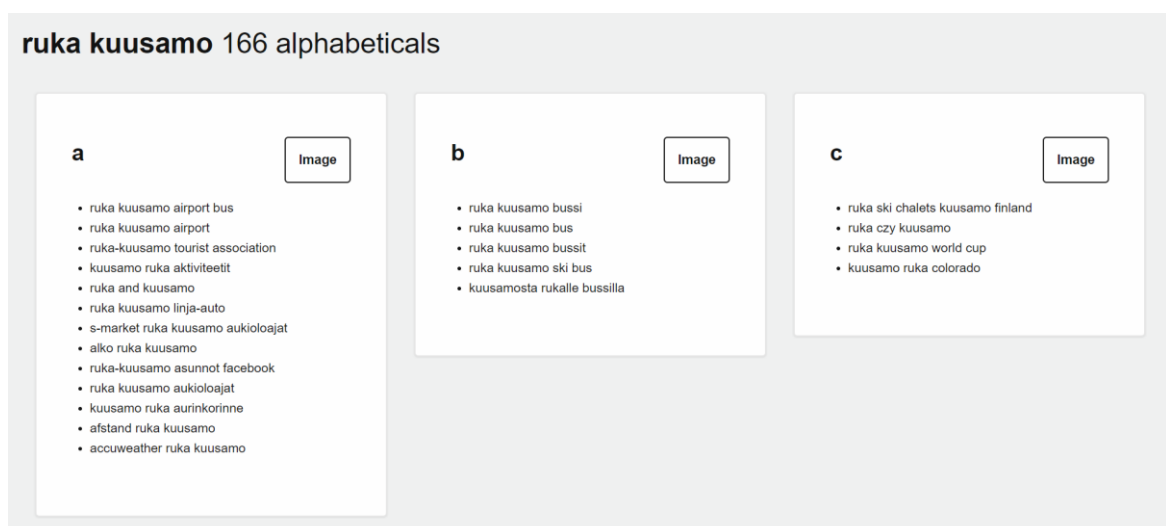
Figure 20. Keywords which are relevant to the topic "Ruka, Kuusamo". Source: Answerthepublic.com

Knowing specifically what searchers interested in each topic can easily help marketers to generate the right content that brings traffic to the website. Also, SEO marketers can also obtain more ideas of relevant words and phrases in the same topic with the help of Latent Semantic Indexing (LSI) keywords. It is defined as keywords semantically related to the primary keyword, which they all share the same context. However, LSI keywords are not synonyms (Rob Powell, 2018). To generate related ideas in the topic of "Ruka cottage", a tool called LSIGraph create a list of semantic keywords (figure 21) that gives marketers more topic view that can be later investigated deeper to figure out the target keywords.

Figure 21. Semantic keywords related to the topic "cottage Ruka". Source: LSIGraph.com

Another place to receive more suggestions for the keyword idea is Google search engine itself. With the similar topic "Ruka cottage", Google was able to generate more similar search terms, as can be seen in figure 22

Figure 22. Similar search terms to "Ruka cottage" suggested by Google.

Knowing which competitors' keywords are ranking for is important for marketers to learn what the customer target group expect from the industry, and to help SEO specialist brainstorming the initial in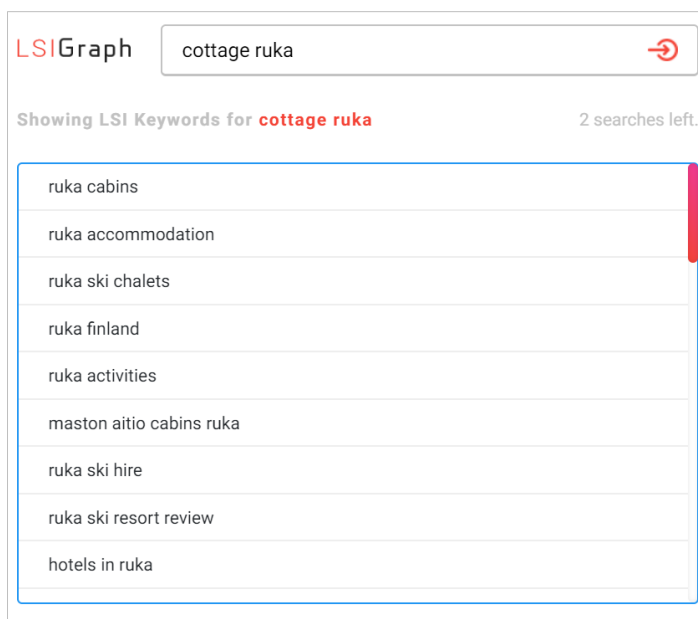put of information for keyword tools. The more quality of initial input data from human, the better and more accurate result keyword tools will provide (Enge et al, 2015, 201). One of Porontimatuvat's competitor is Finlandcottagerentals.com, which have organic keyword ranks in the top 10 SERPs in the topic of "Ruka cottage". An organic keyword rankings analysis ran on the competitor page, https://finlandcottagerentals.com/hotspot/ruka/, and the result can be seen in figure 23

