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Diploma Thesis

Recovering of Company's Website

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The page for official assignment

Declaration

I hereby declare that I have worked on this diploma thesis, named “ Recovering of Company’s Website ”, myself and only the materials listed at the end of this paper has been directly cited.

In Prague,.....

.....

BSc. Michal Lang

Acknowledgement

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Recovering of Company's Website



Obnova webových stránek společnosti

Summary

Small business operating in villages usually face the problem of lack of customers, especially if they offer luxury products. The budget of such companies is often limited and therefore they cannot afford an expensive advertising. The company website is one of the few solutions that can get customers from outside the rural areas and thus create new business opportunities and increase revenues of such companies. The main goal of the thesis is to attract customers to a company website and thus help small businesses seeking customers in their difficult situation. The theoretical part starts with the basics. It describes what systems are suitable for different kind of web pages and the main part is focused on factors that influence an overall website performance.

The second part shows how to achieve the stated goal on an example of a small joinery company Atypruhlárství Lang. The company is present on the Internet since April, 2009. The work with a real website allows to compare results before and after the changes implementation. The practical part starts with an analysis of the original website available at: atyptruhlarstvi.cz. It will provide an information if it is beneficial to include the factors into the old website design or if it is better to make a complete recovery e.g. create a new web page. After this, the academic work deals with the implementation of suitable factors. The final chapter evaluates the original and new version of the site and represents how the made changes are reflected in the site traffic.

Keywords

Website design, SEO, on-page factors, off-page factors, CMS, Content Management Systems, increase site traffic

Shrnutí

Malí podnikatelé operující na vesnicích obvykle čelí problému nedostatku zákazníků, především pokud nabízejí luxusní zboží. Rozpočet takových firem je často velmi omezený, a proto si nemohou dovolit investovat finanční prostředky do nákladné reklamy. Webové stránky pro malé podniky představují jedno z mála řešení, které může přilákat zákazníky i z nevenkovských oblastí a tím vytvořit nové podnikatelské příležitosti a zvýšit příjem takových společností. Hlavním cílem diplomové práce je přilákat zákazníky na webové stránky společnosti a tím pomoci malým podnikatelům hledajícím zákazníky v jejich složité situaci. Teoretická část začíná základy, popisuje, jaký systém je vhodný pro různé typy webových stránek a hlavní část je zaměřena na faktory, které ovlivňují celkovou výkonnost webu.

Druhá část práce ukazuje, jakým způsobem dosáhnout vytčeného cíle na příkladu malé truhlářské firmy Atyp truhlářství Lang. Společnost je přítomná na internetu od dubna roku 2009. Práce se skutečnou webovou prezentací umožňuje porovnávat výsledky před a po implementaci změn. Praktická část začíná analýzou původních webových stránek dostupných na adrese: atyptruhlarstvi.cz. Ta poskytne informaci, zdali je výhodné zahrnout faktory do starého designu stránek nebo jestli je lepší provést kompletní obnovu, tzn. vytvořit nové webové stránky. Následně se již akademická práce zabývá implementací vhodných faktorů. Závěrečná část hodnotí původní a novou verzi stránek a ukazuje, jak se provedené změny odrážejí v návštěvnosti.

Klíčová slova

tvorba webových stránek, SEO, on-page faktory, off-page faktory, CMS, Content Management Systems, zvýšení návštěvnosti stránek

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Lists of abbreviations

CA – Certification Authority
CDA - Content Delivery Application
CMA – Content Management Application
CMS – Content Management System
CSS - Cascading Style Sheets
ECM - Enterprise Content Management
HTML - HyperText Markup Language
PDF – Portable Document Format
OLS - Open Software License
SEO – Search Engine Optimization
SERP - Search Engine Result Page
SQL - Structured Query Language
SSL - Secure Sockets Layer
TLD - Top Level Domain
URL - Uniform Resource Locator
WCM - Web Content Management
WWW – World Wide Web

1 INTRODUCTION

Small businesses operating in villages usually face the problem of lack of customers, especially if they offer luxury products. The budget of such companies is often limited and therefore cannot afford an expensive advertising. Another issue represent a lack of expertise in new technologies available on the market. Nowadays, they are in a very competitive environment where is hard to generate profit for such companies. Unfortunately, the mentioned problems above are leading to a rapid decline of small business in recent years in the Czech Republic, except the Central Bohemian Region and the capital city Prague (Ministry of Industry and Trade, 2014).

The advent of modern technologies have changed the world and opened new opportunities for people and all types of businesses. People are searching for let's say "everything" what they need on the internet and business trying to satisfy those needs. Moreover, those who knows the modern trends can have a significant competitive advantage. This is the reason why all business regardless the size should follow the current trends in information technology.

A good company website is one of the few solutions that can attract customers from outside the rural areas and thus create new business opportunities and increase revenues. However, this applies to up-to-date, optimized and maintained websites. Unfortunately, most of the web pages of small companies are an opposite. They are old, unmaintained and do not meet the current requirements. These aspects lead to an invisibility or unattractiveness of a site for a customer on the internet. In addition to that, there is a noticeable increase in competition between websites. In 2006, there were less than 100 million online sites in the word. 10 years later, the number has increased 10 times to an incredible one billion websites (Dadax, ©2004-2016). It is the highest number in the history and indicates a fact that only the best sites are successful. Each page has to have basic factors which increase its overall performance. This raises several questions. What are those factors who makes the site more attractive for customers and search engines? How to implement them into the website design? And do they really affect the overall website traffic and are they able to help small business?

2 OBJECTIVES AND METHODOLOGY

The main goal of diploma thesis is to increase the website traffic, its attractiveness for customers and thus help small companies located in rural areas to get new clients. The first part helps to achieve the stated goal by dealing with aspects influencing the overall web page performance and also provide basic knowledge related to the website design. Consequently, the objective of this part is an identification of factors that significantly affect the site traffic. The second part aims to apply the gained knowledge on an example web page of small company *Atyp truhlářství* which faces a problem of a lack of customers. It starts with the analysis of the original website that shows its strangeness and weaknesses. This will provide an information if it is beneficial to apply changes to old design or if it is better to make a complete recovery e.g. create a new web. The part of author's own work aims to implement suitable factors from the theoretical part into the website design. The objective of the final part is to compare the changes made with the original design and determine if the new site solution has really improved the number of visits and its attractiveness for customer.

The essential information for the master thesis elaboration were obtained from an analysis of printed sources as professional books, journals, annual reports and online resources as well. New technologies are changing fast and it is the reason why up-to-date and valuable information are often available in online documents or website articles from respected sources. Statistical data reflecting the original website traffic were extracted from MySQL database. The new data about number of visitors were already get in friendlier form of Google Analytics outputs. In addition to that, author also discussed his academic work with website experts and used his own knowledge acquired during the university studies of information technology.

3 LITERATURE REVIEW

3.1 DEFINITION OF WEB SITE

Web site can defined as a group of World Wide Web (WWW) pages usually including interconnected webpages and made available online by a person, educational institution, company, government, or organization. The Web Site has to have its own unique web address which is available through a Web Browser. The main page is usually called homepage and includes hyperlinks to the other pages of the whole web or other sites. Web sites are stored on the same server in the most of the cases. There are two types of Web pages, static and dynamic (Merriam-Webster, ©1928-2015).

3.2 STATIC AND DYNAMIC WEBSITES

Websites are generally divided into two groups. One of the group represent the static pages and the other one is represented by the pages with a dynamic content.

3.2.1 STATIC PAGES EXPLANATION

Every user viewing the static page obtains the same page content and layout of the page. Those pages refers an online content that is rarely, occasionally updated (Costello, Youngblood, and Youngblood, 2012). These type of sites are mainly coded in HTML & CSS. JavaScript can be applied for the usage for client-side scripting if required. Static web pages work well for small business and organizations want a Web presentation on the one hand but are not able to invest high financial resources or educated professionals to keep a web with the latest content or to make changes on a regular basis. The content of the static pages is usually non-dated. A splash page is a typical example of a static web page that is shown before a user is given access to the main web page. In case, the main web page is being loaded for a longer time the static page can be used as a visual placeholder with some basic information about the web or an advertisement (Brown, 2010). Static pages are coded in plain text. It's the reason why user can create them easily with a Notepad++, PSPad or other tools like Dreamweaver, for example (Warner, 2013).

3.2.2 DYNAMIC PAGES EXPLANATION

A dynamic pages is an opposite of the static page mentioned above. The content changes over time and the main goal is to maintain the web content up-to-date. Dynamic pages are not only changed by the web administrator but in most of the cases by the end-users as well. Some web delivers every day weather forecast which can be customized to the customers preferences according to the location (state, city or postal code), for example. Even the page prompts users to share these information to obtain the best weather forecast. This is the example of a typical dynamic websites. Dynamic pages are usually running on some of the wide range of the content management systems (CMS) on the market. A CMS is a database system developed for storing and managing the layout and content of dynamic websites. Content management systems offer graphical user interface where is easier to maintain and control the content and databases of the web. Dynamic Web sites interact with visitors in many ways, including by users recognizing, storing cookies, session variables and history, or by using direct interaction (Costello, Youngblood, and Youngblood, 2012). The following Table 1 provides an overview of characteristics of both, static and dynamic sites.

Table 1: Characteristics of static and dynamic websites

Static	Dynamic
Content of the static page is fixed for all clients.	The Web site content of these pages is not fixed. The administrator and client may change the content.
Programmer writes web pages mainly in HTML & CSS.	There is variety of technologies used like PHP, .Net, ASP, Javascript for dynamic web page design.
A visitor requests for a page with URL of a page only.	A visitor requests for a page with a URL of a page and certain other information. Based on this provided information, the web server will adjust the content in the page.
Static web sites are focused on the delivery of the content which is common for all the clients.	Dynamic web sites are for the delivery of the content especially adjusted to a client and based on his/her requirements.
It's easy to learn, develop, test and publish to a web server.	It's easy to manage the content but much harder to develop, test and publish to a web server.
Less expert knowledge required.	Higher expert knowledge required.
Usually are not connected to back end systems.	It's connected to back end systems.
Smaller hosting requirements.	Higher requirements on a hosting.
User has complete control over the content and design of each page.	Content of the web sites is influenced by visitors too. Administrator doesn't have a complete control over the web content.
A web page which offers online reading facility of articles is the example of static web site. A visitor can only see the pages developed by the programmer.	Online shopping, railway reservation, result systems are the typical examples of dynamic web sites.
Cheap to develop and host.	Financially demanding to develop.

Source: Brown, B.C. (2010) *How to build your own web site with little or no money: The complete guide for business and personal use*. United States: Atlantic Publishing Company FL. [Edited by author]

3.3 BUILD A WEBSITE FOR A SMALL BUSINESS AND ITS OPTIONS

Small business are able to develop and manage websites with their own effort. There are basically two options how to do that on the market. First option is by using some of the Content Management Systems and the second option represents an easy static page written in HTML and CSS. The essential role of creating own web plays the minimized costs compared to an expensive services of web design agencies. The ways how to make the company's web will be described in the following paragraphs.

3.4 EXPLANATION OF THE CONCEPT OF THE CMS, ECM, WCM

CMS means Content Management System. This term does not have a solid definition and can have several meanings depending on the cases where CMS is going to be used. There are another two terms associated with the CMS that have been defined by Association for information and Image Management (AIIM). It is an acronym ECM and WCM. ECM stands for Enterprise Content Management and WCM means Web Content Management. Both of these terms have their own definitions that are available on the AIIM website (Kohan, 2010).

3.4.1 ECM DEFINITION

“Enterprise Content Management (ECM) is the strategies, methods and tools used to capture, manage, store, preserve, and deliver content and documents related to organizational processes (AIIM, ©1943-2016).”

3.4.2 WCM DEFINITION

“A subsection of Content Management is Web Content Management or WCM. A WCMS is a program that helps in maintaining, controlling, changing and reassembling the content on a web-page (AIIM, ©1943-2016).”

3.4.3 CMS DEFINITION

The terms WCM and CMS are really close in meaning, they can be considered as synonyms. Nowadays, the acronym CMS is much more popular among IT professionals and that is why this abbreviation will be used in the next paragraphs.

A CMS or Content Management system is a system that helps users to manage the content on the web page. The CMS include two elements: the CMA that stands for Content Management Application and the CDA that means Content Delivery Application. The CMA element helps to the user who doesn't know HTML, to manage the modification, creation, or removal of the content directly from a Web without an expertise knowledge of a Webmaster. The CDA element processes and uses that information to a Web site update. CMS have many different features that vary according to the particular system but in most of the cases consist: publishing on the web, indexing, format management, control, search and backups. The publishing on the web offers users to use a templates, as well as wizards, and other tools for modification of the web content. CMS system indexes everything within the website. Thanks to this visitors can search for the web content by using keywords. The format management is a feature that is able to publish electronic documents or scanned papers into HTML language or PDF format. The control feature represents a functionality that allows content to be updated to a newer version or restored to a previous version. It means all the content changes are tracking in the system. Another feature called one-to-one marketing can be also provided. This feature is able to focus the content and advertising to a specific user according to his characteristics using information obtained by the user or by the site. Visitors search for "luxury furniture" and the web advertisement will show such stores that offer luxury furniture instead of business that offer travel tours, for example. All mentioned factors above must be considered before an investing company's funds to some Content Management System that does not have to cover the whole business needs. Managers should take into consideration things like organization size, especially when the business is spread out over several countries. Implementation of CMS in such companies is more difficult. Then, what kind of electronic documents are used among the business. If it is really diverse like using graphics, audio, video or different document types to record information, the CMS should be able to manage all of these electronic data (Rouse and Svarre, 2011).

