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DEVELOPING A SOCIAL MEDIA MARKETING TOOL

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ABSTRACT

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The objective of the thesis is to develop a better, easier to use social media marketing tool that could be utilized in any business. By understanding and analyzing how business uses social media as well as currently available social media marketing tools, design a tool with the maximum amount of features, but with a simple and intuitive User Interface.

An agile software development life cycle was used throughout the creation of the tool. Qualitative analysis was used to analyze existing tools and to create a table with advantages and disadvantages of each of them.

The result of this thesis was the design of the easy to use social media marketing tool that included the implementation of Facebook, Twitter and YouTube social networks as well as the possibility to add more social networks over time. Future development could make the tool as a professional business tool.

Keywords: social media marketing, social media engagement, software development, social media, agile development, software as a service, Twitter, Facebook, YouTube

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1 INTRODUCTION

1.1 The goal of the thesis

There are numerous benefits that Social Media Marketing offers for companies and individuals. However, how can those benefits be measured, or how it can be seen if any particular marketing approach works or not. There are a lot of tools developed to help marketers for that. Unfortunately, those tools are quite narrow at what they can do. Some tools are specialized in one of the social networks or have a specific feature of the network, for example, subscribers' management or scheduled posts, but does not consider any other important constants in SMM that would be discussed in later chapters.

The goal of this thesis is to develop a universal Social Media Marketing tool that would provide analytics and marketing insights in various most used social networks such as Facebook, Twitter, YouTube and others. Moreover, the tool would have a unified and intuitive user interface that would help new users who do not have a lot of experience. The tool would embed a variety social network features that would make the tool to be a place for all social networks activities.

Unified User Interface in the software can be achieved by analysing each social media site and standardising to common elements used in all of them without leaving anything specific to that network. Exploratory research method would be used through out this thesis in order to have most accurate connections of received data for the development of the software. Exploratory is an approach to analyzing data sets to find previously unknown relationships (Smith 2013, cited 11.11.2015).

1.2 What is Social Media Marketing

Social media marketing, or SMM, is a form of internet marketing that implements various social media sites in order to achieve marketing communication and branding goals (Wordstream 2015, cited 11.10.2015). Social Media optimization (SMO) is one of the elements of SMM. In a similar way to Search Engine Optimization (SEO), SMO is used to attract unique visitors to a website. SMO can be done two ways: adding social media links to content, such as RSS feeds and

sharing buttons -- or promoting activity through social media by updating statuses or tweets, or blog posts (Rouse 2011, cited 11.10.2015).

Social media sites have become a part of everyone's daily lives. Some of us use them all the time with the help of mobile phones. We chat, discuss, review, give recommendations, etcetera, using various social media sites such as Facebook, YouTube, Twitter and others.

Those interactions made via social media sites cannot go unnoticed by companies and brands. Over the last several years, business competition has become more aggressive and customer-centered. Companies and brands fight for customers and their attention.

In the mid-1990s was an internet boom with its endless possibilities that were opened to millions of people who got online. It also brought many questions on how advertising could be used to build new businesses, new opportunities, and new communities. That resulted in the Internet advertising business growing through banner advertising (Treadaway & Smith 2010, 26-27.) The banner advertisement later got changed to search engines, then to Google AdWords and to Social Media Marketing.

SMM is not just another advertising channel. SMM creates an additional close layer between companies, products, services, brands and their customers and consumers. Companies can get direct feedback, react to the overall attitude towards them. SMM is growing and will keep on growing since there is a need to share information and everyone tries to do that at instant speed due to the wide use of mobile applications. Moreover, everyone of us is the source of information and can be a publisher or a celebrity.

With the power of social medias, companies can increase the revenue for e-commerce efforts, reach new customers or communicate with existing ones, improve customer engagement, establish a base for any future use, for example, product or service marketing and advertising, increase referrals, reposition the business or brand. There are many more not yet used or discovered possibilities on how SMM can be used to create better and smoother business and personal operations (Fidelman 2013, cited 11.10.2015).

2 SOCIAL MEDIA FOR BUSINESS

Nowadays, companies use social media site as a tool to listen to their customers and as an attraction of new customers. Companies create groups and accounts in different networks, post news and videos, give discount and do various promotions. Other ways to communicate with customers is the official group and open community in social media sites. This is a good way to share news, photos or video, make unique group design which would help to make strong association with a company or brand (The Marketing donut 2015, cited 7.12.2015.)

2.1 How business uses social media

The number of social media users are growing every year. In 2015 the amount of active users was around 2.206 Billion with a global penetration of 30%. In other words, there are 12 new mobile social users every second and it is totaling around 1 Million per day (Regan 2015, cited 8.10.2015). People spend more and more time in the Internet by using social media sites. They share the news, upload photos and videos, search products, check email and communication to each other. Moreover, social media is very important to businesses according to 92% of marketers' answers (Stelzner 2015, cited 8.10.2015). Nowadays, companies create accounts in social media sites before the launch own business. It is considered as a huge opportunity to build channels between clients and organizations early on.

SMM with a proper strategy can be a very effective way to make business successful if it uses it right. Moreover, the strategy gives the company a better understanding on personality and uniqueness of the market with similar products and services (Seop 2015, 8). Also, small companies have limited resources and SMM can substitute or replace completely the traditional marketing due to its low-cost and a connection with customers (Conley 2014, cited 11.10.2015).

The wide amount of different social media sites allow companies to choose the right network depending on their businesses and strategy. The importance of the connection and joining the conversation with the audience is understandable, however companies do not need to use every existing social network to try to engage customers and prospects.

Since SMM is a variety of a traditional marketing all marketing concepts apply here including the marketing plan, budgeting and executing that plan. SMM has lower spending costs comparing to traditional marketing. Social networks are a personal spot on the web that causes SMM for companies to be more than participating. It should engage into conversations with prospects and customers with the tendency to care for the problems and solving them (Digital Marketing Philippines 2015, cited 7.12.2015.)

SMM can help with many different of goals. Those goals included but not limited to: communication and feedback, website traffic, creating a positive brand identity, increasing brand awareness, sales, conversions. Unique content is one of the most important parts of SMM as it attracts new readers, prospects and broads the audience. Links are also important for the same reason. Consistent brand image helps to establish the correct brand across all social networks. Blogging is another tool utilized in SMM for spreading the information and establishing trust and a communication channel (Zarella 2010, 9.)

Social media marketing is a vast plain with variety of potential buyers and word of mouth marketing strategies. Figure 1 below represents the “digital word of mouth” as stated by a web marketer Dave Evans (Evans 2010, 5).

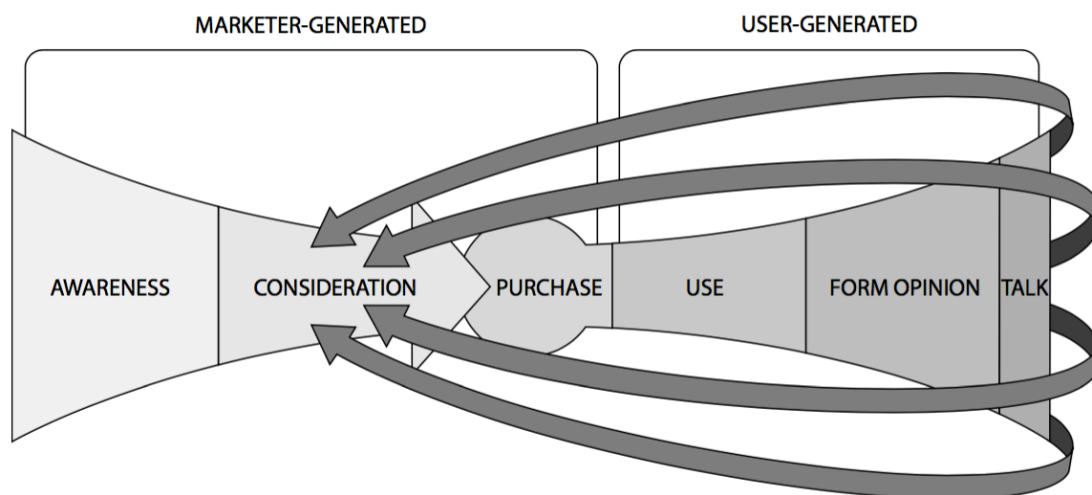


FIGURE 1. The Social Feedback Cycle (Evans, 2010, 5)

According to Sujana Patel, a contributor in Forbes Entrepreneurs, there are five important parts for doing SMM: to treat followers like actual people; to focus on who people are, not what they give; to take the time to build the relationship; help prospects to decide on buying rather than selling; listen. Moreover, there is a 5-3-2 rule developed by TA McCann of Gist. That rule suggests to

have posts on social networks in the following ration: 5 posts based on the information from others relevant to the audience; 3 non-sales posts based on the information relevant to the audience; 2 personal posts that aren't business-related and help humanize you and your brand. (Patel, 2015, cited 22.11.2015.)