▼ Organic keyword rankings ⊙

Keyword	Position	Search vol.	CPC	Competition	URL	KEI
ruka booking	47 ↓6	40	0.68	0.31	⬀ finlandcottageren…	17.4
booking ruka	43 ↑10	110	0.32	0.28	⬀ finlandcottageren…	0
cottages ruka	12 ↑9	20	0.24	0.36	⬀ finlandcottageren…	5.9
ski rental ruka	21 ↑16	10	N/A	0.14	⬀ finlandcottageren…	1.4
bussi ruka kuusamo	84 new	20	N/A	0.04	⬀ finlandcottageren…	0
ruka cottage	10 ↑2	10	N/A	0.21	⬀ finlandcottageren…	1.5
ruka ski rental	18 ↑16	10	N/A	0.19	⬀ finlandcottageren…	1.6

Figure 23. Organic keyword rankings of Porontimatuvat's competitor, finlandcottagerentals.com. Source: online.seranking.com

Now more keyword ideas in the topic "Ruka cottage" has revealed, it is possible to obtain a better understanding of keyword analysis in terms of search volume, competition, impression, etc., in Google Keyword Planner tools. This information is crucial in keyword selection for the content of the website. Figure 24 reveals the number of average monthly searches, competition level, as well as cost-per-click. The search terms with the highest search volume in the list (between 100 to 1000) are: "Ruka ski chalets", "Ruka village", "log cabin holiday", and "Ruka ski". The second highest in the list (between 10 to 100) are followed: "Ruka cabins", "Ruka cottage", "Ruka activities", and "ruka accommodations". These keywords can be considered as the target keywords to create relevant content for the website since they have high search volume.

	Keyword (by relevance) ↓	Avg. monthly searches	Competition	Top of page bid (low range)	Top of page bid (high range)	Competition (indexed value)
☐	ruka cabins	10 – 100	Medium	–	–	48
☐	ruka chatlet	0 – 10	–	–	–	
☐	ruka cottage	10 – 100	Low	€0.18	€1.34	24
☐	ruka holiday apartment	0 – 10	–	–	–	
☐	ruka ski chalets	100 – 1K	Medium	€0.40	€2.86	45
☐	ruka activities	10 – 100	Low	–	–	9
☐	ruka accommodation	10 – 100	Medium	€0.52	€4.69	55
Keyword ideas						
☐	lapland log cabin holidays	10 – 100	High	€0.25	€1.36	100
☐	ruka village	100 – 1K	Medium	€0.29	€0.87	37
☐	lapland holidays 2018	10 – 100	Low	–	–	29
☐	lapland log cabin	10 – 100	Medium	€0.26	€0.95	63
☐	log cabin holidays	100 – 1K	Medium	€0.30	€0.94	56

Figure 24. Keyword plan for Porontimatuvat's website. Source: Google Keyword Planner.

4.2.2   Title Tags

Once the list of target keywords is ready, it can be used to optimize Porontimatuvat's pages. As stated by Enge, Spencer & Stricchiola, 230, title tag plays a major role for search engine relevance, in fact, it is the only piece of meta information about a page that directly impacts relevancy and ranking.

There are several certain rules for title tags practice that should be followed. Firstly, keywords should be placed at the beginning and brand name should stay at the end of the title tag, in order to generate the most of SEO benefit and to maximize user experience in selecting the most relevant content in SERPs.

Secondly, the length of the title tags ideally should remain between 50-60 characters (containing spaces), because the display of the title tags will be discontinued in the Google SERPs if it is too long, depend on pixel width in SERP snippet.

Next, title tags with incorporate longer keyword phrases are more relevant, descriptive and valuable than random keywords which do not provide the appealing context to searchers. For example,

"Porontimatuvat | Holiday lakeside cottage rentals in Ruka" provides more accurate and appealing information than simply "Porontimatuvat | Cottages for rent"

Finally, to enhance the readability of title tags, SEO specialists should consider using a divider to separate different types of content. For instance, most title tags in SERPs use pipe "|", hyphen "-", en dash "–", or em dash "—", to separate "Product/service name | Brand name".