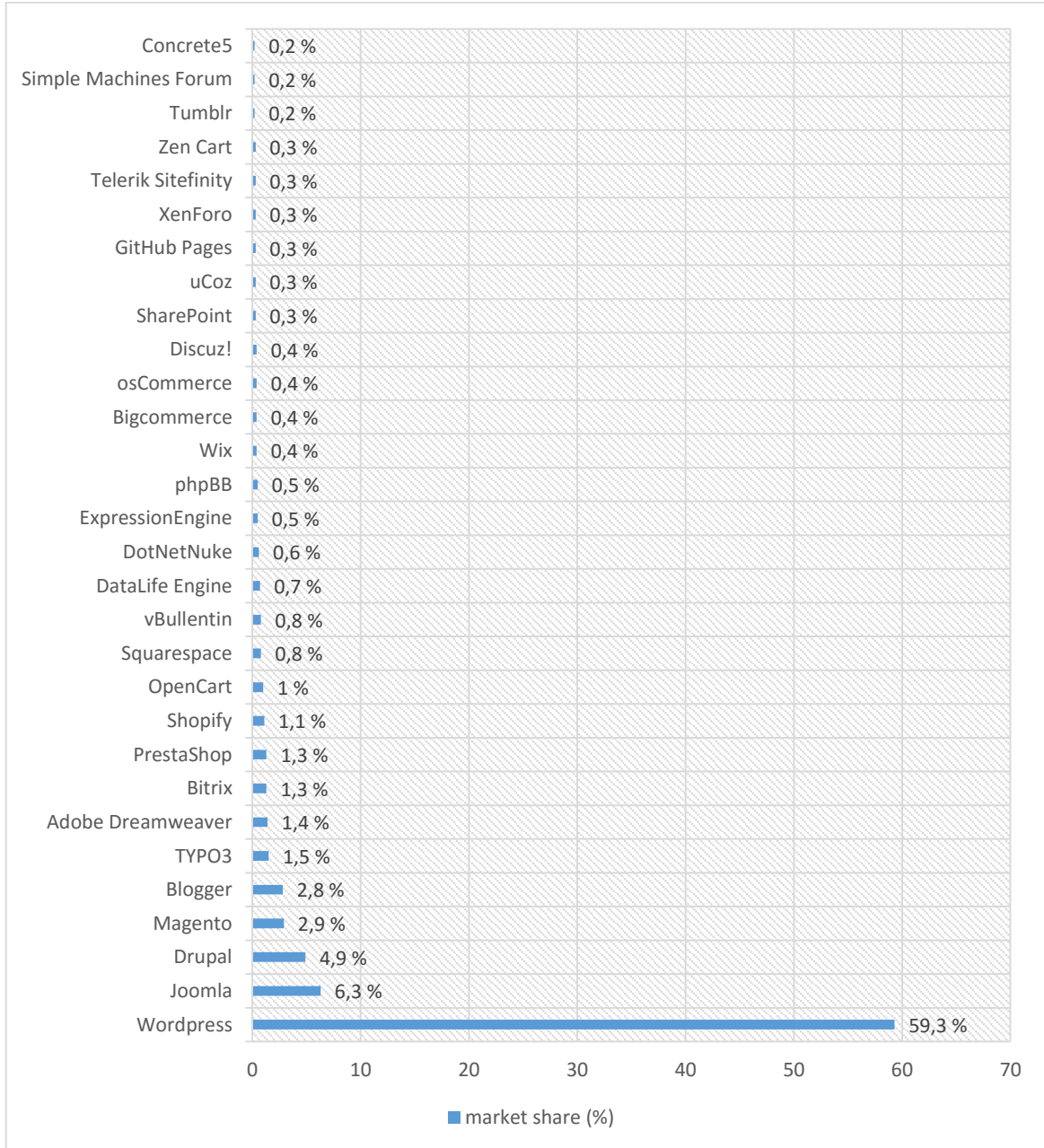
3.5 CMS OVERVIEW: THE MOST WIDELY USED CMS ON THE MARKET AND THEIR PROPERTIES

There is around 300 various CMS used by customers for a website management in the world. Some systems are universal and they cover needs of almost any type of website. However, there are also Content Management Systems that are strictly developed for one purpose only such as managing an online store or a forum, for example. Every system require different level of expertise as well. This article aims to describe characteristics and features of four CMS with the strongest market position.

The most frequently used and most popular systems are on the Table 2 below. This chart shows the percentage of websites using a specific CMS on the market. Every system has its own specifics a differences. Currently, the top four most used CMS according to the market share are Wordpress (59,3%), Joomla (6,3%), Drupal (4,9%) and Magento (2,9%). There is seen a considerable dominance of Wordpress CMS compared to the rest of the website management systems. A deeper description of the mentioned systems is found in the following paragraphs.

Table 2: Percentages of websites using various CMS on the market

Data from 21.02.2016



Source: W3TECHS. *World Wide Web Technology Surveys: Most popular content management systems* [online]. 2016 [cit. 2016-01-09]. Accessible from: <http://w3techs.com/>
[Edited by author]

3.5.1 WORDPRESS

Nowadays, WordPress is the most popular CMS in the world – around 300 million websites are using WordPress as a core CMS (BuiltWith, ©2007-2016). The system allows user to manage websites through an administrative interface with a clear navigation structure without any need of knowledge of HTML or other website programming language. This system is suitable enough for a beginners to learn in a few hours. WordPress belongs to the Open Source Software developed by hundreds of programmers all over the world. WordPress offers its own public domain that user can use for free. The system can be installed on the private hosting as well but in this case, a user have to already pay for the services. WordPress is a web-based application, the code is written in PHP and uses MySQL databases, running on Linux servers. Everything is based on Open Source Software License. It means that Linux which is an operating system for servers is for free too. WordPress is a great platform for a huge variety of uses. It does not cover the needs of small business only but it is suitable for a big professional websites as well. WordPress offers the widest community of users with one of the best community support among the CMS systems. There are thousands of paid and free templates and adjusted plugins to this system. The deployment of the theme or plugin is doing easily in the WordPress interface. In generally, WordPress is powerful and simple CMS system targeting non-technical users. It is the best CMS for beginners (Beneteau, 2010).

3.5.2 JOOMLA

Joomla is the 2nd most popular CMS system on the market. As an Open Source Framework helps users build all kinds of web sites from personal to blogs, discussion forums to online stores for free. Joomla has many freely available templates, extensions and plugins that customize the web page to increase its capabilities. Basically, the system provides all the necessary web content such as articles, menus, and modules, all of which can be modified through administrator interface. Joomla is great for multilingual e-commerce websites but there is required at least a minimum level of technical coding. Joomla has a wide and active community of more than 200 000 users and developers (Mening, 2015).

The system supports the following operating systems: Windows, Linux, Mac OS, Solaris, AIX and FreeBSD. Joomla is written in PHP and it uses MySQL databases same as WordPress. All the content (audio, video, pictures, articles etc.) is stored in a database, which makes managing a web site easier. Moreover, the system provides an intuitive administrator interface that guides the user through a maintenance of a web content stored in the database. With a little training, a web developer or administrator is able to change a web site easily with a help of clear structure and navigation features with just a few clicks. Joomla doesn't offer a public domain for its users and that is why it must be deployed on your own hosting (Harwani, 2015).

Joomla consists some important extensions worth mentioning (Harwani, 2015):

- E-commerce and shopping cart engines: These extensions create and manage shopping carts in an online store and connect the buying process with PayPal services in a minute.
- Dynamic form builders: These plug-ins allows to a web to obtain a feedback from visitors. Visitors can fill out a form which displays after the shopping process, for example.
- Reporting tools: This extensions are able to search and collect data in the database and create reports such as sales reports, sales forecasting reports, market surveys etc.
- Advertising systems: These components manage the display advertising banners on the web site.
- Chat and forums applications: Joomla offer components that easily change your site to a forum or create a customer's chat on your web.
- Other features: Calendars, Newsletters, Multimedia galleries etc.

3.5.3 DRUPAL

Drupal is an open source software distributed under the General Public License. The system is written in PHP and it can be connected to MySQL, SQLite or PostgreSQL databases. Drupal was developed as a university project by a Dutch student, Dries Buytaert. The project aimed to provide a mechanism for sharing news and events for his friends. In 2001, Buytaert turned Drupal into an open source project. The community took over the concept and started to expand the project until to the present version which is now one of the most feature rich and powerful CMS platforms in the world. The basic version of Drupal offers features to publish, organize and manage content on different kinds of websites, ranging from small personal pages to government and large corporate sites. The standard release of Drupal is called Drupal core which consists only basic features that can be used to a design of single or multi user blog, a classic brochure website, a community website or an internet forum with a dynamic content. Moreover, Drupal core consists other features that gives to an author the ability to publish content, manage menus, users, forums and to manage pages through a web-based interface. The basic idea of Drupal is the user enhances its features and custom behavior by downloading and enabling add-on modules. There are a huge number of additional modules that extend the core's functionality, covering a wide spectrum of capabilities like social networking, e-commerce, third-party applications integration and multimedia. Drupal can store the content and settings if the computing platforms supports databases mentioned above and a web server capable of running PHP ver. 5.4.5+. Drupal is not suitable for beginners because it requires an advanced knowledge in databases and programming (Tomlinson, 2014).

3.5.4 MAGENTO

Magento is a complex eCommerce open source platform. This software aims at developers, designers and business owners who are searching for a full-fledged eCommerce web site solution. It enables the users to have complete control over the structure and functionality of a web site. One of the advantages of Magneto is its new standard for open source applications. Magneto uses so-called the Zend Framework that allows the separation of the core operations from functionality and appearance. The system offers to business a stable eCommerce environment and gives them the flexibility for a complete web

customization that suits the business needs. Magento has two license types: one is called Magento Community Edition and the second one Magento Enterprise Edition. The Community Edition is available under the OLS (Open Software License). The Enterprise Edition includes some additional extra features (customer store credits, data encryption, gift certificates etc.) compared to the Community Edition but for an annual fee. Magento is designed in the way of an easy use. The basic operations like updating website by adding new products and managing orders doesn't require some professional knowledge. Users can handle basic operations with little training. On the other side Magento has the flexibility, it can be applied to advanced eCommerce situation where a professional knowledge is required. Standard operations on the web can be customized with a basic understanding of HTML, CSS and XML. While some fundamental changes can be done with an expertise knowledge of PHP and MySQL only (McCombs and Banh, 2009).

Magento features:

- Centralized administration interface: Magento is able to manage multiple stores from one shared administrative interface. This is one of the biggest advantages of this system, especially for those who own different kind of business.
- The system supports more than 60 languages, multiple tax rates and currencies. Then, the global market is not an obstacle.
- Part of the Magento has the built-in Search Engine Optimization (SEO) application which improves the store positions in the Search Engine Result Pages.
- Multiple address are allowed. Magento can ship the order not only to the final customer but to his friends and family as well.
- Reporting tools which easily generate sales reports, customers reports, top selling products etc.
- Magento is designed from three major parts: core, functionality and design. The parts are independent. Users can not change the functionality of the web if they process the images update on the web, for example. The same applies for updating of the core version if users update the core they cannot influence the functionality and design of the web.
- Extensions for the system are available in the own public repository. There are free and paid plug-ins.
- Huge community of users

3.5.4.1 WHAT SYSTEM IS THE BEST: WORDPRESS, JOOMLA OR DRUPAL FOR BEGINNERS?

Marcus Neto from Blue Fish Design Studio consider Wordpress as the right choice for beginners. It has a vibrant community and even people outside of the technical branch are able to make huge changes on a web. There is a wide range of easily deployed plugins. Unfortunately, building users own Wordpress theme from scratch require a deeper knowledge of PHP. On the second place would be Joomla and the third one is Drupal. Drupal is the best of those three but it's too much complex for a beginner.

3.6 STATIC SITE GENERATOR

The previous chapter may simulate an idea that Content Management Systems are just the best solution for creating sites. Unfortunately, those systems have downsides too and it doesn't have to be a truth in many cases. Nowadays, it is very important to have web pages which are fast and secured. CMS are a common target of different kind of electronic attacks. Almost every CMS user could experience notifications by hosting provider about a virus infection of his/her web page. Plus, performance decreases under the weight of a large number of plug-ins. Moreover, it is practically impossible to avoid using plug-ins in those systems. Every additional plug-in brings more scripts and makes a page heavy and slower.

Static site can be design easily with a static site generator. The generator transform input which is typically a simple text to static HTML. Static site generator is a perfect candidate for a creation of sites that are infrequently updated such as companies' sites, documentation sites, event sites, restaurant sites etc. The content is updated occasionally, but most of information remains the same over long period of time. These kind of sites can be possible to build quickly by using templates, they are fast, secure and benefits from the simplicity and low costs of hosting. Another advantage is a complete overview of functioning a site. A static site generator is not suitable for non-technical contributors. It is designed by developers and intended for developers. It means an expert knowledge is required to get the content published. Before choosing a CMS or static site generator is necessary to consider a few aspects: frequency of updates, need of irreplaceable dynamic features (many dynamic features can be replaced by 3rd party services) and the last is contributor's knowledge of web technologies.

3.7 EXPLANATION OF TERMS ON & OFF PAGE FACTORS

There was already described how different ways of website design can influence a site administration, its simplicity, speed, security and other aspects. The following paragraph deals with factors on the page and off the page that affect website rankings by search engines, user experience and simply the overall site performance.

3.7.1 ON-PAGE FACTORS

On-page factors is the combination of various factors that a web designer has direct influence over. These components are situated on the web page and they are analyzed by search engines to determine search result rankings. On-page factors include e.g. HTML structure, URL structure, content, website architecture and many others. This provides an opportunity for businesses to increase the chance of having their website at the top of a search results page (Trackmaven, ©2012-2016).

3.7.2 OFF-PAGE FACTORS

Off-page factors are not directly controlled by a website designer, because they are situated off the page. These factors have a large impact on website rankings and are influenced by third party websites. Search engines find and analyze off page factors in addition to on page factors to determine search result rankings because a designers can influence their on page factors to improve their ranking (Trackmaven, ©2012-2016).