2.2 Social media tools

Since SMM is getting more and more popular, there are various free and paid tools available. For better understanding of the availability and features of the available at the time of the thesis' writing social media marketing tools, 10 most popular tools were analysed. The detailed analysis represented in the Appendix 1.

Hootsuite is the most popular software for social marketers that can work with mostly all existing social networks. Unfortunately, most of other available tools specialize on either one social network or a feature of that network, for example, Twitter or scheduled postings.

Almost all analysed social media marketing tools are accessible from the web and have subscription fees, thus, being available as a Software as a Service that would be discussed in the following chapter. That model reduces the logistics and piracy risks. Moreover, it makes it possible for the software to be accessible anywhere in the world and at any time without any additional installations.

Nearly all analysed tools were lacking a good, simple to use and easy to navigate User Interface. They required either additional training or time in order to feel comfortable using the tool. In some case the User Interface was overloaded with too many features, possibilities and data representation that caused the user to loose the track of what of his or her social media marketing activities and/or campaigns.

3 DEVELOPING A SOCIAL MEDIA MARKETING TOOL

3.1 Agile software development

Information technology as a software development process is a very fast changing sphere. The traditional project methodology is substituted by agile methodology which provides the opportunity to be flexible and efficient to react to changes.

Agile software development (ASD) is a methodology that helps to minimize the risks of errors and failure in the project. ASD concentrates on making code simple, specifying the problem, testing over and over again, building simple and easiest things and delivering the ready parts. The idea of ASD is to have many small parts instead of one big application at the end of the project. (Rouse 2007, cited 11.11.2015.)

ASD as a traditional software development life cycle has six stages: planning and requirement analysis, defining requirements, designing the product architecture, building or developing the product, testing the product and deployment in the market and maintenance. The stages of ASD illustrated on the Figure 2.

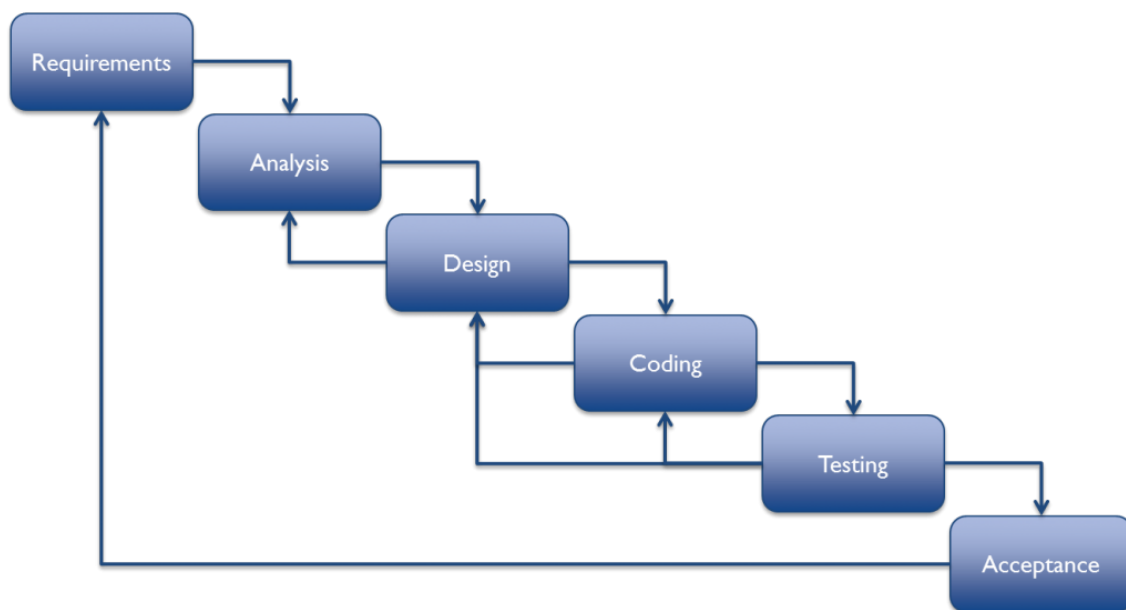


FIGURE 2. Agile Software Development life cycle (Covalent Marketing 2015, cited 11.11.2015)

Agile software development life cycle gives the possibility to developers to cycle back for checking and testing the work. ASD is more adaptable and flexible rather than traditional process of software development which allows to make changes according to requirements. The testing on every stage allows to find errors, bugs and other problems on the early stage. Otherwise, solving problems and bugs can result in additional need for project resources and can postpone the deadline. Due to that every project should have strong management and to find what is inefficient (Covalent Marketing 2013, cited 11.11.2015).

3.2 Software as a Service

For the delivery of the developed tool Software as a Service would be used. Software as a Service, SaaS is a software delivery method that provides access to software and its functions remotely as a Web-based service (Webopedia 2015, Cited 11.11.2015). Social Networks are available as web applications that anyone can access through a web-browser, the software developed in this thesis would comply with that as well.

SaaS is widely adopted by software developers as it makes the delivery smooth and easy, updating is seamless for the client and can be done at any convenient time. Moreover, with SaaS there is a reduction of piracy risks as it does not use Disks that can be easily copied. SaaS does not require any additional installations on the client side since all operations would be done on the server. That creates a possibility to use the software without any separate involvement of the IT department in a company.

SaaS helps with the business model in addition to its other benefits. Subscription fees model is common to be used with SaaS. The client uses the software for as long as he or she pays for it, afterwards, the access can be terminated either automatically or manually. Furthermore, since SaaS does not operate with physical products, worldwide business is easy to approach since there would be no customs involved for export or import (Blackline 2015, cited 7.12.2015.)

The development process of SaaS influences and, thus, should be incorporated in the design, code and the programming way from the start of the development process of the application. Moreover, the architectural planning, for example, of the amount of prospected users and

bandwidth, should be easily scalable. SaaS application to the development of the social media marketing tool is further described in the Future development sub-chapter of this thesis.

3.3 Application-programming interface

An application-programming interface (API) is a set of programming instructions and standards for accessing a Web-based software application or Web tool (Roos 2015, cited 11.11.2015). It is widely used by social network developers as through APIs developers are able to create various applications and increase the popularity of those social networks. APIs provide access to internal functions of most social networks thus making possible to create new applications. Without APIs it is impossible to access, operate or use with any data of social networks.

Twitter, Facebook, Google, YouTube and other web providers have their APIs available for public. Moreover, they have detailed information of APIs that can be easily accessed. APIs of social networks are normally available for several programming languages including PHP and Javascript.

The software development process for this thesis would heavily rely on APIs of social networks. Through APIs the software would be able to fetch home pages, messages, statistical information that would be stored in the database. Due to limitations of APIs of social networks, it is impossible to fetch data real time, that is why retrieved data would be stored in the database and when requested would be shown from there instead of making a new API request. Updates of the account would be fetched within time limits that are allowed for each particular social network. The details on limits and what API requests are available are normally accessible on development pages of each social network. Furthermore, the needed API requests can be tested within those pages as provided for example by Twitter.

4 SOCIAL NETWORKS CHOSEN FOR THE DEVELOPING TOOL

The social world in the web is getting more and more communication networks and sites. There is Facebook, Twitter, YouTube, Google+, Vkontakte, Baidu, Pinterest, LinkedIn, Instagram, Tumblr and many others. In order to start the development of the social media marketing tool, only three social sites were selected that include Facebook, Twitter and YouTube. The reason for that particular selection is due to the popularity and personal experience about those sites.

4.1 The ideal social media marketing tool

Companies have various uses of social media marketing that is growing quite fast. There are lots of tools to full-fill that niche. However, bared on the analysis discussed in the sub-chapter 2.2 of this thesis, each of those tools lack something and cannot become the ultimate tool for social media marketers.

By analysing existing tools, testing them and acquiring their reviews, the missing parts were better understood. The strengths and weaknesses of tools have something in common that would be discussed in more details later in this chapter.