4.2.3   Meta Descriptions

Searchers rely not only on title tags to learn the content summary of a page, but also on meta description tags to understand an overview of a page and decide whether to click on the page or not. Other roles of meta descriptions' roles are displaying targeted keywords, acting as a short "advertisement" to increase click-through-rate (Enge et al, 2015). Even though meta description is not a direct ranking factor, the page still receives SEO benefit because Google uses click-through-rate to determine if the page is helpful and relevant (Yoast, 2018b).

Yoast also points out that a proper meta description length should less than or equal to 155 characters long (including spaces), since nowadays, Google changes the length and cut off meta descriptions that are longer than that. Therefore, if a page has a long meta description, crucial information and focused keywords should be put in the beginning of the sentence.

In addition, a meta description should announce clearly the function the page can provide to searchers by using call-to-action text. For example, if a page not only serve as a source of information but also provide online bookings or purchases, then it should be mentioned in the meta description tags as well like "Book now!", "Learn more", or "Download now", because the audience's search intent varies and it helps the page to boost click-throughs.

In Porontimatuvat's case, to attract more clicks from searchers, the landing page's meta description text should be appealing and meaningful, not just random words combine. An example of suggested title tags and meta description tags can be seen in figure 25.
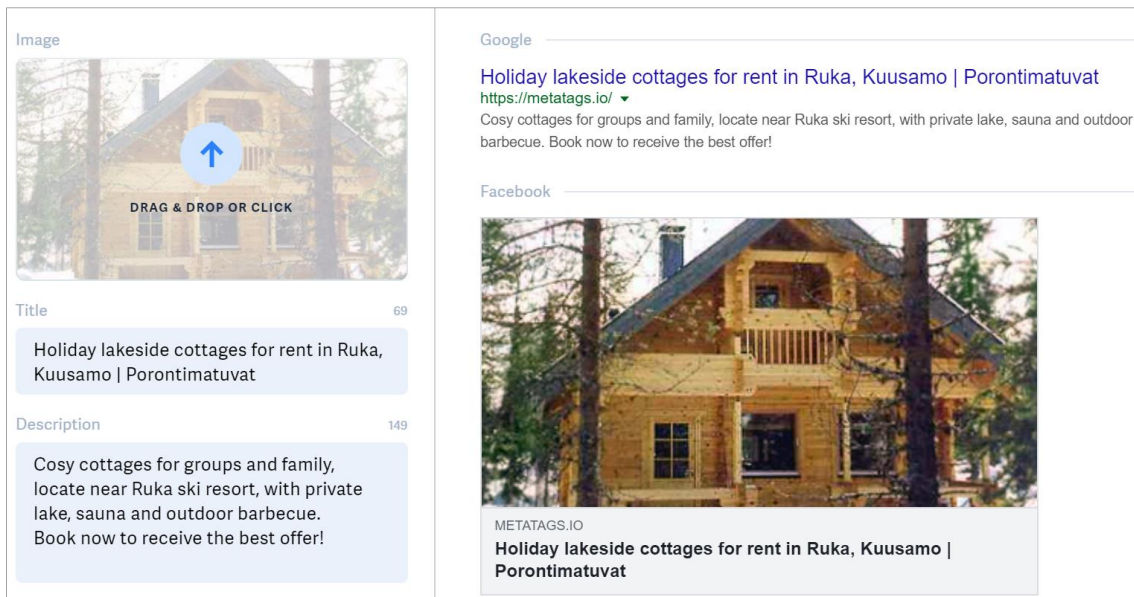
Figure 25. Example of Porontimatuvat's title tag and meta description for Google search engine. Source: Metatags.io

4.2.4 Heading Tags

Heading tags in HTML (Hypertext Markup Language) are created to clarify a headline hierarchy in a page for readers and search engines. Yoast, 2017b, explains the roles of heading tags are to show text structure, improve the accessibility of screen reader for visually impaired users, and enhance SEO. There are in total of 6 heading levels in an HTML page, from <h1> to <h6>, and they are constructed as in figure 26.
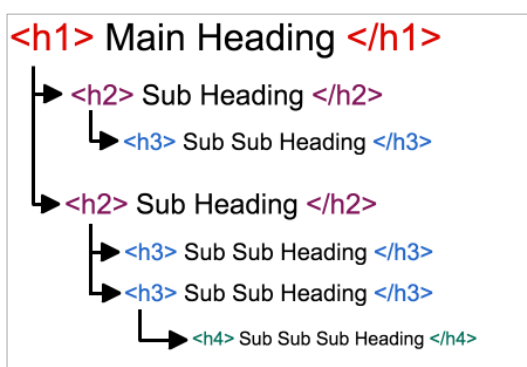