3.8 DETERMINATION OF THE MOST IMPORTANT ON-PAGE AND OFF-PAGE FACTORS.

The website must contain all the necessary factors to be competitive on the online market. The importance of the on & off page factors is changing every year and it is essential to follow the current trends. Searchmetrics company uses Spearman Correlation to study the relationship between Google rankings and the factors. The company searches 10 000 queries and by each query makes an analysis of websites which are positioned between 30 positions in the search engine result page. It is overall approximately 300 000 URLs each year. Because of this, they are able to determine a correlation between factors and website

positioning. The most important factors are published annually in a research study. For the year 2015, the website key factors are shown in the Table 3 below. The factors are divided into following categories: content, user experience, technical, backlinks and social signals. Every factor consists correlation value, trends and importance. Trends express if the correlation decreases, increases or is the same. The star symbol denotes a new feature with a new calculation. Importance indicates if the factor has negative, positive, very positive or no impact on a website rankings.

Table 3: Top 30 ranking factors 2015

Category	Factors	Correlation	Trends	Importance
Content	Proof terms	0.03	*	2
	Relevant terms	0.15	*	2
	Word count	0.07	↓	2
	Keyword in internal links	0.08	↓	1
	Flesch readability	0.02	↑	1
	Keyword in the body	0.07	↓	0
	Keyword in description	-0.01	↓	0
	Keyword in external links	0.03	↓	-1
User Experience	Click-through rate	0.67	*	2
	Time on site	0.09	*	2
	Bounce rate	0.04	*	2
	Responsive design	0.06	*	2
	Internal links	0.09	↓	1
	Presence of unordered lists	0.07	*	1
	Number of images	0.04	↓	1
	Font size	0.12	*	1
	Video integration	0.07	↑	0
	Advertisement	-0.03	↓	-1
Technical	Domain SEO visibility	0.26	*	2

	Site speed	0.04	*	2
	Search volume domain name	0.16	↓	1
	HTTPS	0.05	*	1
	Existence of descriptions	0.04	↓	1
	Keyword in domain	-0.02	→	0
	Domain is .com	-0.04	↑	0
	Flash	-0.01	↑	-1
Backlinks	Referring domains	0.22	↓	2
	Number of backlinks	0.28	↓	1
	Backlinks from new sites	0.22	↑	1
	Backlinks to homepage	-0.06	↑	1
	Domain name in anchor text	0.16	→	1
	Nofollow backlink ratio	0.20	↓	0
	Backlink age	0.19	↑	0
Social	Keyword in anchor text	0.17	↑	-1
	Google +	0.31	↓	0
	Facebook total	0.28	→	
	Twitter	0.23	↓	
Pinterest	0.23	↓		

Trend: ↑ up; → same; ↓ down; * new feature (new calculation);

Importance: -1 negative impact; 0 no impact; 1 positive impact; 2 very positive impact;

Source: SEARCHMETRICS. *Ranking Factors Infographics: Card deck and correlations* [online]. San Mateo, 2015 [cit. 2016-01-16]. Accessible from: <http://www.searchmetrics.com/knowledge-base/ranking-factors-infographic-2015/> [Edited by author]

3.9 EXPLANATION OF INDIVIDUAL FACTORS

The aim of this paragraph is to explain the meaning of individual factors that are included in the table above.

3.9.1 CONTENT FACTORS

3.9.1.1 WORD COUNT

The name of the factor already defines its meaning. It is just a number of the words on each web page. There is no optimum for a minimum or maximum word count on a page. Nevertheless, the landing pages in the top 30 rankings had an average 902 words in 2014 and the figure has risen on average word count of 1140 words in 2015. The average word count for the top 10 is 1285 words. Longer content has thus become standard (Searchmetrics, ©2005-2016).

3.9.1.2 PROOF AND RELEVANT TERMS

Proof terms are the main and typical terms included in all articles on the given topic and therefore Google expects them to be included. Relevant terms are not always present but they consist sub-terms of the topic e.g. the topic is about the “Panda Update” and relevant terms might be “rankings”, “webmaster” or multiple terms as “search engine optimization” (Rayson, 2014).

3.9.1.3 KEYWORDS IN BODY

A website should consist keywords related to the topic of the website. Keywords in body are important but high semantic density, related terms and relevance of the text are much more important than keywords (Searchmetrics, ©2005-2016).

3.9.1.4 FLESCH READABILITY

It is a readability test designed to determine how difficult a written text in English is to understand. A readability formula works by analyzing the variables with the biggest impact on readers being able to understand clearly on a first reading such as: sentence length, number of passive sentences or number of syllables per words (The Writer, ©2000-2016).

3.9.1.5 KEYWORD IN DESCRIPTION

It is the same as Meta descriptions that represent HTML attributes explaining a content of a web page. Meta descriptions are commonly showed in the search engine result pages (SERPs) to indicate a web page content. Optimal length should be around 155 characters. The factor importance decreasing last years (Seomoz, ©2004-2016).

Code example:

```
<head>  
<meta name="description" content="This is an example of a meta description. This will  
often show up in search results.">  
</head>
```

3.9.1.6 KEYWORD IN INTERNAL LINKS

Keyword in internal links represents hyperlinks that point at the same domain as the domain that the link exists on. It is, for example, the link that points to another page on the same website e.g. from home page to gallery (Seomoz, ©2004-2016).

Code example:

```
<a href="https://www.SameDomain.com/" title="Keyword">Keyword</a>
```

3.9.1.7 KEYWORD IN THE EXTERNAL LINK

There are two possible ways of external links, another website links to you or if your site link out to another website. Many website designers uses keywords directly in the internal and external links. However, it is recommended to avoid this. The links should contain a description related to an exact content of referring page (Searchmetrics, ©2005-2016).

3.9.2 USER EXPERIENCE FACTORS

3.9.2.1 CLICK-THROUGH RATE

Click-through rate (CTR) measures how many percent of users click on a certain result in each position of search engine result page. The higher search results are positioned the higher CRT they have. It's an important ranking factor for search engines because the direct analysis of user reaction to the search results show whether the user was satisfied with the result or not (Seomoz, ©2004-2016).

3.9.2.2 TIME ON SITE

The key indication of how the site is successful in attracting relevant visitors is represented by time on site that evaluates how long a visitor stays on a website. There is an assumption, the longer someone stays on a web page the more the page has to offer (Panalysis, ©2001-2015).

3.9.2.3 BOUNCE RATE

Bounce rate gives the percentage of people who visit a web page and leave immediately without visiting a second page. It shows if the right audience coming to a website and if their expectations were met or not (Kelly, 2012).

3.9.2.4 PRESENCE OF UNORDERED LISTS

Unordered lists contain, for example, bullet points or lists that are not numerically ordered. Most of the top ranked URLs include unordered lists, not only in the content, but also in sidebar, navigation or footer. This is typical for online shops where products are often listed using bullet points. This is related to the structure of the content. It means, the structured content has a better rank (Searchmetrics, ©2005-2016).

3.9.2.5 MEAN FONT SIZE

The analyzed pages use font size uniformly, the average font size of header and navigation bar is around 14 pts and the central area (content area) around 12 pts. The basic principle of font size is to ensure readability for any mobile device. The smaller the display, the larger the font size should be (Searchmetrics, ©2005-2016).

3.9.2.6 NUMBER OF IMAGES

The number of images in the analyzed top pages has increased in 2015 compared to the previous year. Images represents a smart way how to increase time on side and improve the user experience. Sometimes users search for image galleries only and they expect them in the top search results e.g. for the keyword: “fashion trends 2016”. Google image search is another instrument how to attract users if the web page includes relevant and high quality pictures (Searchmetrics, ©2005-2016).

3.9.2.7 VIDEO INTEGRATION

People like watching videos and sharing them via social sites. For this reason, videos are able to significantly improve the user experience and increase time on site as well. It is recommended to upload videos on a server of external provider (e. g. YouTube) and embed the video code to a web page. It has several benefits such as saving web storage and obtaining visitors from third parties (Searchmetrics, ©2005-2016).

3.9.2.8 RESPONSIVE DESIGN

The percentage of website traffic gaining from smartphones and tablets is rapidly increasing. For the year 2015, more than 33% of all website traffic comes from mobile devices and this number is getting higher every year (Statista, ©2007-2016). The growth of using mobile devices on a regular basis cannot be ignored. Responsive design is an approach to how a web site is designed to provide users of a web site with a good experience regardless the device, browser or screen size used. Responsive design adapts a web site layout by using fluid content, fluid grids and CSS3 media queries. Responsive design avoids using fixed units such as pixels and applies relative units like percentages that provide website flexibility (Fielding, 2014). Google announced that mobile friendly websites boost the rankings in mobile search results worldwide (Gilbertson, 2015).

3.9.2.9 INTERNAL LINKS

The website structure has also an impact on a domain performance. An optimal website structure has to guide users through its content continuously just to ensure that the user stays on the page and is satisfied. An optimized link structure is one of the ways how to achieve this goal (Seomoz, ©2004-2016).

3.9.2.10 ADVERTISEMENT

Too much advertising in the visible area (above the fold) bothers website users and it is also negatively ranked by Google, especially in cases, where an advertisement overlays the entire content when the page is retrieved (Chris, 2010).

3.9.3 TECHNICAL FACTORS

3.9.3.1 DOMAIN VISIBILITY

Domain visibility shows the actual trend and historical development of a domain's visibility in SERPs for a certain keyword. This indicator reflects how often a website shows up in the search results. Domain visibility can partly reflect a website's real traffic but from the organic search only. The traffic that comes from many different online places is not able

to measure. Comparing the domain visibility of similar websites provide a valuable comparison of competitive websites (Searchmetrics, ©2005-2016).

3.9.3.2 SEARCH VOLUME DOMAIN NAME

Search volume domain name is connected to the brand. Users usually search for an exact company name (=brand) or go directly to the company's website. Recognized brands rank on the first page or even occupy first position. It means, they are preferred and influence the search results for non-brand searches (Searchmetrics, ©2005-2016).

3.9.3.3 EXISTENCE OF DESCRIPTION

Almost all analyzed websites contained meta-description and the ratio slightly increased compared with the year 2014 (Searchmetrics, ©2005-2016). Meta-description are data in the head of a web-page providing an information about what the page's content addresses. Good Meta description describes a web page as accurately as possible. Meta-description appears in the search results (Mitchell, 2013).

Code example:

```
<head>  
<meta name="description" content="Sample description of a page content.">  
</head>
```

3.9.3.4 HTTPS

HyperText Transfer Protocol (HTTPS) has become a new ranking factor. Search engines prefers sites that are trusted and certified. However, HTTPS is not required for an every site but those who contain sensitive client information or some purchasing processes must be secured. If not, they will get a lower rank (Searchmetrics, ©2005-2016).

3.9.3.5 SITE SPEED

The Site Speed reports indicates how quickly users are able to see and interact with content (Google, ©1998-2016) The average loading time for the top 30 websites is 1.2 seconds and the top 10 websites load more quickly 1.16 seconds (Searchmetrics, ©2005-2016).

3.9.3.6 FLASH

Flash is one of the factors that negatively influences a website for a several reasons. The first reason is that flash cannot be used for mobile phones and tablets because it is designed strictly for use with a mouse and keyboard. The second reason is the inaccessibility of flash. Flash elements cannot be scaled using the minus and plus buttons on most keyboards. There is no way to copy and paste content, recognize clickable links, use a back button. The third problem with flash is that it is very insecure with many vulnerabilities that are targeted by hackers. Finally, since flash content is not connected to any URLs it is not possible to index such a content and there is no way of monitoring outbound links. All of these facts reduce the level of website search visibility and it's better to avoid the use of flash (Allcock, 2015).

3.9.3.7 KEYWORD IN DOMAIN

A specific keyword included in a domain name had positive effects on the website rankings in the past. As an example, it helped to rank for the keywords: “the best bar in Prague” to have a domain such as www.bestbarinprague.cz. Nowadays, the situation has changed, the keyword in domain has lost its positive ranking effect. The top ranked domains do not consist a keyword in their domain names and the proportion of such domains having a keyword included is still decreasing last years. When choosing a domain name, a customer should not be focused on keywords (Searchmetrics, ©2005-2016).

3.9.3.8 DOMAIN IS .COM

There is a high proportion 81% of .com domains which result in the top 30 rankings, in the top 10 the figure is 84%. Nevertheless, TLDs are generally not a ranking factor (Searchmetrics, ©2005-2016).

3.9.4 BACKLINKS FACTORS

3.9.4.1 REFERRING DOMAINS AND NUMBER OF BACKLINKS

Referring domains are the domains that backlinks are coming from. Backlinks are links (URLs) on other website that point to your site (Johnson, 2014). Number of referring domains significantly affects a website positioning. It is essential to avoid paid backlinks and other deceptive techniques, otherwise the website can be penalized. If the backlinks are organic and they are coming from a valuable sites, it rapidly boosts the referred website.

3.9.4.2 BACKLINKS FROM NEW SITES

The number of backlinks from new sites to the homepage of the ranking URLs increases significantly every year. In 2014, the top ranked websites had on average 333 backlinks from new sites. In 2015, there were already 522 backlinks from new sites on average. It is an indication that the content of these pages ranks still highly (Searchmetrics, ©2005-2016).

3.9.4.3 LINKS TO HOMEPAGE

There is a common characteristic for top ranked websites and it is that the proportion of direct links to the homepage is much lower than the proportion links to the subpages. It means highly ranked websites contain the most important content/topics on the subpages of the web and the homepage serves more as an introduction to the web (Searchmetrics, ©2005-2016).

3.9.4.4 NOFOLLOW BACKLINK RATIO

A nofollow link is a link that does not boost a page rank and does not improve the website position in the SERPs. Nofollow links are commonly used for links in the comments, forums, paid links and any other “untrusted content” (Marrs, 2013). The percentage of nofollow links has increased significantly in the top 10 rankings. There were 6% of nofollow backlinks in 2014 and it has risen to 9% in 2015 (Searchmetrics, ©2005-2016).