The first thing that should be considered when building the social media marketing tool is that it needs to be available without any installations and could be accessed from any part of the World at any time. Moreover, the user interface should be intuitive and easy to use without the need of any additional training or extra time. The tool should have all most used social networks and even more. The tool should be a one place for all management, reporting and other activities needed in social media marketing. Scheduling of posts is another essential feature for the tool.

The management of the audience is one of the essential components of social media marketing. That is why the tool should embed audience management such as lists, followers or subscribers' analysis as well as the ability to gain the audience. Direct communication with the audience should be also available in the tool.

The statistical data is needed for understanding if the social media marketing campaign is going to succeed or not. It also helps with the budgeting for various marketing activities. Statistics should reflect the reach of each message, post or tweet. It should also show the success or failure of each of those messages, posts or tweets.

The reporting should have two kinds of reports. One is for the daily or weekly use; another one is for the monthly use. Those reports should be portable and easy to use in either presentations or marketing reports. Thus, there is a need to have PowerPoint version as well as the pdf available for download or set to automatic sending of those reports to the desired email address.

Even though each social network is unique and has its own features, in order to make a simple and understandable user interface, all social networks in the developing tool should have a unified interface that is easy to use and navigate through. Moreover, there is a need to have the possibility of managing more than one account in each social network. The support should be available via chat and email during closed hours. The support should be as efficient as possible for keeping the client calm and stress free.

4.2 Introduction to Facebook

Facebook is one of the most popular networks with 1.19 Billion worldwide users (Scherer 2014, cited 11.10.2015). Nowadays, Facebook is actively used for creating and increasing the brand or company awareness. Companies create web pages and post news, share photos and videos, make updates of important changes and events. Moreover, companies use personal details such as demographic data, job titles, marital statuses, age and hobbies that users have in their profiles. In addition, companies are not obligated to make frequent, updates can be posted several times a day or several times a week, it doesn't affect much the popularity of company brand or what followers think about the company.

Facebook is the most used social network that combines the biggest amount of features that any social network can offer at the time of writing of this thesis. Facebook marketers have many possibilities for engaging with Facebook users, for example, the ability to restrict the page or a group to a certain audience helps to have a more targeted audience that can result in a higher conversion rate of acquiring a customer, loyal customer or a one-time buyer.

There are groups, personal pages and public pages in Facebook. Every user has his or her personal page. Any user can create a group or a public page in addition to his personal page. Groups are intended for creating communities, on the other hand, public pages represent business, brand or product. Furthermore, Facebook has advertising possibilities inside its network.

Public pages are the ones that interest companies the most as they have the accessibility to analytics and newly introduced Facebook Insights. As stated on the popular marketing blog kissmetrics "By using Facebook Insights you'll be able to determine the best time of day to post, the best day of the week to post and what type of content is most popular" (Kissmetrics 2015, Cited 1.12.2015). Facebook Insights is the ultimate marketing tool to be used for analyzing the results on social media marketing campaigns. Facebook Insights would be heavily used in the software developed in this thesis. Moreover, the data received from Insights would be analyzed further and presented in an intuitive way. Facebook public pages are the only ones that have Insights' analytics, that is why everything in the designed during this thesis software would be referring to Facebook public pages.

4.3 Implementation of Facebook in the developing tool

The software development had a goal of creating an intuitive and easy to use tool for marketers. The front page is one of the most important pages in the software as with a glance a marketer should know the situation of the performed social media marketing efforts. The outcome of it can be seen below on Figure 3. Zoomed elements of Facebook discussed further in this sub-chapter are available in the Appendices 2 - 3.

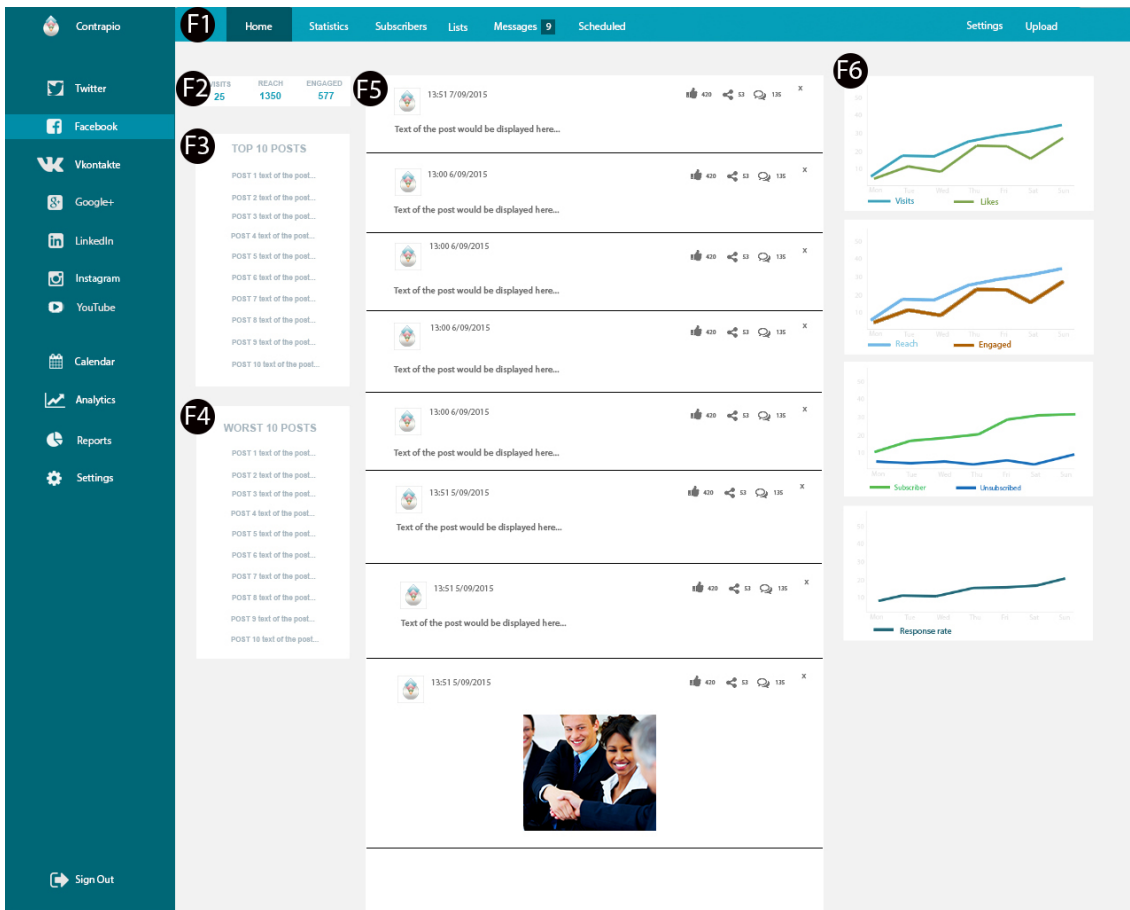


FIGURE 3. Designed Facebook Home Page.

There are three important elements for Facebook marketers, they are visits, reach and the amount of engaged users. Visits is the amount of visits of the public page may it be through shared links, search engines or any other possible way. According to Facebook help pages “post reach is the number of people who have seen your post” (Facebook Help Center 2015, cited 1.12.2015). Whenever the post is showed in the News Feed of Facebook it counts as reach. Engaged are unique Facebook users who have either liked, commented, clicked or shared a page post.

Top 10 posts are the best posts that have been made for all time unless set differently in settings. They tend to help marketers with pointing at correct strategies used that should be analysed and utilized in other posts. Worst 10 posts are opposite to Top 10 posts and tend to help the prevention of mistakes in further posts.

The middle part of the designed Facebook home page has the Timeline with all posts on the public page. Each post has some statistical information including likes, shares and comments of

each particular post. Any of those posts can be clicked that would bring the post in a new window with all comments and the ability to answer to them. Moreover, any post can be clicked on the cross sign at the top right side for either hiding from the page that would not affect the disappearance of the post from the public page or completely deleting the post.

The right side of the designed Facebook home page contains statistical graphs. Those graphs are a glance of a more detailed statistical information that is under the statistics tab of the Facebook menu. Graphs show the weekly amount of page visits, likes of posts, reach, the amount of engaged users, the amount of subscribers or the ones who liked the public page itself as well as the ones removed the like of the public page, thus, becoming unsubscribed, response rate. The data on the graphs would be described later in this sub-chapter.