Figure 26. Illustration of headings hierarchy. Source: nomensa.com

Similar to other elements, heading tags also have rules that need to learn before applying them on any pages. In Patel's opinion (2017b), H1 heading acts as a name or title of the page, consequently,

there should be only one H1 in a page. If a page has more than one H1, this could dilute the ranking on SERPs. Besides, the H1 heading length should stay between from 20 to 70 characters, because it is too long, the power of the tag might be diluted. In addition, H2, H3,… and H6 headings can be used as subheadings, sub subheadings and so forth. There is no limit of using them, which mean they can be used more than once on a page.

At this moment, none of any Porontimatuvat's pages use headings. Instead, the text was all treated as paragraph in HTML. This can be an obstacle for search engines to identify the topic of the page/post and weaken the page's SEO power.

4.2.5   Images Optimization and Alt Tags

Images contribute many benefits for a website. First, it supports articles to be more descriptive and appealing, readers are more engaging to articles with illustrations. Second, images bring more traffic to the website through visual search in various platforms such as Google Images, Google Lens, Pinterest, web SERPs and many more. Third, images are part of the business's branding strategy, without it, customers might have difficulty remembering the company's brand or business concept (Yoast, 2019b).

For image optimization, Yoast (2019c) suggests several key tips that can be controlled to adapt to SEO and user experience:

1. Filename

The file name should describe correctly the content of the image with focus key phrase because search engines use this as a clue to understand what inside the image. Currently, the cottage's images of Porontimatuvat are named with ruskatupa1.jpg, ruskatupa2.jpg. The names are not incorrect; however, they can be improved with more detailed descriptions such as Ruskatupa-kitchen.jpg, Ruskatupa-dining-room.jpg

2. Format

There is no one format fits all images; instead, different types of images require several formats. In fact, JPEG supports large photos or illustrations, PNG goes along with transparent background images and SVG reinforces logos and icons. Using the right format can enhance image quality and improve user readability.

3. Size

Image needs to keep as light as possible to reduce loading time on the site, increase user experience level and conversion. There are several online tools to help to compress images without

affecting too much of the image quality like TinyPNG or Compress JPEG, or offline professional program, Adobe Photoshop. Images of Porontimatuvat's site are considerably light, there is no necessary for improvement.

4. Responsive image

The role of responsive image is to automatically adjust its size to fit with the size of the screen. Using responsive images is beneficial for website visitors since various types of device are being consumed such as desktop, tablet, or smartphone. Developers can choose different approaches to make the image responsive like adding CSS, HTML, etc. (W3schools, 2018).

5. Alt attribute text

The alt attribute tag is necessary for the image for many purposes. The first goal is to enhance the user's accessibility. Some images cannot be displayed properly on web browsers, or visually impaired users need to use a screen reader to read images' content. Image alt attribute needs to be added so it will appear as a descriptive text, for users who cannot see the images. In addition, alt attribute tags are able to show images' label when the user hovers over the image with cursor. The second goal is to improve search engines' accessibility. Image with relevant, proper alt attribute text strengthens website ranking in image search and indexability of search engine bots (Moz, 2017e). Porontimatuvat's alt attribute text was left blank in all of the images. Fortunately, this can be fixed by simply use HTML code, for example:

4.2.6 Content Development

To gain organic traffic from users, the site needs to provide valuable, relevant and original SEO content for both human and search engines. Alexa (2017a) explained that any content that is destined to generate organic traffic from search is considered SEO content. Depends on the business's target audience and their search intent, type of content also varies. Some typical example that most businesses are using such as:

- Blog posts/site posts
- Videos
- Evergreen content (F.A.Q, tutorials, reference guides, etc.)
- Infographics
- PDF downloads

- Social media posts

A well-planned SEO content development strategy delivers positive outcomes for business in various ways. First, with unique content that serve user's search intent, business easily stands out from its competitors in increasing site traffic. Second, valuable content improves the site's SEO in terms of amount of the time users spend on site, the number of organic search keywords, and ranking position. Third, thorough product/service description direct conversion, and even lead to purchase (Moz, 2015).