3.9.4.5 BACKLINK AGE

The websites with solid backlinks that are functional for a long time and stay on the same place are more trusted. Links that pop up and then disappear fast can indicate paid links which are penalized (Smarty, 2009).

3.9.4.6 KEYWORD IN ANCHOR TEXT

In 2014, Google imposed penalties against link networks and their customers which were creating “unnatural” links. These links usually contained a keyword in the anchor text. For this reason, Google has changed an evaluation of such backlinks. Currently, it is not recommended to use keywords in the anchor text because they can be considered as “unnatural” (Searchmetrics, ©2005-2016).

3.9.4.7 DOMAIN NAME IN ANCHOR TEXT

The number of backlinks with the domain name in anchor text is increasing. The reason is that domain name is usually same as a brand name. For example, Kofola website is available under the domain: kofola.cz. Brand name links are natural but keyword links are not in most of the cases. The brand name is usually same as the domain name and the referring links with a brand name in the anchor text can improve the site ranking. Google can also penalize backlinks with the keywords in anchor text if they were artificially created (Searchmetrics, ©2005-2016).

3.9.5 SOCIAL FACTORS

3.9.5.1 SOCIAL MEDIA

Social signals are not considered as a direct ranking factor. However, it is one of the most important factor which affects the overall online performance of a domain. Using social media is a daily routine for most users. They search for communities, friends, and information on various networking platform, such as Google+, Pinterest, Facebook or Twitter. Social network is a powerful tool how to increase direct website traffic, enhance its visibility and improve brand awareness. Moreover, social network followers can build natural links to the website and they can easily share links among their friends or linking directly to a website. Understanding the social media can help to expose a website to a larger audience. Social signals are factors that correlate strongly to better rankings and therefore top ranking domains have significantly more social signals than other URLs (Elmansy and Majure, 2013).

4 PRACTICAL PART

The practical part deals with a real website of a small joinery company Atypruhlářství. The website is available under the domain name: atyptruhlarstvi.cz. The company is situated in a rural area far from larger cities and the location represents a big obstacle for the successful business operation. There are no potential customers in its near surrounding area that leads to a lack of orders. One of the ways how to approach customers, mainly from larger cities is a good company website. Actual company's web doesn't have satisfactory results as regards the number of newly get clients. For this reason, the weaknesses of the current website will be uncovered and the proposal of a possible solution will be included as well.

4.1 ASSESSMENT OF THE ORIGINAL WEBSITE: ATYPTRUHLARSTVI.CZ

The original website is based on Content Management System: Wordpress 3.5.1 and it is available from: <http://atyptruhlarstvi.cz>.

4.1.1 POSITIONING IN SERPS

The most important element of the website is its positioning. This element determines if the website will be visible for customers or not. The website SERPS.com is offering a free Keyword Rank Checker Tool. This tool determines a position of a specific keyword to a certain domain. In our case for Atypruhlarstvi.cz. The tool is able to evaluate a result among top 120 search results. The results that do not fit to this range are evaluated by number: 0. The table 4 consists combinations of keywords that were chosen based on a company brand name, business location and popular keywords proposed by a service Sklik.cz. The resulted positions are valid for desktop devices located in the Czech Republic and using Google Search.

Table 4: Atyp truhlářství keyword rankings

Data from 24.11.2015

Engine: Google Country: cs-cz Device type: desktop Domain: atyptruhlarstvi.cz		
No.	Keyword	Position
1.	atyp truhlářství (name of the company)	1
2.	truhlářství Střítež (joinery Střítež)	4
3.	truhlářství Pelhřimov (joinery Pelhřimov)	0
4.	stolařství Střítež (joinery Střítež)	22
5.	stolařství Pelhřimov (joinery Pelhřimov)	0
6.	zakázková výroba nábytku (custom furniture)	0
7.	zakázková výroba schodů (custom stairs)	0
8.	zakázková výroba dveří (custom doors)	0
9.	výroba kuchyní na zakázku (custom kitchen)	0
10.	truhlářské práce (joinery work)	0

Source: SERPS. *Free Keyword Rank Checker & SERP Checker* [online]. [Author edited]. Accessible from: https://serps.com/tools/rank_checker

The positioning of the web got very bad results. It is almost impossible to find a website without an exact knowledge of the company name or its location.

4.1.2 CONTENT

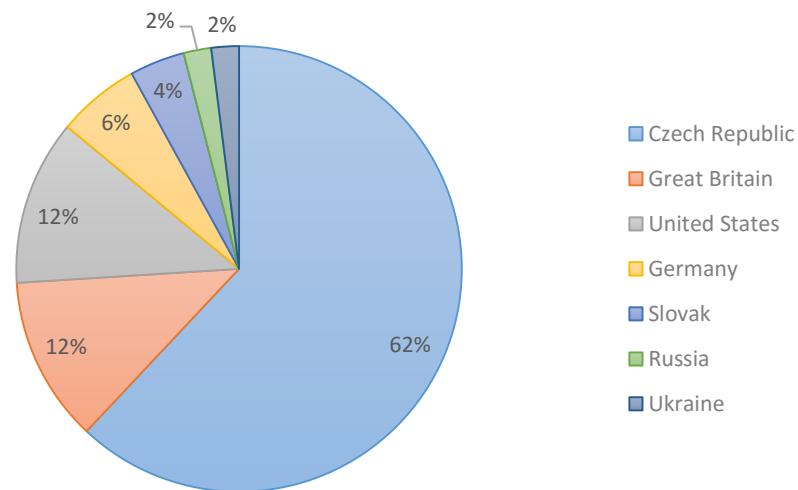
Content is one of the weakest aspects of the original site. There are overall 279 words only. A poor and unvalued content gets worse ranking by search engines which can result in bad positioning of a web.

4.1.3 WEBSITE TRAFFIC

The website is using a Wordpress plug-in called: Statpress for the measuring of the web traffic. Statpress saves all traffic data into the MySQL database. Unfortunately, the database size is 50 MB only. The small size of the database led to the exceeding of MySQL memory limit and a loss of traffic data for the last 5 years.

Nevertheless, it was possible to find traffic data related to the year 2011. The average website traffic was around 25 people/day. The Figure 1 shows the distribution of visitors by nationality. Most of the visitors came from Czech Republic (62%), the second one were visitors from English speaking countries (24%), third visitors from Germany (6%) and rest represented other nationalities (8%).

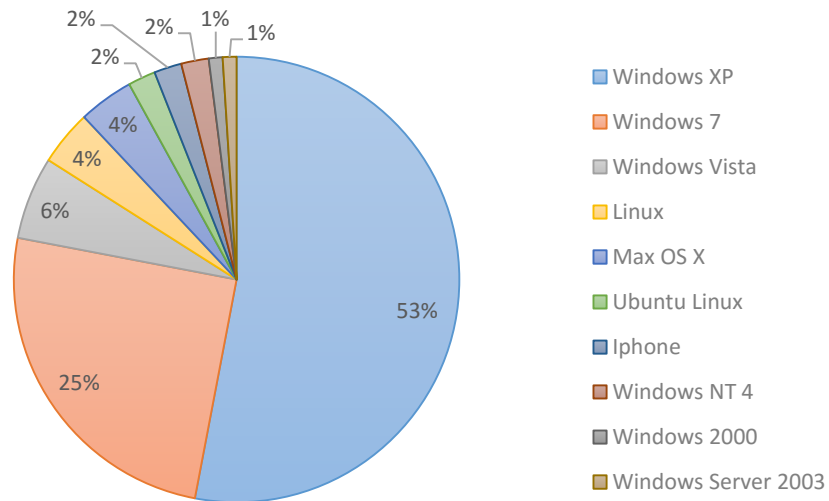
Figure 1: Visitors and their nationality



Source: Author

The Figure 2 illustrates what operating system was used by visitors. Among the most popular OS belonged Windows XP (53%), Windows 7 (25%) and Windows Vista (6%).

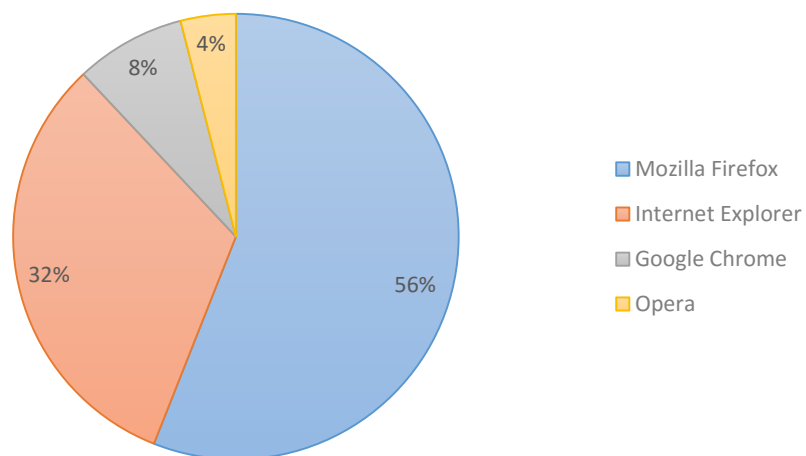
Figure 2: Used operating system



Source: Author

According to Figure 3 browsers were represented as follows: Mozilla Firefox (56%), Internet Explorer (32%), Google Chrome (8%) and the last Opera (4%).

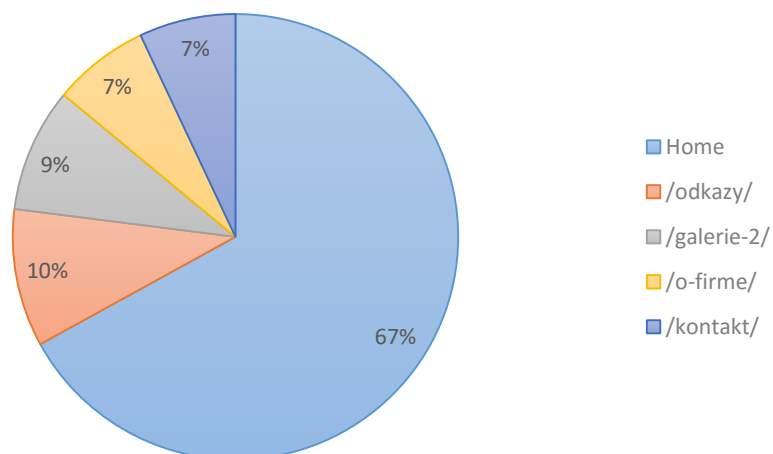
Figure 3: Used browsers



Source: Author

Top visited pages on the website shows Figure 4. Namely, it is the home page (67%), then /odkazy/ (10%) and /galerie-2/ (9%).

Figure 4: Top visited pages



Source: Author

According to the Table 5, the best referrals were: 1) search.seznam.cz, 2) alfa.elchron.cz and 3) stroke.cz.

Table 5: Domain referrals

No.	URL	Traffic distribution
1	http://search.seznam.cz/?aq=-1&oq=truhl%C3%A1	18%
2	http://alfa.elchron.cz/	14%
3	http://stroke.cz/	14%
4	http://yandex.ru/yandsearch?text=atyptruhlarstvi.c	10%
5	http://whois.domaintools.com/atyptruhlarstvi.cz	8%

6	http://www.ubound.info/Top/World/%c4%8cesky/Obchod	8%
7	http://www.ubound.info/Top/World/%c4%8cesky/St%c3%	8%
8	http://search.seznam.cz/?sourceid=szn-HP&thru=	8%
9	http://search.seznam.cz/?aq=&oq=&sourceid=	7%
10	http://www.wsanalyzer.com/ws/atyptruhlarstvi.cz	7%

Source: Author

4.1.4 WEBSITE SPEED TEST

The website speed test was focused on the loading time of a webpage. It means that was necessary not only to determine the time but also the elements that rapidly slows down the page. Details of the speed test are shown in the Table 6. The most important factor is page load time. The website has been loaded exactly in 4.38 seconds.

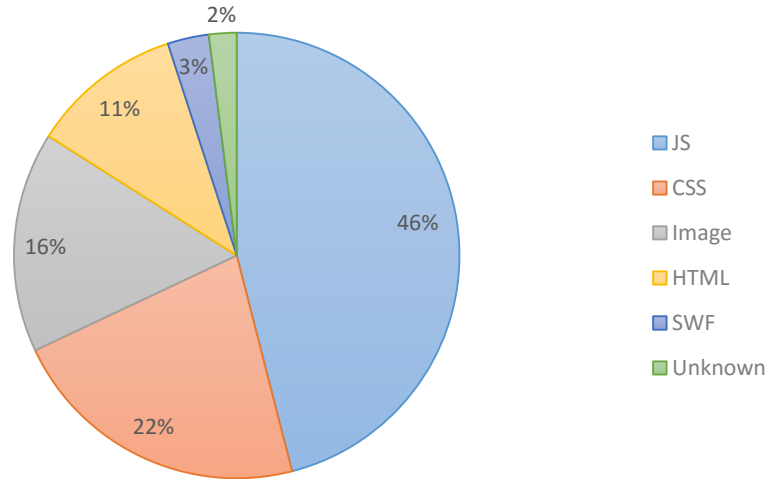
Table 6: Speed test overview

Details	Value
Total Size in KB Total	762.52
Total Number of Objects	37
Page Load Time	00:04.38
Number of Hosts Connected	7
Errors	1
Js	17
Css	8
Image	6
Html	4
Swf	1
Unknown	1

Source: Dotcom-Monitor: *Website Speed Test* [online]. [Edited by author]. Accessible from: <https://www.dotcom-tools.com/>

Figure 5 shows the percentage distribution of file types on the web. JavaScript stays on the first place with a share of 46%.

Figure 5: Percentage distribution of file types



Source: Author

The website speed is influenced by the slowest, fastest and largest elements of the web. Table 7 determines these particular elements with their load time or size.