The statistics page shows public page metrics. First of all, at the top of the page it shows page visits with all visits, today visits, week visits, month and year visits. That kind of information and design would be used on every statistical page throughout the designed during this thesis software. The graph can be changed to show the information within the desired period of time. Below the graph is a more detailed information including date, the amount of views and the source of those views. The outcome of the designed statistical page can be found below at Figure 4. Other statistical elements would be presented in a similar to page views way.

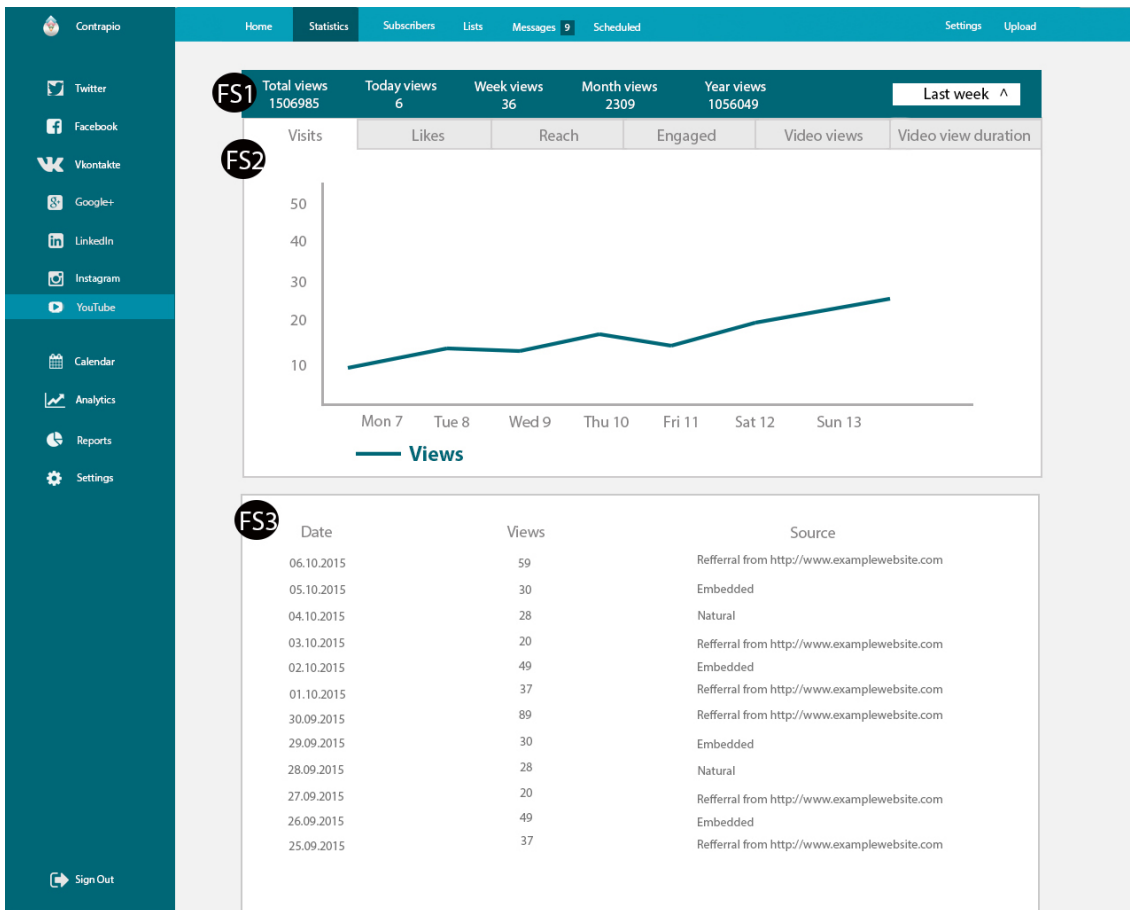


FIGURE 4. Designed Facebook Statistics Page.

The Subscribers tab shows the ones who liked or stopped liking the public page. That information is the benchmark of other marketing activities. More attraction the page receives more page likes, views, shares it would gain. However, if something is done wrongly the amount of page likes would decrease, moreover, the likes that have been made could be unliked leaving less subscribers to the public page and reducing the reach.

Lists help to manage and separate different segments and target audiences. Most companies have at least two segments that are different, for example, business to business and business to customers. Those segments can have different purposes and utilizations, what is relevant to one segment may be not relevant to the other one. Lists can be used to address the message to a particular segment.

Messages is the direct communication channel with either a promoter, another brand, social content provider, etcetera. Direct messages similar to emails that could be utilized for same functions.

Scheduling is an important feature of social media marketing tools. It allows to publish posts on holidays or whenever the marketer is away from the office. Furthermore, scheduling simplifies the process of chained posts that follow each other and tend to have one goal that the whole campaign has set.

Settings are specific to the network settings, for example, sharing the location when posting or not. Moreover, that tab helps to customize the way and feel of Facebook reports, how often would be sent, when exactly it would be sent and what it would include.

4.4 Introduction to Twitter

Twitter is another most popular social network. In Twitter messages can be post that are no longer than 140 characters. This network is good for marketing companies, sport-related businesses, software as service companies and for in-the-moment development. Users use Twitter because they want to be on top of latest trends, news and events. They want “to keep up-to-date about what’s going on “(Scherer 2014, cited 11.10.2015). The brand awareness can be increased by going to the source. Posts should consist information about latest trends and technologies, future sector development, events that important for the company. Moreover, Twitter helps to monitor feedback of companies, customer support, in order to learn more about customers’ problems and reviews.

In 2006, Twitter was launched. Twitter was originally created as a mini blogging platform that anyone could use to share what was short for a blog. Twitter was brought to life with the idea of finding a simple way to share what his friends were doing—that is, their status at any given moment (Thomases 2010, 4). Twitter is a real time micro-blogging social network. Users follow other users in order to be up-to-date to latest trends, news, ideas, business or casual insights, events and other happenings, etcetera.

Twitter is still maturing and growing, for example, it has utilized the advertising business model to their network recently, while other social networks have been using it for a while already. Twitter is lacking some features that are essential for every marketing activity. There is not much of detailed statistics and analytics tools. There are various online services offering just pieces for the

whole analytics, for instance, scheduling tweets services, followers and unfollowers tracking, reach, etcetera.

4.5 Implementation of Twitter in the developing tool

The front page of Twitter in the designed software contains all important information that by looking at just that page the marketer can understand the level of current activities and whether they are successful or not. The result of it can be seen on Figure 5 below. Zoomed elements of Twitter discussed further in this sub-chapter are available in the Appendices 4 - 6.