As a result, SEO specialists must create keyword content that aligns with the audience's search intent. On the report of Broder (2002), he classified search intent into 3 categories which are:

- Informational, where searchers want to learn general information.
- Navigational, where searchers want to find a particular website.
- Transactional, where searchers want to make transactions.

In the field of content creation for Porontimatuvat's accommodation sites, based on Alexa's suggestion (2017b), various types of travel content can be made for the site in the English language, depends on user's search intent like:

Table 4 - Content development suggestion for Porontimatuvat's site.

	Content Types	Example Topics
Informational	Blog posts, videos, infographics, guides	- Seasonal activities in Ruka - Popular attraction guides of Ruka
Navigational	Landing pages, service list.	- Restaurants, bars in Ruka - Direction to Ruka ski resort
Transactional	Sign-up pages, sales pages,	Thorough cottages' descriptions

4.3   Technical SEO Optimization Strategy

4.3.1   Mobile-friendly

Googled announced in 2015 that mobile-friendly page will have a promotion in ranking on the mobile search result. This means pages without mobile-friendly optimization will be affected in ranking position by this update. Base on figure 13, Porontimatuvat' homepage has 3 critical issues in the mobile-friendly test, which can be fixed by these following suggestions:

- "Viewport not set"

One of the elements to form a responsive web page is the meta viewport tag. The viewport is the visible area of a web page that can be seen (W3school, 2019). A meta viewport tag instructs the web browser to control the width and scaling of user's viewport. It is placed in the <head> of a document, for example: `<meta name="viewport" content="width=device-width, initial-scale=1">`

with "`width=device-width`" instructs the page to correspond the screen's width in device-independent pixels, and "`initial-scale=1`" guides browsers to establish a 1:1 relationship between CSS pixels and device-independent pixels (Google Developers, 2019a).

- "Text too small to read"

The text of Porontimatuvat's page on mobile devices is illegible; therefore, visitors would require pinching to zoom for a better reading experience. Any font size smaller than 12px is difficult to read on mobile devices, and Porontimatuvat's font size on the home page is currently 9px. Therefore, it is recommended the text should be at least 12px on at least 60% of the text on the page (Google Developers, 2019b).

- "Clickable elements too close together"

Different from the desktop environment, users are unable to control accurately navigation links and buttons on mobile screen since a mouse cursor is not available. For this reason, clickable elements should have a finger-friendly design. In a study of Jin, Plocher, and Kiff in 2016 to investigate the optimal button size and spacing standards for touch screen user interfaces considered for use by older adults. It was found that the button size between 42 and 72 pixels achieved the highest touch accuracy. Above all, the most preferred button size was 60 pixels (figure 27).
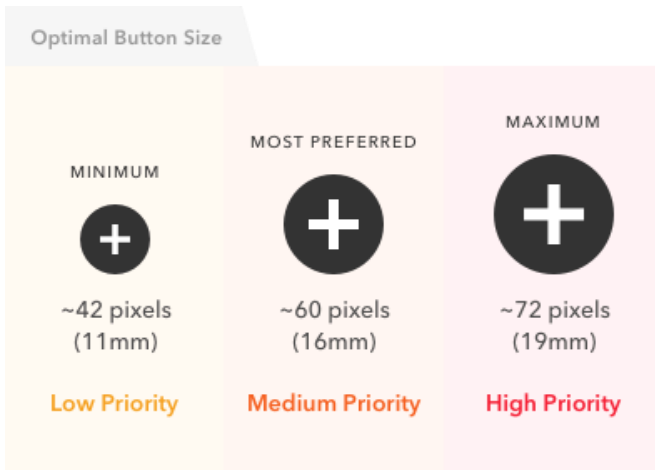
Figure 27 - Optimal button size for the touch screen. Source: uxmovement.com