Table 7: The slowest, fastest and largest elements on the website

	URL	Time (ms)
10% of fastest elements	fhttp://www.google-analytics.com/ga.js	5
	https://apis.google.com/_scs/apps-static/_js/k=o...V57qJOtAbsMlrE0-PBubzfbAUA/t=zcms/cb=gapi.loaded_0	17
	https://apis.google.com/_scs/apps-static/_js/k=o...V57qJOtAbsMlrE0-PBubzfbAUA/t=zcms/cb=gapi.loaded_0	22
	URL	Time (ms)

10% of slowest elements	http://www.atyptruhlarstvi.cz/wp-content/plugins/n...gen-gallery/shutter/shutter-reloaded.css?ver=1.3.0	2656
	http://www.atyptruhlarstvi.cz/ 1335	1335
	http://www.atyptruhlarstvi.cz/wp-content/themes/art-magazine/images/bg.png	1332
	URL	Size (Kb)
10% of largest elements	https://fonts.gstatic.com/s/roboto/v15/grlryt2bdKIyfMSOhzd1eA.woff	80.62
	https://apis.google.com/_/scs/apps-static/_/js/k=0...6xprUnSKIQXYalM4S1229i566Q/t=zcms/cb=gapi.loaded_1	77.48
	http://www.atyptruhlarstvi.cz/wp-content/plugins/n...gen-gallery/shutter/shutter-reloaded.css?ver=1.3.0	64.84

Source: Dotcom-Monitor: *Website Speed Test* [online]. [Edited by author]. Accessible from: <https://www.dotcom-tools.com/>

4.1.5 CODE VALIDATION

The Code Validation was made through the W3 Validator and only one code validation error was found. This error refers to some mistake in G+1 embedded code.

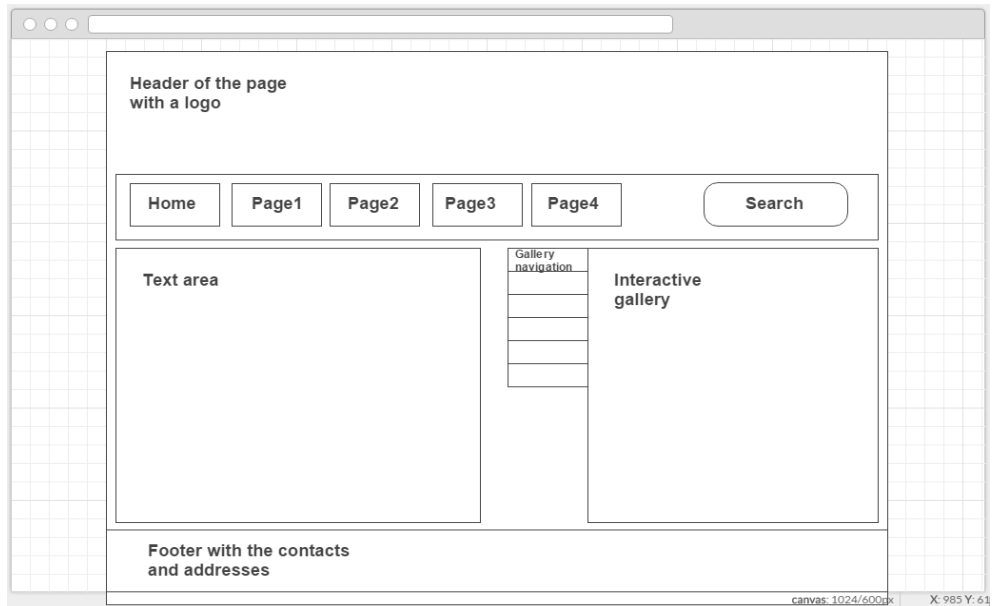
Line 82, Column 40: element "g:plusone" undefined

```
<div class="odsazeniplus"> <g:plusone></g:plusone> </div>
```

4.1.6 OLD WIREFRAME

The Figure 6 is an illustration of the original website wireframe. There are five pages and search box in the navigation panel. The homepage content area is divided into two parts, the text part on the left side and flash interactive gallery on the right side. The header typically includes a company name, slogan and logo. The footer contains the company address and contacts. Unfortunately, the “old” wireframe is not responsive for mobile devices. Nowadays, the website responsivity is a condition for every successful online presentation. The graphic form of the wireframe is shown in the Figure 7.

Figure 6: Original homepage wireframe



Source: Author

Figure 7: Original graphic form



Source: Author

4.1.7 WEBHOSTING OVERVIEW

Price:	30, - CZK / month (36, - CZK including VAT) 360Kč / year (432, - CZK including VAT)
Disk Space:	350 megabytes of shared web, database and e-mail
Traffic:	10 Gb / month
Server Platform:	Linux
Supported Scripting:	PHP
PHP memory limit:	40MB
Supported Databases:	MySQL 50 megabytes
Supported Technologies:	Server logs, .htaccess, mod_rewrite, cron, ErrorDocument
Access Server:	FTP, Secure FTP, via a browser (WebFTP) Safe Mode can be turned on / off. Up to 2 FTP accounts
E-mail:	2 boxes, the size of 100 megabytes

The low PHP memory limit 40 MB led to an unstable usage of the Wordpress system. The MySQL database was insufficient as well. One of the possible solutions is an increase of hosting parameters which leads to a higher hosting costs as well. The second solution can be a use of static site generator and 3rd party services instead of CMS.

4.1.8 SUMMARY OF THE ORIGINAL PAGE

The main issue of the website is its positioning in the search engine result page. Customers cannot find the online presentation if they don't search exactly the company name. This problem leads to a small number of visitors on average 25 people a day in 2011. Moreover, only 63% of visitors come from the Czech Republic. It means that the number of potential customers is even smaller. Another problem is a poor site content which consists overall 279 words only. Unfortunately, the website template is not responsive and therefore it is difficult to browse the pages on a mobile device. The website template has a low attracting power, it won't impress customers who are willing to pay for luxury products. There are two important technical issues as well. The first of them is a low MySQL database

size which led to a loss of traffic data for 5 years. The second one is an insufficient PHP memory limit 40 MB. The embed plugins are using up the whole PHP memory. For this reason, it is hard to work with the Wordpress system because it is unstable. There is also several issues with a site speed. The web page consists large JavaScript, CSS and image files that slows down a page. It is the reason why the page load time is 4,38 seconds which is not sufficient. According Google an acceptable site speed shouldn't exceed 2 seconds. The next problem is an unsecured protocol of web pages. On the other hand, the code check was successful with one error code only. In addition, the error code was found in the embedded external code.

4.2 NEW WEBSITE DESIGN

The current website is absolutely uncompetitive with regard to its low positioning, poor content, slow speed, instability, non-responsivity, security, old appearance and technical issues. The author of the thesis proposes to create a new website in this case. It is necessary to take in consideration the mistakes that have been made in the original web and try to avoid them in the future. The goal is to include suitable factors that affect website ranking and traffic found in the literature review.

4.2.1 SELECTION OF A SUITABLE CONTENT MANAGEMENT SYSTEM OR STATIC SITE GENERATOR

First, it is necessary to determine type of pages that will be design. In this case, the pages are extremely static without a dynamic content. There is static text only, any online shop, forum or comments are not a part of a web. The site is managed by technical contributors. They do not require a graphical user interface which is common for CMS. Previous paragraphs show the technical issues that led to the instability of Wordpress system and loss of traffic data for 5 years. There were security issues related to the use of plug-ins too. For those reasons, instead of CMS will be used a static template edited in the classic HTML and CSS editor Atom, version 1.1.0. The website traffic will be measured by external service called Google Analytics. The contact form on the page will be connected to the email server function. It means no plug-ins are required. These steps will avoid the system

unstability, loss of data about visitors and improve a security because CMS and plugins are a frequent target for hackers.

4.2.2 BASIC TEMPLATE REQUIREMENTS

The new website template should fulfill several basic requirements listed below:

- HTML5 and CCS3: Written in the latest markup language and cascading style sheets;
- Responsive web design: Mobile device friendly;
- Web speed: Template with a reduced load time;
- Simplicity: Keep the design clean and simple to avoid leaving customers confused;
- Easy to navigate: Keep navigation choices to under six of the most import pages and use subpages to order an additional content;
- Good readability: Use a suitable contrast;
- Social media buttons: Facebook, Pinterest etc. buttons must be available on every page;
- Visible company's contact: Every page must contain a quick company's contact
- Modern: The new proposal should be modern and related to interior design;

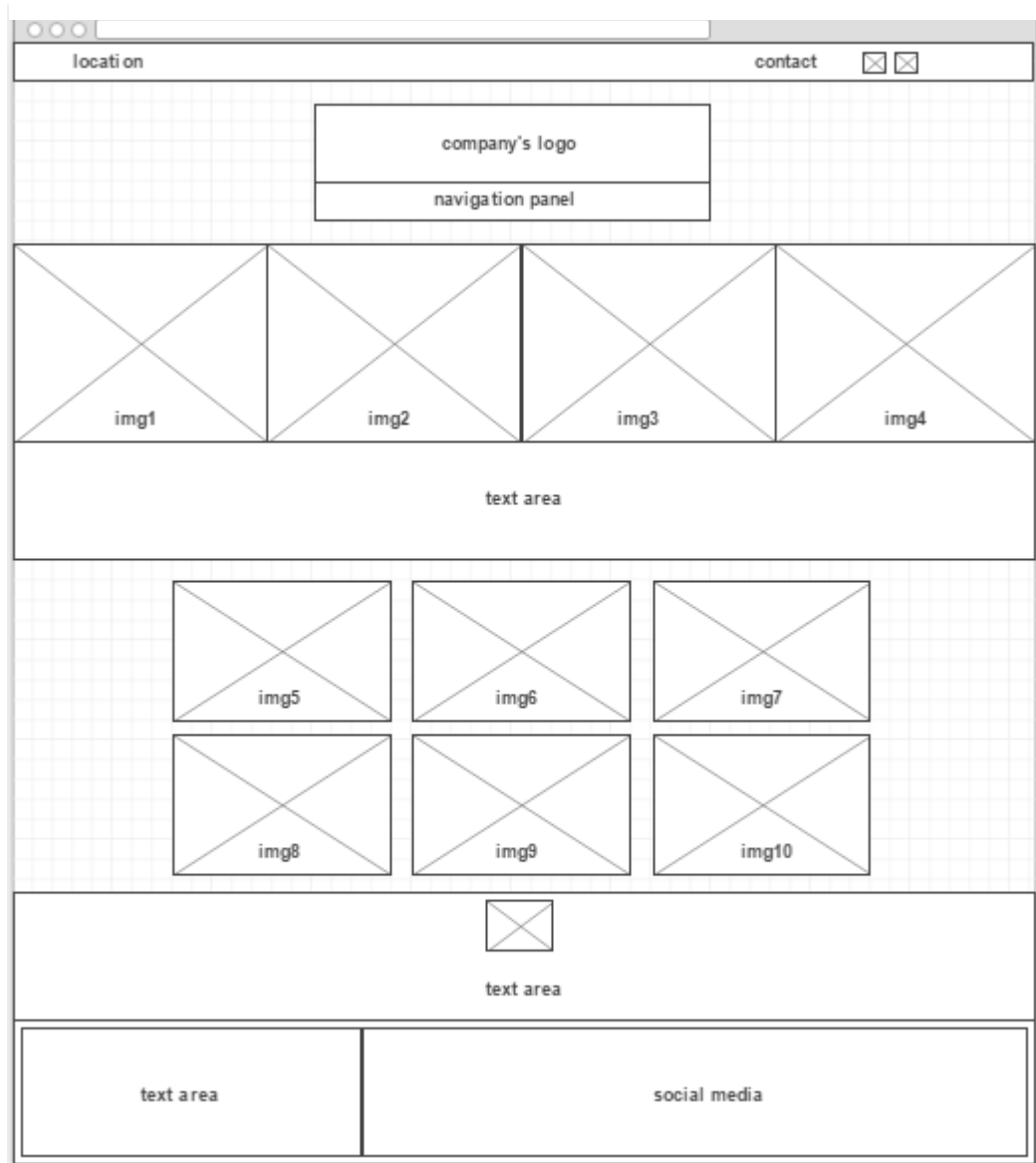
4.2.3 TEMPLATE SELECTION

A website designer has to decide if it is better to design a template from scratch or to use one of the templates that are freely available on the internet. Nowadays, these “ready to use” templates meet high standards and are able to cover needs of most business in the world. The website Atytruhlarstvi.cz does not require any unique layout or functionalities. Moreover, a web designer can try if the template really fits to the specific business needs and save valuable time. For this reasons, it was also used a free template called “Interior design” which is accessible on the web w3layouts.com. The template is available with Life Time Free Licence under Creative Commons Attribution 3.0 Unported. It means, there is no limitation in use of the template and its source files. The selection was made on the basis of customer’s interviews.