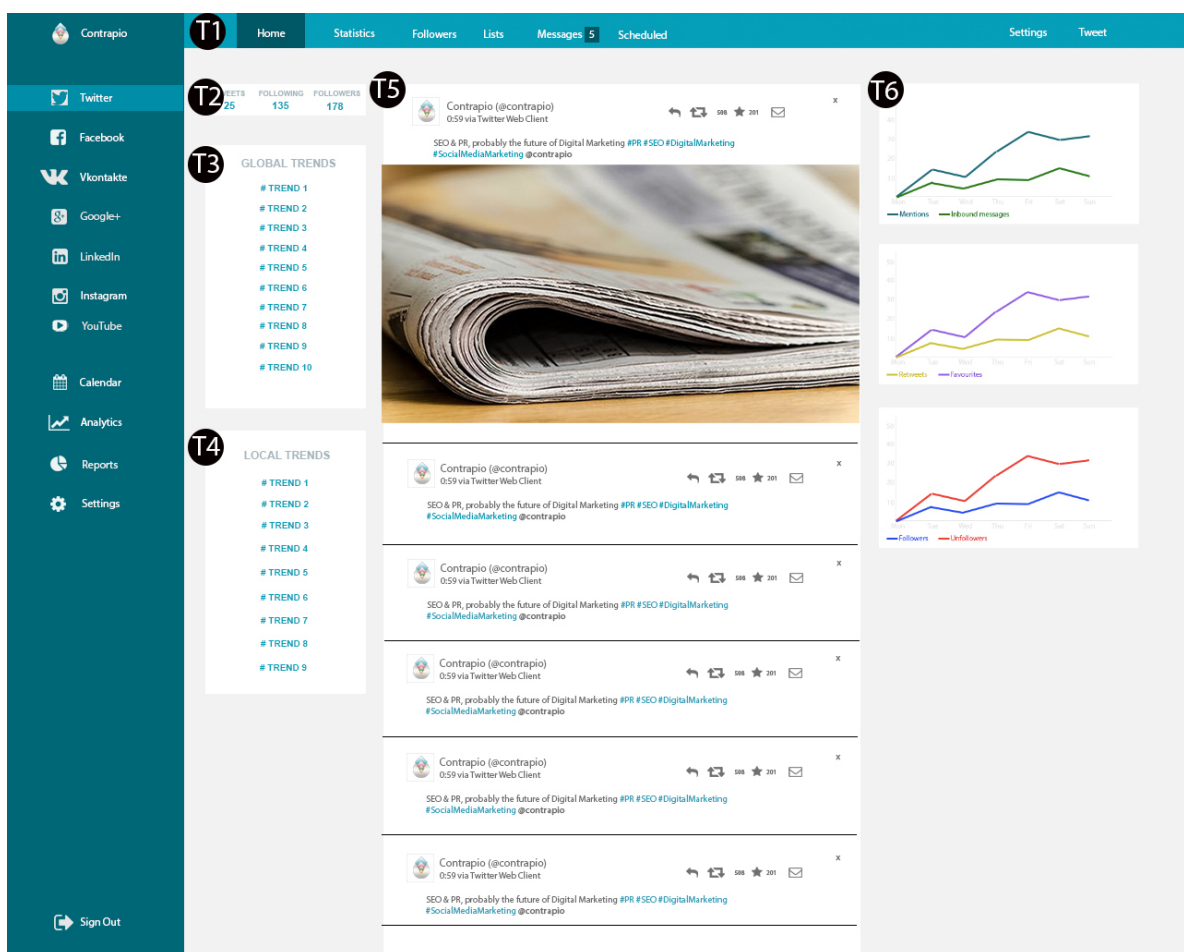


FIGURE 5. Designed Twitter Home Page.

In the Twitter world there are three important numbers that you would see right away on each profile as well as on the home page of your own profile. Those are the following: tweets, following and followers. Tweets is a measure of the activity level of any particular twitter account. The amount of who is followed is essential due to the fact that content providers should have a greater

amount of followers rather than followings. Moreover, some of who is followed follow back thus increase the amount of followers. The amount of followers shows how active and trustworthy the account is. More followers mean more reach on tweets and more business as well as engaged users.

Trends is another analytical instrument offered by twitter that can be found on each page. Trends show of what are most discussed topics at this particular moment. They are created by analysing keywords, also known as hashtags, within each tweet. There is a marketing strategy that utilizes trends for promotion. Twitter trends can help marketers, because they enable the marketer to identify any problems people might have that can be solved, see what opportunities are coming up, or figure out whether there is a want to be part of any conversations (Lacy 2010, 165).

Trends can be global or local. Global trends show most discussed hashtags throughout the world despite the language used. On the other side, local trends show hashtags that are discussed in your area or closest to your area. Trends can have a very powerful effect and reach on the audience since it is almost equivalent as advertising on each page.

On the software front page, besides tweets, following, followers and trends, there is a twitter stream of the logged in account. The stream makes it more efficient for the marketer to see right away his or her last posts and their statistical and analytical data.

Tweet is a message with a maximum length of 140 characters, including hashtags and spaces. Each tweet can be replied to, shared, also known as a retweet, favoured. Mentions are messages where your username is used in any part of the message. Replies are equivalent to mentions on Twitter. Mentions are important to understand the total reach of the message since whoever replied or mentioned the username will have that message on their profile that would be visible by that person's followers, thus, increasing the reach. Moreover, mentions also reflect the engagement level of the community into any particular message and can give a rapid boost to the brand presence. This is represented in the Figure 6 together with Retweets and Favourites.

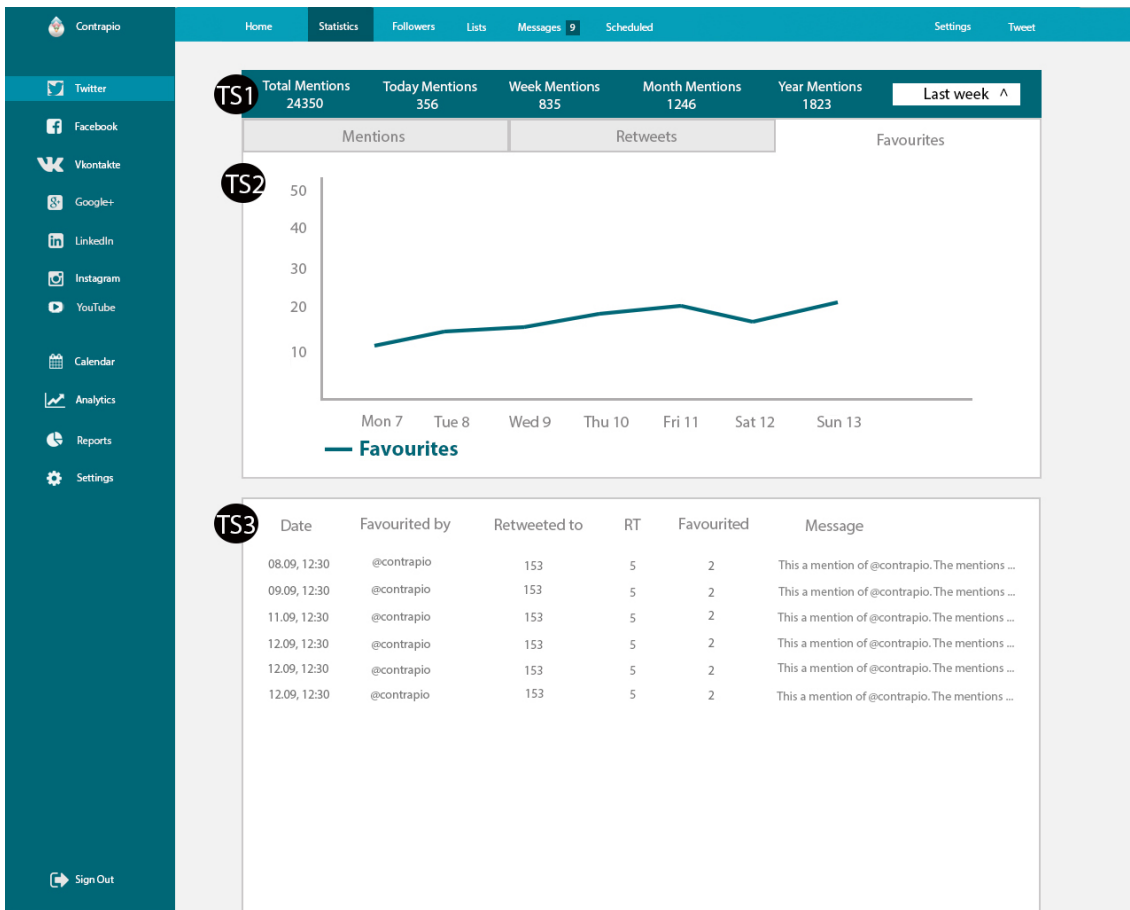


FIGURE 6. Designed Twitter Statistics.

Retweet is a sharing of the whole tweet to the followers of any particular account, for example, if you find something unique or appealing that one of your twitter content providers have made, you can share it to your followers spread the word. Retweets influence the reach of a tweet in a similar way as mentions. The greater the amount of retweets, the greater the amount of influence the account has.

Favourites is another way to share a tweet. It can be seen as a bookmark. Favourites can be marked for later reading or for the development of account positioning, for instance, trending messages in the area, reviews or feedback from clients, anything related to the business. In addition, potential follower will have an idea of what you are interested in.

Each message can have its own reflection on mentions, retweets and favourites that is why they have to be analysed in depth. Furthermore, those elements can help to coordinate marketing activities and foresee arising needs and problems.

It is not difficult to manually manage the followers, however, when the number of followers would be increasing it would start to get difficult. The Followers tab has versatile tools for managing followers as well as gaining new ones. You can follow your followers and create a professional communication channel. You can also follow the ones that your followers are following since everyone follows accounts of any particular interest to them, it can be relevant to get engaged with more professionals in your area or with clients in the same segment. There is also a possibility for bulk copy & paste following. That all is represented in Figure 7 below.