The study also found the optimal size for spacing standards to enhance user experience. It explains that if the distance between the buttons too large, users moved to the touch targets slower. On the contrary, if the distance is too little, the touch accuracy level is lower. Overall, the optimal button spacing is in the range of 12 to 48 pixels, varies on button sizes (figure 28).
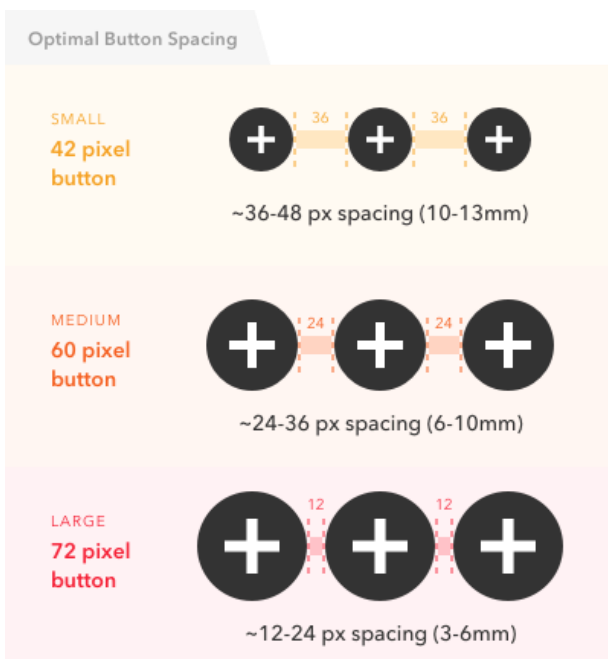

Figure 28 - Optimal button spacing for touch screen. Source: uxmovement.com

Given these points, it is feasible for Porontimatuvat's site to become mobile-friendly by adopting viewport setup, text legibility, clickable elements' distance and size in order to maximize user experience level.

4.3.2   HTTPS Implementation

HTTPS (Hypertext Transfer Protocol Secure) is a protocol that secures the transfer of data such as personal data, credit card details or social security number between the user's computer and the site. The transfer of data using HTTPS encryption was meant to enhance protections for users which are (1) authentication – ensure that the users of the server are interacting to are who they claim to be, (2) data integrity – make certain that the data will not be modified while it is in transit between servers and users, and (3) encryption – protect communication data from spies or eavesdroppers (Google Developers, 2014).

HTTPS encryption not only gains safety and trust for internet users but also increases credibility for websites, and a ranking signal in Google search engine. Backlinko (2016) analyzed 1 million search results and found that HTTPS sites have a moderate-strong correlation with first page Google results. This result makes sense as Google has confirmed HTTPS sites as a ranking signal in 2014.

The site of Porontimatuvat was built with Apache CMS (Content Management System), and it has already added an SSL certificate in the domain, the site only needs to redirect HTTP addresses to HTTPS versions.

Namecheap (2019), suggested various methods of how to redirect to HTTPS on Apache servers, such as:

- Enable the redirect in the Virtual Host file.
- Edit ".htaccess" file in the document root folder of the website.
- Use the mod_rewrite rule in the Virtual Host file

To be able to perform this, the site may need the help of a website developer, who is competent at back-end development, since the process is involved deeply with editing the Apache server root folder.

4.4   Performance Monitoring and Analytics

In any SEO project, it is vital to set up a baseline before proceeding to record the website condition history, to compare and analyze for future improvement. Based on the organization's objectives, measure strategy and tracking metrics vary. However, the tracking cycle remains unchanged. In

the opinion of Enge, Spencer, and Stricchiola (2015, 711), the tracking and measurement process is defined as the following steps:

1. Identify an SEO strategy and implementation schedule.
2. Discuss the strategy with other departments to align with the business objectives.
3. Draw a baseline by recording the current statistics.
4. Proceed the project.
5. Collect data.
6. Compare new data to the baseline data.
7. Refine the strategy.

If the process achieves a positive result, then it can apply to other pages of the site. However, if the result did not go according to plan, the organization must switch the path and design a new strategy.

4.4.1   Analytics Tools

Web analytics is defined as the process of measurement and analysis of data, to comprehend user behavior and how they interact throughout the website. Analytics platforms track user's activity by using tracking code to collect anonymous information, for example: user's demographics (age, gender), user's geographic (location, language), user's behavior (session, engagement, conversion), user's technology (browser, device), and traffic sources (Optimizely, 2019).

At this moment, the most popular and most used web analytics tool is Google Analytics, that is free, suitable for both SMEs (small & medium-sized enterprises) and enterprise level. In addition, TrustRadius (2019) listed 74 web analytics platforms based on 3,376 ratings collected from the website and the top ten of most rated web analytics tools are:

1. Google Analytics
2. Adobe Analytics
3. Kissmetrics
4. Hotjar
5. Mixpanel
6. Webtrends Analytics
7. Crazy Egg
8. Smartlook

9. IBM Digital Analytics
10. AT Internet

However, TrustRadius also emphasized that web analytics tools can only provide valuable insight data of online behavior, there is no web analytics tools can give complete accurate data, because users are able to delete their cookies, and browsers can restrict JavaScript.