4.2.4 NEW WIREFRAME

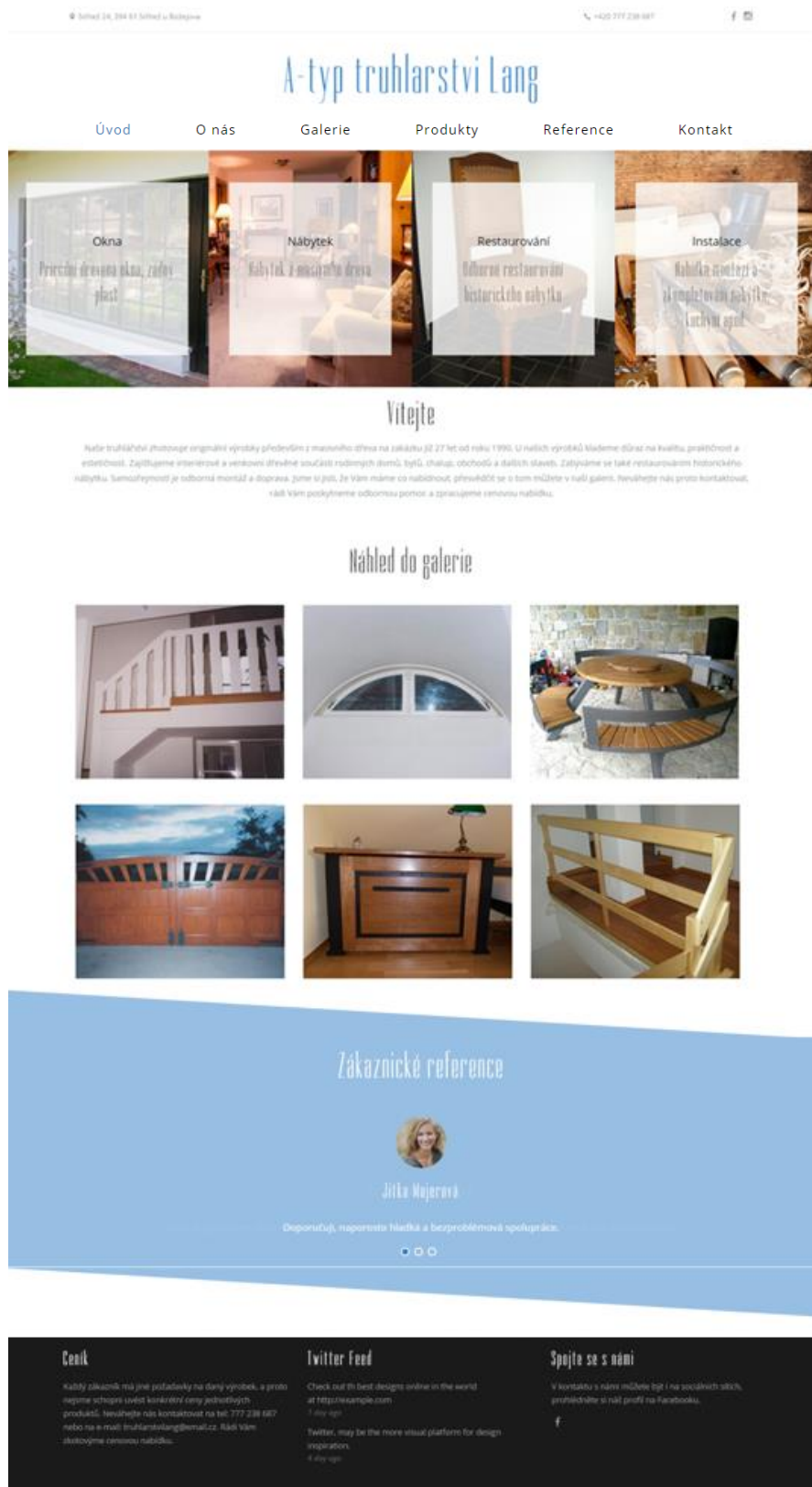
Figure 8 shows the layout of a new homepage. Contact, address and social buttons are easily accessible in the header of the page. The company's logo and navigation panel is situated in the center of the page. Under the navigation panel are an introductory pictures which should attract a customer attention. The following is the text area and preview to the main gallery. Between the gallery and footer is another text area designed for customer's reviews. The footer contain again social media buttons on right side and a small text area on left side.

Figure 8: New homepage wireframe



Source: Author

Figure 9: New graphic form



Source: Author

Figure 9 is a graphical representation of a new framework. The template has clean and modern design. The layout keeps its simplicity and therefore customers can easily navigate through the web. The readability is also very good. Combination of black/blue text on the white background or white text on the black/blue background doesn't cause any readability issues. There are visible contacts and social buttons in the header and footer of the web. Thanks to this, customers can call or leave a message immediately after entering the web. The template is fully responsive and therefore it can be accessible from any mobile device. The new website is written in the latest markup language HTML5 and cascading style sheets CCS3. These mentioned aspects fulfills most of the basic requirements set out in the requirements section.

4.2.5 IMPLEMENTATION OF THE KEY FACTORS

This part of the master thesis is focused on implementation of relevant factors into the new web page that have been identified in the literature review. There is an assumption of increased website traffic after the changes implementation.

4.2.6 INCREASE THE NUMBER OF WORDS ACROSS THE WEB

The biggest issue of the original page was its content. The word count was only 279 words for a whole website which an extremely small number indicating a very poor content. There was of a need to add meaningful articles that increase the word count. The original website didn't consist any more information about manufactured products and customer's reviews. For that reason, there was implemented two new pages: "Products" and "Reviews". The Product page is divided into the sections where every section is focused on a certain product. All the product sections provide detailed information for customers about used materials, types and shapes of different products etc. The Review page contains testimonials gained by our actual and past clients. These changes improved the overall website word count to 1809 words which is roughly 7 times more text than before. The new content is valuable and strictly connected with woodworking industry.

4.2.7 FONT SIZE AND UNORDERED LIST

The new website articles were written with the emphasis on a clear structure of the text. Main titles are differentiated by importance, there are used headings from <h1> to <h6> with a different font sizes. The largest font size is 36px and the smallest 10px. The font size adjusts the screen size and hence customers gets always the best font sizes according to mobile device they use. Paragraphs are combined with unordered lists for a better text clarity. Everything what was possible to categorize like product types and shapes were putted into the lists. Overall there are 9 unordered lists on the web. The original website included one unordered list only. Structured content is equal to better rank of a page.

4.2.8 FOCUSING ON THE RIGHT WORDS AND PHRASES

The aim of this paragraph is to find the words that customers looking for. The relevant terms that should be used in the content were derived from the business branch, location and offered products and services:

Company name & business branch: Atyp truhlářství Lang, joinery (truhlářství, stolařství);

Location: district Pelhřimov (okres Pelhřimov);

Products:

- Furniture: cabinets, wall units, dressers, shelves, bookcases, desks, chairs, show-cases, wood paneling (skříně, obývací stěny, komody, regály, knihovny, stoly, židle, vitríny, dřevěné obložení);
- Kitchen: classic, traditional, rustic and modern (klasické, tradiční, rustikální a moderní);
- Doors: interior, exterior, single, double, sliding (interiérové, exteriérové, jednokřídle, dvoukřídle, posuvné);
- Gates: single, double (jednokřídla, dvoukřídla);
- Stairs: straight, spiral, curved, corner, atypical (přímé, točité, oblé, rohové, atypické);
- Windows: single, double, lining, euro (jednoduchá, zdvojená, špaletová, eurookna);

Services: restoration, renovation, installation, assembly (restaurování, renovace, instalace, montáže);

The simple data above were used for creation of basic terms list. This list contains 115 words that are derived from the basic company information and it is available in the attachment. After this, each line in the list was inserted into Sklik tool which is a freely

available application for searching keywords by Seznam. The tool provided related terms that customers are looking for on the internet with an indication of the average number of searches per month. Finally, it was obtained 308 relevant terms with a different level of search. In the Table 8 are resulted relevant terms with more than 1 000 searches per month. The complete table is attached as well. Suitable relevant terms were implemented in the topics of the whole website. There is an assumption of the strong correlation between the used words and phrases in the text and the site traffic. Unfortunately, it was not possible to make a Flesch readability test. This calculation is not available in Microsoft Office software for the Czech language. The test works primarily on English articles. The result would show if the text is difficult or easy to understand.

**Table 8: Selected relevant terms
(> 1 000 searches per month)**

No.	Sklik generated terms	Average searches /month
1	kuchyně	12 360
2	zahradní nábytek	12 110
3	nábytek	11 981
4	kuchyňské linky	11 144
5	interiérové dveře	9 616
6	obývací stěny	5 356
7	kuchyně na míru	4 222
8	vchodové dveře	4 209
9	okna	4 093
10	vestavěné skříně na míru	3 462
11	koupelnový nábytek	3 349
12	dveře	2 834
13	kancelářský nábytek	2 758
14	střešní okna	2 584
15	židle do kuchyně	2 482
16	jídelní stoly	2 403
17	posuvné dveře na stěnu	2 070
18	posuvné dveře	2 037
19	rustikální nábytek	1 997
20	skříně	1 914
21	vestavěné skříně	1 808
22	truhlářství	1 748
23	psací stůl	1 632
24	moderní kuchyně	1 629

25	vchodové dveře do bytu	1 600
26	dřevěná okna	1 571
27	půdní schody	1 502
28	rustikální kuchyně	1 446
29	schody	1 399
30	schodiště	1 397
31	vrata	1 297
32	eurookna	1 139
33	venkovní vchodové dveře dřevěné	1 093
34	dřevěné dveře	1 079
35	zábradlí schodiště	1 072
36	posuvné dveře do pouzdra	1 046

Source: Author

4.2.9 WEBSITE DESCRIPTIONS

The original website had meta-description but there was a problem of its duplication. It is a common mistake to use the same meta-descriptions for all the pages of the web which is wrong. The new meta-descriptions¹ were created individually for each web page with regard to the relevant terms as follows:

Index page/Úvod: České truhlářství vyrábějící luxusní kuchyně na míru, dřevěná okna, schody, dveře a nábytek na zakázku jako jsou masivní stoly či vestavěné skříně apod.

About us/O nás: Truhlářství z Vysočiny s dlouholetou tradicí. Vyrábíme klasické kuchyně, dřevěný nábytek na míru, schodiště, dveře a okna. Provádíme také renovaci nábytku.

Gallery/Galerie: Fotogalerie slouží jako inspirace. Najdete zde moderní i tradiční kuchyně, jídelní stoly z masivu, dřevěné schody, skříně na míru, vchodové dřevěné dveře atd.

Products/Produkty: Atyp truhlářství se zabývá výrobou, montáží a dopravou kuchyňských linek, dřevěného nábytku, schodů, oken, dveří a vrat. Realizuje rovněž restaurování nábytku.

Reviews/Reference: Naše truhlářství dostává reference od zákazníků z celé České republiky. Většina výrobků směřuje do hlavního města Prahy, ale také do Pelhřimova či Jihlavy.

Contact/Kontakt: Truhlářství se nachází na Vysočině u města Pelhřimov, ale spolupracuje se zákazníky z celé ČR. Kontaktují nás klienti z Prahy, Jihlavy, Tábora a Pelhřimova.

¹ Meta description length should be between 150-160 characters.

4.2.10 NUMBER OF IMAGES & VIDEO INTEGRATION

The number of images has decreased from 112 original images to 40 images on the new website. The reason was a very bad image quality of old pictures. The best company's photos were included in the online gallery. This is connected to attracting customers to a high quality photos which can cause customer interest for the product. In addition, customers probably spent more time on the web which is also a factor influencing the website rankings. The previous images could have an opposite effect that lead to a higher bounce rate and lower time on site.

Finally, no video was integrated to a web. There were several reasons for that. The presentation is mainly focused on pictures media, not videos. Another reason is a high purchase price of a professional video promotion. The last argument is a negative impact on the homepage speed where the video would be deployed.

4.2.11 CHANGE FROM HTTP:// TO HTTPS://

From technical point of view it is relatively easy to change the unsecured Hypertext Transfer Protocol (HTTP) to secured Hypertext Transfer Protocol (HTTPS) on the server side. The redirection from http:// to https:// can be done in the .htaccess file by adding the following code:

```
RewriteEngine On
RewriteBase /
RewriteCond %{ENV:HTTPS} !^.*on
RewriteRule ^(.*)$ https://www.example.com/$1 [R,L]
```

Nevertheless, one of the condition of a proper function of secured protocol is an ownership of SSL certificate to a certain domain or subdomain. Certificates are issued upon request by one of the certification authorities (CA). The issued certificates has to be forwarded to webhosting provider and deployed on the server. These kind of services have a large price range starts at \$5 (without deployment costs) to several hundred dollars a year. In this case, the Positive SSL Certificate by Comodo CA was acquired for final price of \$35. It is better to use certificates of third parties because of financial costs. The examined domain is hosted by ONEbit company where the price of a basic SSL is \$80 a year and an extended

SLL costs \$600 per year which is much more expensive compared to the final solution. The URL address has changed to a secured form: <https://atyptruhlarstvi.cz>.

4.2.12 RESPONSIVE DESIGN TEST

The template was tested on 17 screen resolutions as shown in the table 9. For all of these screen sizes and resolutions was the test successful. This conclusion was also supported by successful Mobile-friendly test by Google. The website is fully responsive and available for most mobile devices. It is a big change compared to the old unresponsive design. This step eliminates the loss of visitors coming from mobile devices.