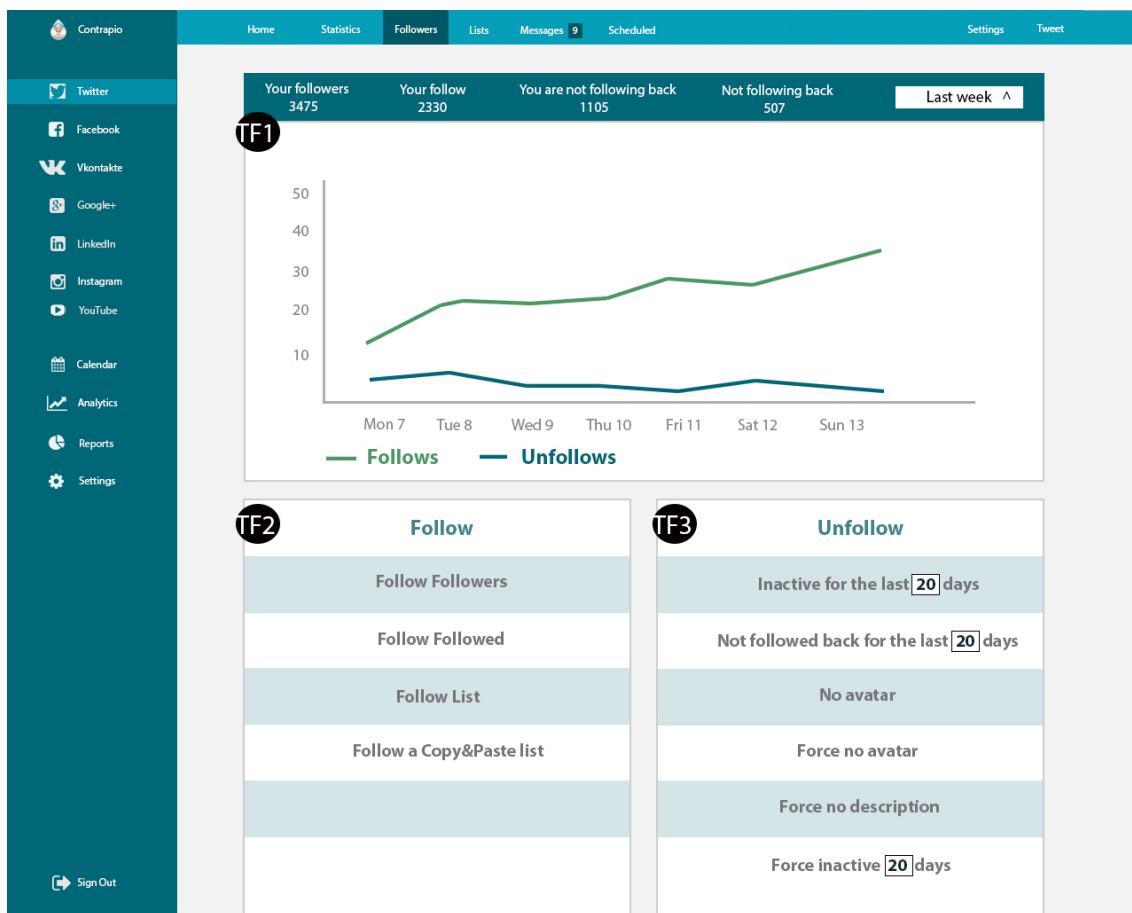


FIGURE 7. Designed Twitter Followers.

Similar to following possibilities the tool offers various instruments for unfollowing. Having many followers does not mean that they are all relevant and worth. 100 active followers are better than 1000 irrelevant ones. Within the tool you can unfollow the ones who do not have an avatar or/and any information on their profile, thus reducing the amount of irrelevant followers and improving your account. Furthermore, inactive followers can be unfollowed, the ones that have not been doing anything on twitter recently. One of the strategies to gain followers is to follow new accounts and then they will follow back, unfortunately, it does not work all the time. The ones who

are not following you back can be unfollowed within the tool. There is also a possibility for bulk copy & paste unfollowing.

Lists is the most efficient way to manage the audience. They can be utilized for directing the message to the exact audience. Lists can be used in the follower's tab to follow or unfollow any of them. Otherwise, they would be used the same way as described in the Implementation of Facebook in the developing tool sub chapter.

Direct messages are a private way of communication on Twitter. Personal questions, offerings, sales can be done through direct messages. Furthermore, direct messages can also be a reaction to any particular tweet.

There are times when a marketer is on vacation, sick-leave or is not able to do the post on time. The tool helps to encounter any problems with posting by offering the scheduling possibility. The marketer can spend some time to schedule a series of posts and then just wait and follow the statistics.

4.6 Introduction to YouTube

In 2005, YouTube came to an existence. YouTube was the biggest video hub on the web and still is. However, the whole company was acquainted by Google later. YouTube is a video social network and the second biggest search engine (Cohen 2015, cited 11.10.2015). Video blogging has appeared and has changed the content creation.

YouTube attracts its users with possibilities to watch free videos and to perform various activities such as liking, commenting, favoring and sharing of videos to the friends or web-visitors. This social network is good for all types of businesses. YouTube videos can have different topics and formats, one of the recommendations is to shoot videos around 3 minutes in general. The topic of the video can help to communicate with customers. Organization can post videos about products, education video, entertainment video, or commercial videos depending on the business segment. YouTube is the only social network that pays to its users depending on their effort towards the network.

4.7 Implementation of YouTube in the developing tool

As previous Social network design patterns, YouTube design implementation in the tool has an intuitive and easy to use front page that is similar to other designs within the tool that could be observed on the Figure 8 below. Zoomed elements of YouTube discussed further in this subchapter are available in the Appendices 7 - 8. Videos, Subscribers and Views are key three elements to know how the account is doing. The amount of videos shows the activeness of the account. Video blogging is not much different from blogging and has to have a timeline of new content postings meaning, for example, that new videos will be available every Thursday. The amount of subscribers is the reach of the video and a solid base of prospects. The greater the number the better pay off it would bring. The amount of views is the actual number of how much views all videos have received. By knowing those three numbers it is easy to see the activeness of the account as well as it's subscribers.

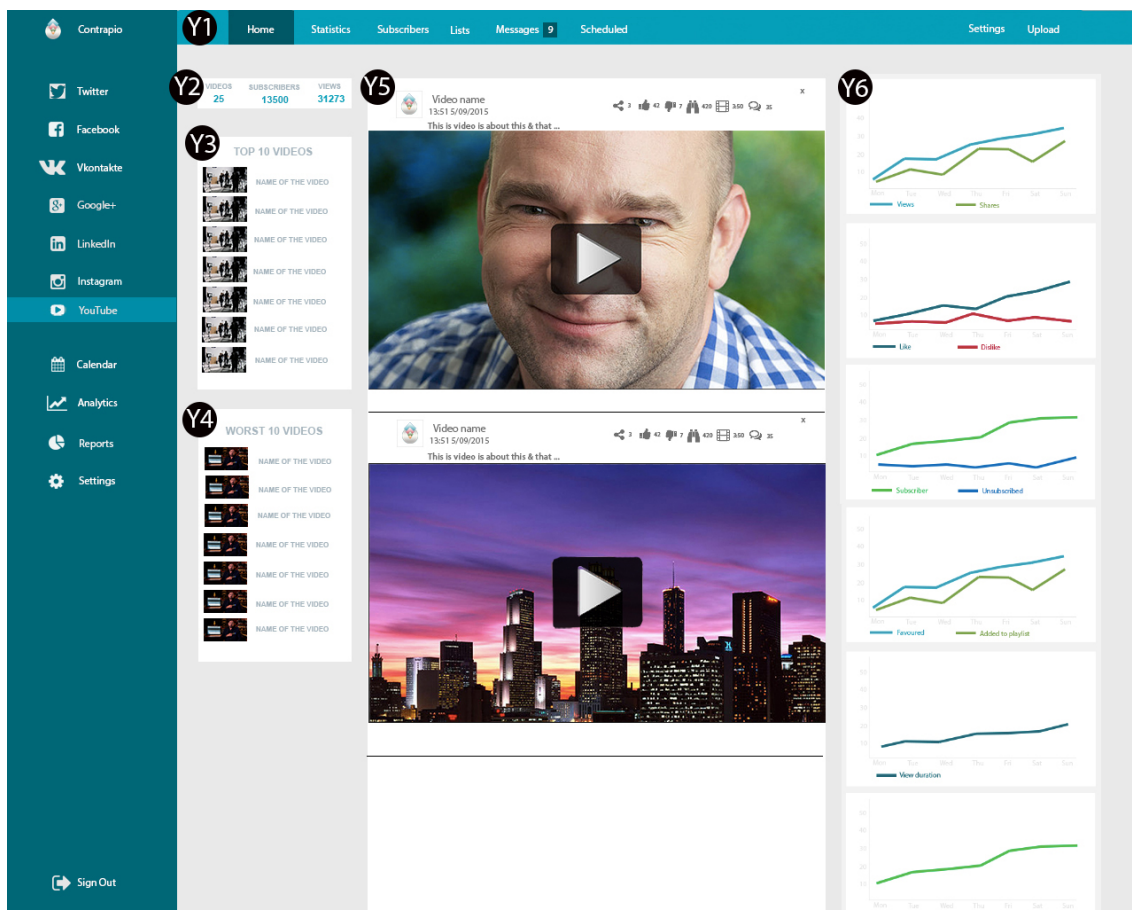


FIGURE 8. Designed YouTube home page.