4.4.2 Tracking Metrics

In the opinion of Intechnic (2015), to learn how productive the website is in converting website visitors to customers, measuring website traffic only is not enough, but the business also needs to look at more factors than that such as conversion rate, visit duration, pages per visit, unique visitors & returning visitors, to name a few. Even though businesses' objectives may differ, but they still remain the same format, ABC cycle, that is used by Google Analytics in clustering data and reports, which is known as:

- Acquisition, amount of traffic and how it comes to the website.
- Behavior, level of engagement the website has based on user' views and actions.
- Conversion, how effective the site performs in converting visitors into customers/leads.

As reported also by Intechnic (2015), many organizations and businesses have been used Key Performance Indicator (KPI) to evaluate and determine a project's progress in achieving their goals, and digital marketing is not an exception. KPI is also a metric that is used frequently in measuring website performance. Not all websites and businesses have the same objectives, therefore, measuring and tracking strategy will differ. Particularly, Porontimatuvat's measure and tracking strategy, for example, may look like this:

Table 5 - Measurement and tracking strategy example for Porontimatuvat's site.

Report	Website Goals	KPI/Metric in Google Analytics
Acquisition KPI	- Raise traffic from organic search - Increase the number of new visitors	- Number of visits - Source/Medium - Number of organic keywords
Behavior KPI	Decrease exit rate	Bounce rate

	• Prolong time on site • Increase the number of pages per visit	• Pages per sessions • Avg. Session Duration
Conversion KPI	• Maximize numbers of E-mail subscribers • Increase the number of bookings	• Goal conversion rate • Goal completions • Goal value

5 DISCUSSION AND CONCLUSION

Search Engine Optimization can be a good digital marketing practice for businesses to be promoted in the online world. Adopting SEO tactics for the website help the business grows by gaining level of user experience, improving raking positions in SERPs to increase organic traffic, which are also the main purposes of this project thesis that is customized for Porontimatuvat's English site, concentrate on international users, particularly foreign prospective travelers on Google search engine.

5.1 Managerial Application

The SEO elements are divided into 4 categories which are: accessibility and site structure, on-page, technical and off-page. Accessibility and site structure involve with a site's robots.txt file, XML sitemap, URL structure, links & redirects. While on-page represents for keyword, title tag, meta description tag, heading, image. Technical factors include page speed, old technology/flash used, mobile-friendly and HTTPS implementation. And finally, off-page contains social media promotions, link building, and domain authority, which does not belong in the website. The implementation plan for Porontimatuvat's site can be summarized as the table below:

Table 6 - SEO recommendations for Porontimatuvat's site.

SEO Factors	Recommendation for improvement
robots.txt file	The robots.txt file should be located in the top-level directory of Porontimatuvat's site's, to instruct search engine bots of how to index and store pages of the website in the database of search engine.
URL Structure	Some URLs of the site contain some underscores, which should be replaced with hyphens.
Duplicate Content	Add rel=canonical attribute in the <head> section of other duplicate pages, pointing to the canonical page.
Keyword Research	Research topics → research competitor's keywords → search terms → search term volume

Title Tags	Create descriptive, relatively short (less than 60 characters) title tags that include the page's title with keywords and product/service's brand, e.g. "Porontimatuvat | Holiday lakeside cottage rentals in Ruka"
Meta Description	Design appealing meta description that is less than 155 characters, which accurately describes the page content to generate click-through rate.
Headings	The site should adopt heading tags to break up text and to clarify a headline hierarchy since all the headlines on the page are treated as paragraph HTML at the moment.
Images	Images' file name, size, format, alt attribute tag and responsiveness need to be adjusted to be visible on visual search platform, and for better user experience.
Content Development	Planning website content that aligns with the audience's search intent and trend with targeted keywords. For example, seasonal activities, popular attraction guides of Ruka.
Mobile-Friendly	Optimize the site to be mobile-friendly by setting viewport, adjusting text legibility and, and altering clickable elements' distance for the purpose of maximizing user experience level.
HTTPS Protocol	Redirect HTTP addresses to HTTPS versions to enhance protections for users by editing Apache server root folder with the methods mentioned above.
Measure and Tracking	Adopt the tracking process before and after the implementation of SEO, with analytics tool (probably Google Analytics) to measure results and refine the strategy.