Table 9: Tested Screen Resolution

Screen resolution	Aspect ratio	Screen size & device type example
320x480	2:3	3.5" iPhone
320x568	9:16	4" iPhone 5
360x640	9:16	4" Nokia N97
480x800	3:5	7" Samsung Galaxy S2
768x1024	3:4	9.7" iPad
720x1280	9:16	4.8" Galaxy S
1024x768	4:3	15" monitor
1280x720	16:9	720p TV
1280x800	8:5	14" notebook
1280x1024	5:4	19" monitor
1366x768	16:9	14" notebook / 15.6" Laptop / 18.5" monitor
1400x900	14:9	19" monitor
1440x900	8:5	19" monitor
1600x900	16:9	20" monitor
1680x1050	8:5	22" monitor
1920x1080	16:9	21.5" monitor / 23" monitor / 1080p TV
1920x1200	8:5	24" monitor

Source: RapidTables: *Screen Resolution Statistics* [online]. [Edited by author]. Accessible from: <http://www.rapidtables.com/web/dev/screen-resolution-statistics.htm>

4.2.13 SITE SPEED TEST

The website speed was verified by Pingdom² test and Google PageSpeed Insights³. The first test got very good results. The website is faster than 93% of all tested domains through Pingdom service. The load time is 842ms and overall page size is 1.1 MB. Nevertheless, PageSpeed Insight indicated some files (HTML, CSS, JavaScript and images) should be compressed. The issue was that a webserver didn't provide compressed files to a browser. The webserver is able automatically decrease file size using deflate algorithm. Therefore, web server settings were changed by adding the following commands to the htaccess file:

```
# compress text, html, javascript, css, xml:
AddOutputFilterByType DEFLATE text/plain
AddOutputFilterByType DEFLATE text/html
AddOutputFilterByType DEFLATE text/xml
AddOutputFilterByType DEFLATE text/css
AddOutputFilterByType DEFLATE application/xml
AddOutputFilterByType DEFLATE application/xhtml+xml
AddOutputFilterByType DEFLATE application/rss+xml
AddOutputFilterByType DEFLATE application/javascript
AddOutputFilterByType DEFLATE application/x-javascript
```

This step ensure a permanent compression of output files. Moreover, another change was made in files caching. There was set an expiry date for files. It means data will be saved directly into the browser for a certain period of time instead of downloading files again from a webserver. The settings were set in the htaccess file as follows:

```
<IfModule mod_expires.c>
ExpiresActive On
ExpiresDefault A300
ExpiresByType text/javascript A604800
ExpiresByType application/javascript A604800
ExpiresByType text/css A604800
ExpiresByType image/gif A604800
ExpiresByType image/png A604800
ExpiresByType image/jpeg A604800
ExpiresByType image/x-icon A604800
ExpiresByType text/html A300
</IfModule>
```

² Pingdom Speed Test, available at: <http://tools.pingdom.com/>

³ Google PageSpeed Insights, available at: <https://developers.google.com/speed/pagespeed/insights/>

The adjustments above led to the better result in the Pingdom test. The page size decreased by 30% to 771.6kB and the final load time speed up by 31% to 580ms. Currently, the website is faster than 96% of all tested domains which is a perfect score.

4.2.14 EXISTENCE OF FLASH OR ADVERTISEMENT

Flash is an outdated technology that was replaced by newer, more compatible technologies and standards based on HTML5. It is not a good practice to use flash anymore. Moreover, flash does not work well on mobile devices. The new website does not include any flash objects. The original page was using flash for a presentation of multimedia content. There is also an improvement on this count. There is no advertisement included in the content.

4.2.15 KEYWOD IN DOMAIN & TLD

The domain name atytruhlarstvi.cz contain a keyword truhlářství (joinery) and it uses the main TLD for the Czech Republic .cz. Nevertheless, these factors does not significantly influence the rankings anymore. More important is that the domain is secured and easy to remember.

4.2.16 REFERRING DOMAINS

There were only a few good-quality referring domains to the original website. This is a hard challenge for the new proposal. The goal is not to get low quality backlinks from hundreds sites such as different backlinks catalogues. The aim is to get organic backlinks based on customer's reviews and content quality. Through this way the site gains stable backlinks with a real value. It is a long term process that can be achieved in several months or even years. However, there is still a need to boost the website and its traffic faster. There is another simple method how to make it and it is through social media.

4.2.17 SOCIAL MEDIA

Social media represent the fastest way how to increase the website traffic and company awareness almost immediately. There were created company's profiles on the most

popular social sites as Facebook, Google+, Pinterest and Twitter. The profile information consist the referring link to the Atyp truhlářství homepage. However, these links don't improve the website rankings because of no-follow type of such backlinks. The principle is about an increase of direct traffic to the company website.

The profile presence on social networks is not everything. There is necessary to provide the company description with the URL among users as well. For this reason, author of this academic work made a Facebook post about Atyp truhlářství Lang on his personal profile on 08.01.2016. Since this time to the end of February the post was shared by 8 people on their walls. It was summarized that the post could be seen up to 1 781 people after counting the number of friends by people who shared it. This can help to build organic backlinks in case that somebody would mention the company on his/her blog, personal page etc.

4.2.18 INTERNAL LINKS

Customers have to find everything easily on the web, otherwise they will go for the information to other competing site. Internal links make easier to browse the web for visitors. Each page must contain internal links referring other related pages of the web.

The internal links were implemented into the examined website as well. Homepage contain an introductory text with links to the Contact and Gallery pages. When the customer click on sliding images at the top of the page he/she is navigated to the gallery. The gallery consist a button above the images that refers to the Contact page. The Product and About Us pages have both links to the Gallery and Contact page. The Review page has a link to the Review page only.

4.2.19 DOMAIN VISIBILITY AND BRAND

Domain visibility is a metric developed by Searchmetrics GmbH. It measures the domain popularity in SERPs for a certain keyword. It is a very good way how to track a search volume of a domain over time. Unfortunately, this metrics is available only to certain countries in the word and data for the Czech Republic are not available. In general, high domain visibility has brands. People often search for an exact company and that is why the new web design tries to present the joinery as a brand "Atyp truhlářství Lang".

4.3 WEBSITE TRAFFIC DEVELOPMENT

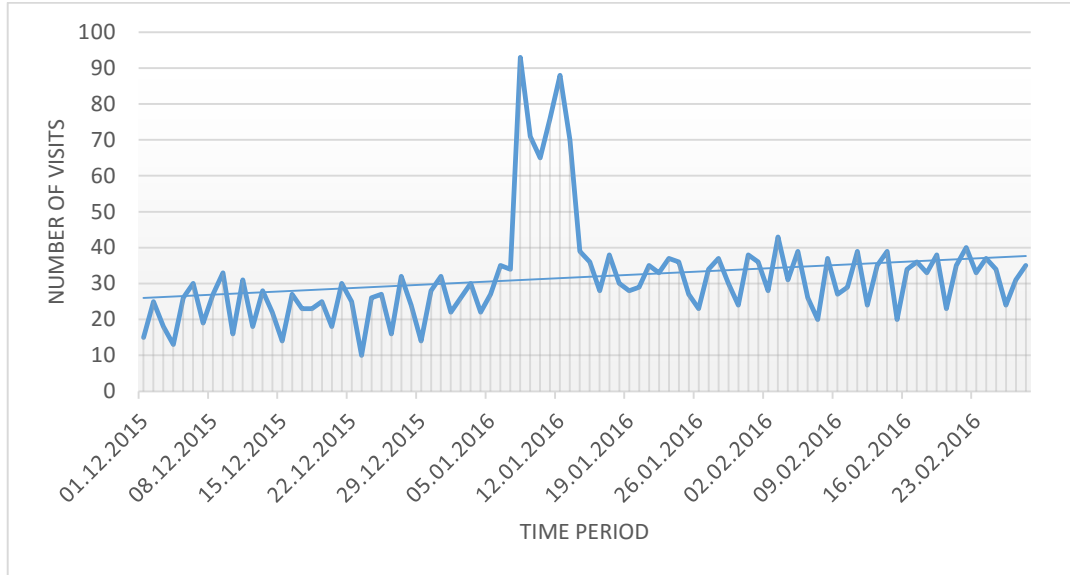
Another change was made in traffic measurement. Currently, the website is using Google Analytics instead of the Wordpress plug-in called Statpress. Google Analytics gets its data through the implemented code in the each measured web page. There are several advantages of using external services. All the data are saved to external databases. It means that it cannot cause data loss as in case of old websites where traffic information were saved to the private MySQL database with a limited size. Google Analytics also provides detailed and more accurate information about the website traffic. The service is possible to connect to other Google services as Adwords or Search Console.

4.3.1 NUMBER OF VISITS

The site traffic started to be analyzed from 01.12.2015. The table 10 shows the development of number of visits⁴ for the domain name atypruhlarstvi.cz. In December 2015, the average site traffic was 23,0 visits per day. This number reflecting the original site traffic which was around 25 visits a day with a decrease of 8%. The first week of January 2016 noted a small increase in traffic to an average of 28,0 visits a day. The biggest change in chart was found on 08.01.2016, when the traffic jumped to 93 visits a day. The time period between 8th -13th January 2016 is characteristic for a high number of visits in average 77,2 visits a day. Another characteristic for this period are sudden changes in the number of visits from day to day. All of this can be explained by an influence of social media. On January 8th was written a post about A-typ truhlářství Lang on Facebook that attracted many people to visit the website. However, the post was shared among Facebook friends. From January 14th to the end of the month, the average daily traffic was 32,3 visits. The last month was noted slightly higher traffic of 32,6 visits a day. The comparison of data from December 2015 and from February 2016 shows a visible increase in number of visits in February 2016 where the traffic was higher by 41,7% compared to the first examined month. Moreover, there is a positive increasing trend in a number of visits since the beginning of December 2015.

⁴ A visit indicates an individual visitor who arrives at the website. A visit counts all visitors regardless of how many times the same visitor returned to the site.

**Figure 10: Number of visitors for atyptruhlarstvi.cz
(01.12.2015-29.02.2016)**

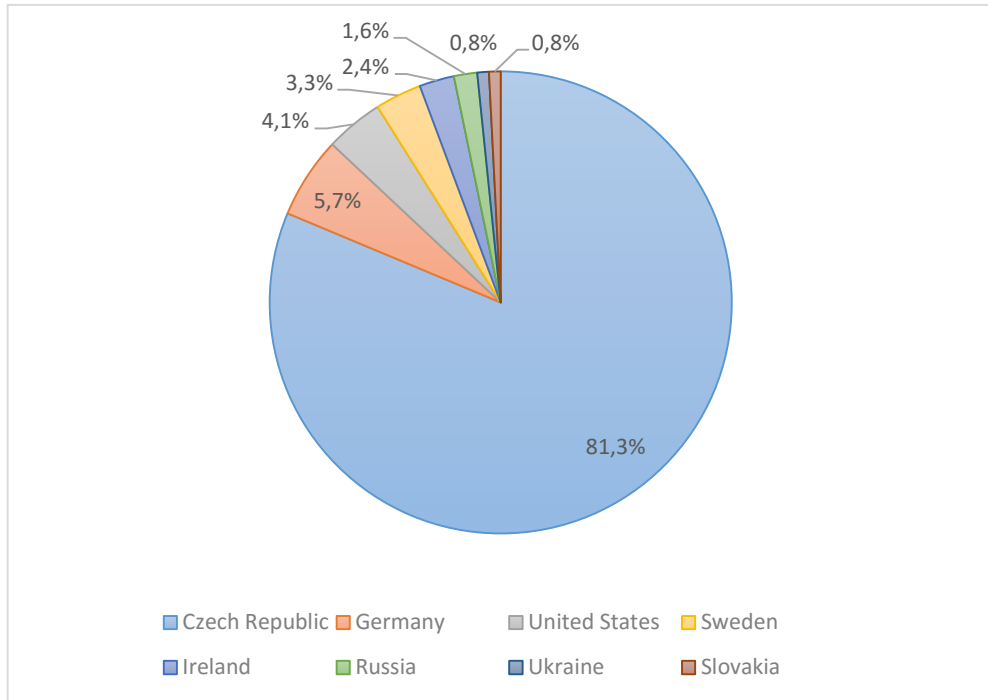


Source: Google Analytics [Edited by author]

4.3.2 VISITORS ORIGIN

The Figure 11 shows the traffic distribution with regard to nationality. It is important that the majority of visitors come from the Czech Republic (81,3%). It is a better result than by the original website, where the Czech Republic was represented by 62% only. The rest of the countries are Germany (5,7%), United States (4,1%), Sweden (3,3%), Ireland (2,4%), Russia (1,4%), Ukraine (0,8%) and Slovakia (0,8%).

Figure 11: Traffic distribution by country of origin



Source: Google Analytics [Edited by author]

4.3.3 OTHER FACTORS

The average bounce rate for the chosen period is 42%. It means that 58% of potential customers have to browse the web which is a good result. An average customer spend 2 minutes 41 seconds on a site and look at 2,5 pages. The percentage of new visits is on average 54,3%.

5 CONCLUSION

The website overall performance is greatly influenced by the system on which it operates. For this reason, the literature review provides an overview about Content Management Systems and Static Site Generators. There are explained differences between these two approaches to a website design and are given recommendations about what kind of pages are suitable for each approach. The main part identifies 30 on-page and off-page factors that have a positive or negative impact on the final website traffic.

The practical part deals with a real company website: `atyptruhlarstvi.cz` that faces the problem of low number of visitors. An analysis of the examined site discovered the following weaknesses. The positioning is very bad in Search Engine Result Page and it is almost impossible to find the web without an exact knowledge of the company name or its location. Content can be considered as extremely poor with overall 279 words only. There were also two technical issues. The first caused a traffic data loss for the last five years due to exceeding 50MB of MySQL memory limit. The second was related to plugins deployment that used up the whole PHP memory limit. It resulted in WordPress strong instability. The website speed test was disastrous. The small page size of 762,52kB was loaded for 4,38 seconds. An acceptable result would be less than 2 seconds. Concerning security, the site did not use secured protocol and the next risk could pose deployed plugins that are frequent targets of hacker attacks. The used template was not mobile-friendly and therefore it was difficult to browse the pages on mobile device. In addition to that the graphical appearance had a low attracting power, it was not able to adequately impress the customers. The site was visited by an average of 25 people a day in 2011. Furthermore, only 63% of visitors come from the Czech Republic. Unfortunately, more actual data could not be obtained because of the data loss. After considering of all mentioned issues above was proposed a complete website recovery with an implementation of suitable factors from literature review.

The examined website is extremely static without a dynamic content and the frequency of updates is relatively low. The web pages are managed by a technical contributor and it is the reason why graphical user interface of CMS is not required. After evaluation of

all previous technical, speed and security issues was selected a static site generator for the website design.