Top 10 videos shows the best videos of all time on the channel. Those videos can be used for analysis for improving other videos or to share them in other marketing activities. Worst 10 videos are the opposite of the top 10. That list tends to show to the account owner what mistakes avoidance should be considered in further videos.

In the middle of the page there is a video stream of the logged in account with needed statistical data on each video. That data includes the amount of shares, likes and dislikes, views, total view duration, comments.

On the right side of the screen there is a visual representation of all statistical data. That approach saves time to the account user as he or she does not need to go to a different tab and can view everything on one page. The detailed information on each statistical element is under the Statistics tab in the main menu of YouTube. The Statistics tab is shown below on the Figure 9.

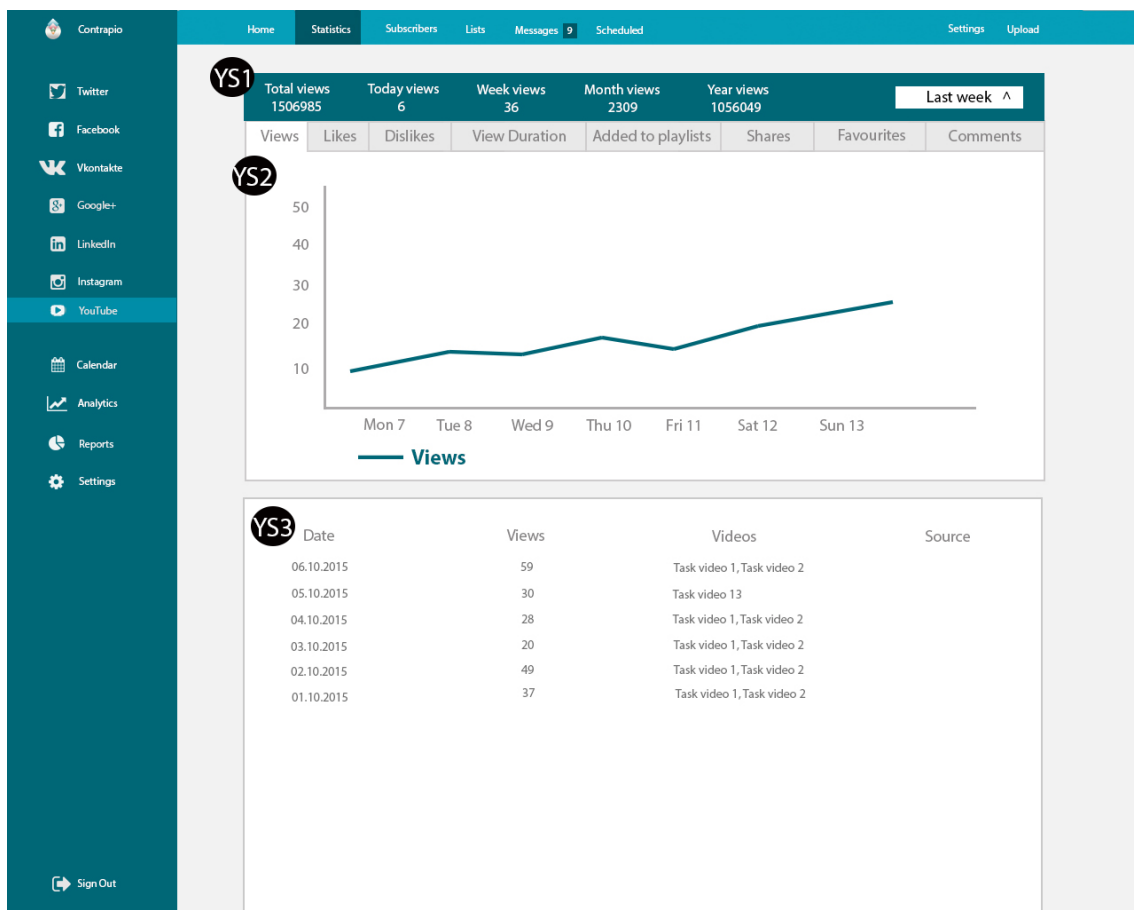


FIGURE 9. Designed YouTube statistics.

Since YouTube belongs to Google, it has a wide range of statistical and analytical tools built in. Views as has been mentioned before is one of important measure for the account evaluation. Moreover, the amount of payment from YouTube depends on the amount of views. Views can be checked for a certain period of time. Furthermore, it shows total views for the day and what videos were viewed on that day and from which source. Sources are needed for understanding the audience as well as finding out if any particular campaign works or not.

Likes and Dislikes show the attitude towards the video. The more likes video would have the more chances it would go on top of the search on the YouTube. Dislikes show that there is something needed to be improved. Both of that data is anonymous, thus, no possibility to track to the source.

View duration is an element that is in a way similar to the page view duration in a web-site analysis. It shows if any particular video has been watched till the end or not. It also reflects the engagement with users. The better video content quality the better video duration will be.

YouTube offers the possibility for its users to create playlists. There is a default playlist that everyone has called watch later. Added to playlists tab shows the statistical information on which and how many videos have been added to playlists. Playlists can consist of three or more videos and can be viewed by others, for example, if the subscriber of the channel have added a video or several videos made by one brand to the playlist, others will be able to view all of those videos without searching for them. That improves the brand awareness as well as the reach.

Shares is one of the most important statistical elements, it is available in every social network as it makes the social network core. Without shares, there would be no viral content or word of mouth strategy. The more shares are done to the video the bigger the reach it gains as the subscribers of a sharer will also be able to view it and share further.

Favourites is another way to increase the reach of the channel. Favourites are visible on the page of any user and can be easily found if needed. They show what any particular user favourites, thus, making the understanding of the audience better.

Comments is a direct feedback to the provided content. It can help to improve further videos. Moreover, the more comments you have the more engagement you get from subscribers. With comments there is a need to reply to them in order to establish a personality of the channel.

Subscribers are very important to the channel as they show if the channel is small or big and what level of trust does it have. Under the Subscribers tab all subscribers can be seen. Moreover, the amount of their subscribers is also viewable. That information can be used to establish a relationship with a channel and to subscribe to other members of the YouTube.

Lists is the manageable database of YouTube users. Lists can have different audiences categorized. There is a possibility to make hidden videos on YouTube, meaning that the video can be accessed only if there is a direct link. Those hidden videos are a great way to have targeted content for the particular target audience.

Messages is a direct way to contact any user on YouTube as well as to get contacted. Through messages there is the best establishment of a personal relationship. There are numerous other benefits of messages.

Holiday videos or videos when the marketer is not at his or her job can be posted with the scheduling feature of the software. Scheduling is one of the core parts of the software that tend to make the life of a marketer easier, thus saving money to the company.

5 CONCLUSION

Social media marketing is a popular to topic to be discussed in books as well as in web resources. Marketing specialists share their professional experience, tips, reviews of methods, approaches and tools in the social media marketing world. Furthermore, social sites try to improve themselves by adding features not only for the users of that social site but also for marketers such as advertising and marketing data.

Unfortunately, there is not much information available concerning the creation of a SaaS. Since SaaS is heavily utilized as a business model and requires good knowledge of the server administration, there are not known ready made solutions for the scalable, extendable web application development.

5.1 Future development

Social media marketing is still maturing and one of the most changing. However, the niche of social media marketing software is still not filled, thus, leaving almost endless possibilities for it to be taken. Business is using social networks to reach to their customers, partners, prospects. Unfortunately, complex tools with complicated User Interface keep new business away from using such tools as part of their marketing. Intuitive and easy to use User Interface accessible anywhere and at any time with extensive amount of features, detailed reports and the possibility to tweak it to the needs and requirements are the fundamental part of making the best and most competitive software.