The improvement of Porontimatuvat's ranking position is possible to achieve. However, the implementation may take time and a combined effort of many people in the digital marketing team. As claimed by Forbes (2015), it takes about 4 to 6 months for SEO to start generating leads and sales. The process of SEO implementation is considerable long and complicated, including website audit, keyword research, content creation, on-page optimization, technical optimization, and even off-page optimization. Consequently, the business should calculate the overall budget for SEO implementation and anticipate a return on investment (ROI) to learn how much to invest for the whole project.

As technology evolves non-stop, for the future plan, to be able to expand the scale of traffic, the commissioner might need to consider adopting local search, voice search, and mobile search tactics, as they become more popular in the trending of user behavior.

5.2 Limitations

The process of writing this research thesis, however, was suffered by some limitations. First, because the nature of SEO is changeable, therefore, materials related to SEO that were published before 2015 are considered outdated, in the opinion of the author. Moreover, the numbers of books and paper research about SEO topic is also short, compare to online articles. As a result, collecting relevant and fresh materials for this research is relatively difficult and time-consuming for the author.

The thesis length and time restriction were considered as the second limitation in this research work. The commissioner specified that the majority of foreign tourists are from Russia, for that reason, it would be beneficial for the commissioner to have some insights about the Russian search engine's dominance, Yandex. In addition, off-page and benchmarking SEO are also essential for the commissioner to understand a full picture of the site' trustworthiness and popularity, as well as their competitors. Nevertheless, both of the sections could not be included in this paper due to the mentioned reason above.

5.3 Personal and professional development

I discovered about the topic through a basic digital marketing course in my study plan and noticed that SEO becomes more inseparable for the grow of businesses, SEO specialists also become more needed in the job market. Because of this, I decided to investigate the subject more careful by enrolling "Mastering in SEO" as my summer study course in 2018 by Metropolia Helsinki University of Applied Sciences. To be well-prepared for the subject, I also registered other online courses in the same year by Google Academy to become proficient in how to use Google Analytics and Google AdWords (which is now Google Ads), for the purpose of future keyword research and analytics process. From this point, I was confident to apply my knowledge of SEO into a real case company, with the hope of gaining practical experience in the field. The reason SEO was chosen as my topic research because it connects strongly with my future career choice, as becoming a

digital marketer. SEO is an integral part of digital marketing, along with social media marketing, email marketing, referral marketing, etc. Throughout the writing process, I acquired the skills of how to use essential SEO tools such as Alexa, SEMrush, Moz Pro, etc., which are essential for any SEO research project.

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LIST OF TABLE

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GLOSSARY

Bounce Rate   The percentage of users visit on a site, then exit without performing any other action, or browsing any further.

CMS   Content Management System, a web application that allows user to create and manage digital content, e.g. WordPress, Zoomla, Drupal,

Conversion   When a visitor completed a desirable activity of a site goal, he/she just made a conversion, e.g. subscribe to newsletter, download a PDF, create an account.

CTR   Click-through Rate, is the ratio show how often people click on a particular link, ads, after seeing it.

DA   Domain Authority, a ranking metric to measure how high a website or domain will rank on search engine result page, on a score of 1 to 100, with 100 is the best and 1 is the worst.

Flash   A technology used to show video and animation on a website. It can be bandwidth heavy and unfriendly to search engine spiders.

HTTP   Hyper Text Transfer Protocol, which is the protocol over which data is sent between a browser and a website.

HTTPS   Hyper Text Transfer Protocol Secure, is the secure version of HTTP, which means all exchanges of information between the browser and the site are encrypted.

Landing Page   The page a user reaches when clicking on a paid or organic search engine listing. The pages that have the most success is those that match up as closely as possible with users' search queries.

LSI	Latent Semantic Indexing
Metric	A quantitative measurement of data in Analytics.
PA	Page Authority, a score from 1 to 100, describe how well a certain page will rank on search engine result page, with 100 is the best and 1 is the worst.
Search Engine Bots	Also known as web crawler or search engine spiders, they access web pages to index the entire contents to build their databases.
SERP	Search Engine Results Pages, are the pages displayed by search engines to response by search terms by user.
SEM	Search Engine Marketing is the marketing process with a goal of getting more visibility in search engines either by getting more free traffic (SEO) or paid traffic (Paid search advertising).
SSL Certificate	Secure Sockets Layer, is a standard security technology for creating an encrypted link between a server and a client—typically a web server (website) and a browser, or a mail server and a mail client
Traffic	The amount of visitors and visits a website receive.
User Experience	The human's interactions, reactions, emotions, and perceptions while using an app, service, website or product.