The important chapter is represented by implementation of suitable factors that should as a complex lead to an increase of a site traffic. First important factor is a content. The original word count of 279 words was improved to 1809 words which is 7 times more than in the past. Before writing the articles, an analysis of relevant terms were made. Those terms are included across the web content. The new articles are meaningful and they provide product details and customer reviews. Moreover, the content is structured, there are 9 unordered lists included and main titles are differentiated by importance. Each page has internal links to other subpages. The text clarity and an inclusion of relevant terms are equal to a better rank of a page. The number of images has decreased from 112 original images to selected 42 images on the new website. This is because of a very bad image quality of most old pictures. The high quality images can cause customer interest for the product, higher time on site and lower bounce rate. Meta descriptions were implemented individually for each web page with regard to the page content. The new website was accepted by a certification authority (CA) and the unsecured Hypertext Transfer Protocol was replaced by Secured Hypertext Transfer Protocol (HTTPS). It means the site is trustable and secure for browsing. There are no plugins used and therefore an attack risk is much lower. The template was tested on 17 screen resolutions. All tests were successful and the site is fully responsive. Almost 33% of customers use some mobile device to browse a web. The current web eliminates the loss of visitors coming from mobile devices. Furthermore, Google officially announced that secured and responsive websites get priority. The site speed test had two rounds. The first test can be considered as very good. The page load time was 842ms and overall page size was 1.1.MB. Nevertheless, after the compression of large files the site became even faster. The page size decreased by 30% to 771,6kB and the final load time speed up by 31% to 580ms. Currently, the website is faster than 96% of all tested domains which is a perfect score. The adjusted site speed is 7,5 times faster than the original speed. No flash, advertisement or other disruptive elements are available on the web. The web page is newly available on Google+, Pinterest and Twitter. These factors are able to boost direct page traffic. The new template is written in the latest markup language HTML5 and CSS3. The design is clean and simple just to avoid leaving customers confused. The readability is

also very good. Combination of black/blue text on the white background or white text on the black/blue background doesn't cause any readability issues. Social buttons and a quick company contact is present on each page in header and footer section. Another change was made in traffic measurement. The website started to use Google Analytics for tracking visitors. The actual traffic data are more accurate and the possibility of data loss is reduced.

The main goal of diploma thesis was to improve the website traffic. The web page was measured from 01.12.2015 to 29.02.2016. The average site traffic was 23,0 visits a day in December 2015. This number reflects the original site traffic which was around 25 visits a day with a decrease of 8%. The biggest change in traffic development was found between 08.01.2016 – 13.01.2016 when the average site traffic was 77,2 visits a day. Those changes are explained by an influence of social media. Author has written a post about Atyp truhlářství on Facebook on 8th January 2016. The post was shared by 8 people and it attracted many people to visit the website. From January 14th to the end of the month, the average daily traffic was 32,3 visits. The last month was noted slightly higher traffic of 32,6 visits a day. The comparison of data from December 2015 and from February 2016 shows a visible increase in number of visits in February 2016 where the traffic was higher by 41,7%. There is a positive increasing trend in a number of visits since the beginning of December 2015. Moreover, majority of visitors 81,3% come from the Czech Republic and it is a better result than by the original web pages with 62% only.

The complete recovery of a small joinery website atyptruhlarstvi.cz was successful. It improved the website traffic and many other aspects as content, speed, security, responsiveness, social media etc. The web design itself and implemented factors can be considered as crucial elements that influence the final number of visits. For this reason, the made changes on a web page can really help small business in rural areas to get new customers. There were also identified factors that affect an overall website performance with an emphasis on a positive site traffic development. An overview about different website design approaches is included as well.

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7 SUPPLEMENTS

Appendix 1 – Basic terms list [author]

No.	Basic terms
1	truhlářství
2	stolařství
3	truhlář
4	stolař
5	truhlářské
6	stolařské
7	truhlářství Pelhřimov
8	truhlář Pelhřimov
9	stolařství Pelhřimov
10	stolař Pelhřimov
11	zakázková výroba nábytku
12	zakázková výroba nábytku Pelhřimov
13	zakázkové truhlářství Pelhřimov
14	nábytek
15	nábytek na míru
16	nábytek na míru Pelhřimov
17	nábytek na zakázku
18	nábytek na zakázku Pelhřimov
19	kuchyně
20	kuchyňské linky
21	kuchyně na zakázku
22	kuchyně na zakázku Pelhřimov
23	kuchyňské linky na zakázku
24	kuchyňské linky na zakázku Pelhřimov
25	kuchyně na míru
26	kuchyně na míru Pelhřimov
27	kuchyňské linky na míru
28	kuchyňské linky na míru Pelhřimov
29	klasické kuchyně
30	klasické kuchyňské linky
31	rustikální kuchyně
32	rustikální kuchyňské linky
33	moderní kuchyně
34	moderní kuchyňské linky
35	dveře
36	dveře na zakázku
37	dveře na míru
38	dřevěné dveře
39	interiérové dveře
40	exteriérové dveře
41	jednokřídlá dveře
42	dvoukřídlá dveře
43	posuvné dveře
44	vrata
45	vrata na zakázku
46	vrata na míru
47	dřevěná vrata

48	jednokřídla vrata
49	dvoukřídla vrata
50	skříně
51	skříně na zakázku
52	skříně na míru
53	vestavěné skříně
54	vestavěné skříně na zakázku
55	vestavěné skříně na míru
56	vestavné skříně
57	vestavné skříně na zakázku
58	vestavné skříně na míru
59	obývací stěny
60	obývací stěny na zakázku
61	obývací stěny na míru
62	dřevěné knihovny
63	knihovny na zakázku
64	knihovny na míru
65	dřevěné regály
66	dřevěné regály na zakázku
67	dřevěné regály na míru
68	dřevěné police
69	police na zakázku
70	police na míru
71	stoly
72	dřevěné stoly
73	stoly z masivu
74	masivní stoly
75	stoly na zakázku
76	stoly na míru
77	dřevěné židle
78	židle na míru
79	židle na zakázku
80	vitríny
81	dřevěné vitríny
82	vitríny do obchodů
83	vitríny do muzeí
84	dřevěné obložení
85	dřevěné obklady
86	obklady krbových říms
87	dřevěné obklady krbových říms
88	okna
89	okna na zakázku
90	okna na míru
91	dřevěná okna
92	jednoduchá okna
93	zdvojená okna
94	špaletová okna
95	eurookna
96	schody
97	schodiště
98	dřevěné schody
99	dřevěná schodiště
100	schody na zakázku

101	schody na míru
102	přímé schody
103	přímé schodiště
104	točité schody
105	točité schodiště
106	atypické schody
107	atypické schodiště
108	restaurování nábytku
109	renovace nábytku
110	instalace kuchyní
111	instalace nábytku
112	montáž
113	montáž kuchyní
114	montáž nábytku

Appendix 2 – Generated terms by Sklik [author]

No.	Sklik generated terms	Average searches per month
1	kuchyně	12 360
2	zahradní nábytek	12 110
3	nábytek	11 981
4	kuchyňské linkový	11 144
5	interiérové dveře	9 616
6	obývací stěny	5 356
7	kuchyně na míru	4 222
8	vchodové dveře	4 209
9	okna	4 093
10	vestavěné skříně na míru	3 462
11	koupelnový nábytek	3 349
12	dveře	2 834
13	kancelářský nábytek	2 758
14	střešní okna	2 584
15	židle do kuchyně	2 482
16	jídelní stoly	2 403
17	posuvné dveře na stěnu	2 070
18	posuvné dveře	2 037
19	rustikální nábytek	1 997
20	skříně	1 914
21	vestavěné skříně	1 808
22	truhlářství	1 748
23	psací stůl	1 632
24	moderní kuchyně	1 629
25	vchodové dveře do bytu	1 600
26	dřevěná okna	1 571
27	půdní schody	1 502
28	rustikální kuchyně	1 446
29	schody	1 399
30	schodiště	1 397
31	vrata	1 297
32	eurookna	1 139
33	venkovní vchodové dveře dřevěné	1 093

34	dřevěné dveře	1 079
35	zábradlí schodiště	1 072
36	posuvné dveře do pouzdra	1 046
37	moderní kuchyně fotogalerie inspirace	998
38	skříně s posuvnými dveřmi	860
39	šatní skříně s posuvnými dveřmi	860
40	nábytek na míru	771
41	pc stoly	636
42	kuchyňské linky na míru	578
43	rohový psací stůl	576
44	dřevěné schody	567
45	dvířka ke kuchyňské lince	559
46	šatní skříně	549
47	vitrína	544
48	vestavné skříně	543
49	rustikální kuchyně fotogalerie	526
50	skříně na míru	516
51	vestavné skříně Praha	478
52	dřevěná eurookna	447
53	kuchyně na míru Praha	440
54	truhlářství Praha	435
55	vchodové dřevěné dveře	422
56	dřevěné židle	397
57	výroba dřevěných oken	396
58	montáž oken	395
59	dvoukřídle dveře	372
60	točité schodiště	325
61	interiérové dveře Brno	322
62	dřevěné regály	309
63	zábrana na schody	305
64	renovace nábytku	299
65	dřevěná schodiště	297
66	židle jídelní dřevěné	295
67	zakázková výroba nábytku	289
68	točité schody	272
69	točité schody	272
70	prosklená vitrína	247
71	kulatý jídelní stůl	244
72	jídelní stoly z masivu	243
73	stolařství	238
74	moderní kuchyně fotogalerie	229
75	dvoukřídla vrata	228
76	dřevěné obklady	226
77	vestavné skříně na míru Praha	222
78	mlynářské schody	221
79	nábytek na zakázku	220
80	výroba nábytku na míru	207
81	truhlář	203
82	kuchyně na míru Ostrava	199
83	montáž nábytku	188
84	kuchyně na zakázku	187
85	kuchyně na míru Brno	184
86	koupelnový nábytek na míru	182
87	posuvné interiérové dveře	177
88	kuchyně na míru fotogalerie	176
89	kuchyňská linka rohová	172
90	nábytek na míru Praha	171

91	dřevěná střešní okna	166
92	skříně na míru	163
93	truhlářství Brno	152
94	truhlářství Plzeň	152
95	venkovní vitríny	152
96	dřevěné obklady na stěnu	148
97	dřevěné police	146
98	moderní kuchyňské linky	145
99	dřevěná okna Brno	144
100	skříně na míru Praha	141
101	restaurování nábytku	138
102	výroba nábytku na zakázku	137
103	dřevěná okna a dveře	126
104	dřevěná euro okna	126
105	rohová lavice do kuchyně	125
106	luxusní kuchyně na míru	123
107	moderní kuchyně na míru	123
108	oprava dřevěných oken	120
109	shrnovací dveře na míru	119
110	masivní jídelní stůl	118
111	dřevěná vrata	117
112	stolařství Brno	116
113	stolařství Ostrava	115
114	stoly z masivu	115
115	eurookna Brno	113
116	kancelářský nábytek na míru	112
117	šplaletová dřevěná okna	112
118	pracovní deska na kuchyňskou linku	111
119	truhlář Praha	109
120	výroba dřevěných dveří	109
121	montáž nábytku Praha	109
122	mlynářské dřevěné schody do podkroví	108
123	dřevěný obklad schodiště	107
124	moderní kuchyně na míru	105
125	vestavěné skříně Ostrava	104
126	dřevěné obložení	104
127	zašupovací interiérové dveře	102
128	psací stůl z masivu	101
129	výroba kuchyní na míru	100
130	dřevěná okna Praha	100
131	vestavěné skříně na míru Brno	98
132	interiérové dřevěné dveře	95
133	dřevěné posuvné dveře	94
134	dřevěná okna na míru	93
135	truhláři	89
136	dveře na míru	88
137	vestavěné skříně na míru Ostrava	88
138	stolař	87
139	moderní luxusní kuchyně	82
140	restaurování	81
141	výroba nábytku na míru praha	80
142	dřevěné obklady do interiéru	80
143	renovace starého nábytku	78
144	zakázkové truhlářství	76
145	klasické kuchyně	76
146	dřevěné fasádní obklady	75
147	zábradlí ke schodišti	74

148	nábytek na míru Brno	72
149	posuvné dvoukřídlé dveře na stěnu	71
150	kuchyně na míru fotogalerie	69
151	shrnovací dveře dřevěné	67
152	dřevěné obklady fasád	67
153	koupelnový nábytek na zakázku	66
154	vchodové dveře na míru	66
155	posuvné dveře na míru	66
156	stůl z masivu	66
157	moderní kuchyně praha	65
158	truhlář Plzeň	64
159	interiérové dveře do bytu	64
160	nábytek na míru Praha 9	63
161	dřevěné balkónové dveře	63
162	truhlářská výroba	62
163	dětský nábytek na míru	62
164	truhlářství Praha 4	60
165	vchodové dvoukřídlé dveře	60
166	vestavěné skříně České Budějovice	60
167	interiérové dveře prosklené	59
168	dřevěná vjezdová vrata dvoukřídlá	59
169	rustikální obklady do kuchyně	58
170	dřevěné obložení stěn	58
171	vestavné skříně na míru	56
172	montáž kuchyně	55
173	kuchyně na zakázku Praha	53
174	vestavěné skříně inspirace	52
175	dřevěné stoly	52
176	dřevěná knihovna	51
177	dvoukřídlé posuvné dveře	50
178	fotogalerie dřevěná selská vrata	50
179	masivní stoly	49
180	samonosné schodiště točité dřevěné	48
181	dřevěné shrnovací dveře na míru	46
182	dřevěné obklady stěn interiéru	46
183	venkovní dřevěné dveře	45
184	dubový stůl z masivu	45
185	české truhlářství	44
186	jednoduchá dřevěná okna	43
187	interiérové dveře na míru	42
188	skříně na míru Brno	42
189	vestavné skříně na míru Praha	41
190	dřevěný psací stůl	41
191	nábytek na zakázku Praha	40
192	tradiční kuchyně	40
193	vekovní vchodové dveře dvoukřídlé	40
194	dřevěné schodiště do podkroví	40
195	rustikální kuchyně z masivu	39
196	dřevěné obložení stěny v bytě	39
197	dřevěný obklad domu	39
198	schody na míru	38
199	nábytek do předsíně na míru	37
200	montáž kuchyňské linky	37
201	výroba dveří na zakázku	35
202	exteriérové dveře	35
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