Due to the time frame of this thesis, the development process has been stopped at the design phase of the Agile software development model. However, it can be continued to later stages for the final implementation. Through using the Software as a Service business model the whole project can become easy to deliver to the end customer as well as to update and enhance features.

The most suitable programming language for the software development is the latest version of PHP and Ajax. Mostly all APIs of social networks are available in PHP. PHP was created for web

development and is supported with all hosting providers. PHP can be used in three ways as described by Rasmus Lerdorf: server-side scripting, command-line and client-side Graphical User Interface (Lerdorf 2002, 14). On the other hand, Ajax would help to create a web application that looks and feels similar to a desktop application (Holzner 2006, 21). Moreover, Ajax would make it possible to reload parts of the web application that is important for stream or real time updates.

For any application in order to use features of social networks APIs should be used. However, the access to APIs can be received only through APIs Open Authentication, also known as Oath. Oath is the middle layer between the social network and the end user that helps to insure that any application gets only the required and permitted data (Oath 2015, cited 8.12.2015). The limitations of APIs' queries should be considered, thus, using local storage or a database for storing data and preventing unnecessary use of APIs' queries. APIs of social networks change and evolution a lot in a direction sometimes not known, for example, Facebook Insights that have been recently introduced that gives more analytical data that has ever been, or a change to Oath 2.0 that requires a more precise permission from the end user.

Openstack can be used to insure the scalability of the SaaS. As stated on the official Openstack web-site: "OpenStack software controls large pools of compute, storage, and networking resources throughout a datacenter, managed through a dashboard or via the OpenStack API" (Openstack 2015, cited 8.12.2015). Openstack is an open source software, thus, would not need to be purchased and could be adapted and used for either private or commercial purposes without much restrictions.

All in all, the software design can be utilized to have a full featured web application that could suit the needs of both new and professional marketers. Moreover, all APIs, specific social networks features have been implemented into the design, thus, having everything prepared for later stages of the agile software development. Due to the fast changing nature of social networks and it is APIs, there might be a need of small adaptations to the future.

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LIST OF APPENDICES

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ANALYSIS OF ADVANTAGES AND DISADVANTAGES OF EXISTING SOCIAL MEDIA MARKETING TOOLS

| Social medial tools name | Advantages | Disadvantages |
|--------------------------|---|--|
| Hootsuite | <ul style="list-style-type: none"> + Operate with many social networks; + Can be manage more than one account; + Provided as SaaS; + Available on desktop computers as well as on mobile devices; + Reporting build tool, present SMM data into pdf file; + The built in URL shortener with tracking capabilities; + Schedule posts, can attach images or files; + It also has the built in URL shortener with tracking capabilities. | <ul style="list-style-type: none"> - Price is not valid for small companies; - The URL shortener can be customized with an extra expensive payment; - Facebook image problem; - Social networks are available as modules developed either by Hootsuite or third parties; - Modules have a monthly subscription fee; - Overcomplicated interface; |
| TweetDeck | <ul style="list-style-type: none"> + Manage multiple twitter accounts and twitter lists; + Schedule; + Everything can be seen in one window; + Provides customization of Twitter streams. | <ul style="list-style-type: none"> - Should be downloaded and then installed; - Cannot be use on multiple computers; - No mobile version; - The interface is a column based and has the maximum size of 9 columns that limits the customization abilities of the tool; |

-Work only with Twitter

Buffer

- + Easy to use tool for Twitter;
 - + The tool has the scheduling feature;
 - + Work with RSS feeds for easy sharing of blogs;
 - + The possibility to work with photos, videos;
 - + Pablo tool for an image creation and sharing it to social networks.
 - + The browser extension;
- Have limitations on other features of Twitter;
 - Buffer users cannot view their Twitter feed;
 - Users have no possibility to interact directly with followers.

SocialOomph

- + Assists with adding real human spam free followers;
 - + Various automation tools;
 - +Compatible with every operating system;
 - + It is stable and secure as well as it has the URL shortener;
 - + Unlimited number of tweets uploading limits;
 - + Offers Facebook scheduled posts.
- SocialOomph needs time to adapt to it;
 - Has boring and messy interface;
 - Intended for small and medium sized businesses thus does not have extensive and reach capabilities

Crowbooster

- + Crowbooster is a tool to increase the amount of fans and followers;
 - +Support Facebook and Twitter;
 - + Crowbooster has a real-
- Supports only Twitter and Facebook;
 - There is a voting system on the forum concerning integration other social networks, but might take a

| | | |
|----------------------|---|---|
| | <p>time audience growth unlike long while to the actual other similar tools; integration;</p> <p>+ The tool has live chat and forum support for users.</p> | <p>- Possibility to manage only 1 Facebook page and 1 Twitter account.</p> |
| Sprout Social | <p>+ Supports many social networks;</p> <p>+ Well organized dashboard with an intuitive and understandable menu;</p> <p>+ Scheduling feature and comprehensive reporting;</p> <p>+ The Messages area presents all connected Twitter, Facebook, and Google+ profiles in a single, unified stream, which Sprout Social calls "Smart Inbox."</p> | <p>- It is limited to Twitter, Facebook, Google+ and LinkedIn;</p> <p>- The user interface has difficulties for navigation;</p> <p>- There is also a lack of LinkedIn, YouTube and other visual platforms integration;</p> <p>- The tool is expensive especially if used in a team;</p> <p>- There is no side by side stream, limited filtering;</p> <p>- The scheduler only allows different times to be chosen for weekdays and weekends.</p> |
| Sendible | <p>+ Integrates with a wide number of social channels;</p> <p>+ Integration with the most popular URL shortener;</p> <p>+ Detailed tracking and analytics module;</p> <p>+ Possibility to schedule messages;</p> <p>+ Have RSS postings;</p> <p>+ Monitor multiple review sites like Yelp, Trip and Advisor;</p> | <p>- Sendible is a bit complex and overwhelming at first, thus, needs some time spending for getting used to it or acquiring a training;</p> <p>- There is a need to contact the company for the account;</p> <p>- The price of the monthly subscription is not cheap.</p> |

| | | |
|------------------------|--|---|
| | + Sendible can see trending hashtags. | |
| SocialBro | + Devoted to Twitter network; + It has a mass add/remove accounts from the list of who get followed; + It can analyze competitor's followers and the strategy; + Offers geographical mapping of the community. | - Does not have the best User Interface; - Sometimes it is very confusing and hard to navigate; - Design elements could be implemented better; - Does not support any social networks beside Twitter; |
| Simple Measured | + Simple Measured offers reports for all major social networks; + Reports can focus on any specific aspect of social activity or competitive analysis; + Offers extensive reports on web traffic, Facebook pages, multi-profile analysis; + All reports can be downloaded and used in PowerPoint. | - Simple Measured is lacking scheduling feature; - There is not much support of any URL shorteners; - No multi-media analysis represented that is needed for YouTube videos and others; - There are limited adjustments for reporting; - Too deep of analysis that might be needed monthly. |
| Oktopost | + Can integrate all social communications through the social inbox; + It can track individual campaign through analytics. | - Concentrates on posting only. - Oktopost does not have cross-post ability between networks. |

FIGURE F1. Facebook main menu

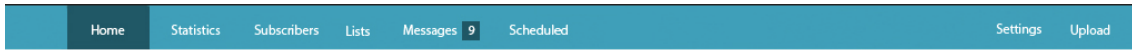


FIGURE F2. The table of key elements Facebook

| VISITS | REACH | ENGAGED |
|--------|-------|---------|
| 25 | 1350 | 577 |

FIGURE F3. Top 10 posts

- TOP 10 POSTS**
- POST 1 text of the post...
 - POST 2 text of the post...
 - POST 3 text of the post...
 - POST 4 text of the post...
 - POST 5 text of the post...
 - POST 6 text of the post...
 - POST 7 text of the post...
 - POST 8 text of the post...
 - POST 9 text of the post...
 - POST 10 text of the post...

FIGURE F4. Worst 10 posts

- WORST 10 POSTS**
- POST 1 text of the post...
 - POST 2 text of the post...
 - POST 3 text of the post...
 - POST 4 text of the post...
 - POST 5 text of the post...
 - POST 6 text of the post...
 - POST 7 text of the post...
 - POST 8 text of the post...
 - POST 9 text of the post...
 - POST 10 text of the post...

FIGURE F5. Facebook stream



FIGURE F6. Graphics of analytical data of Facebook

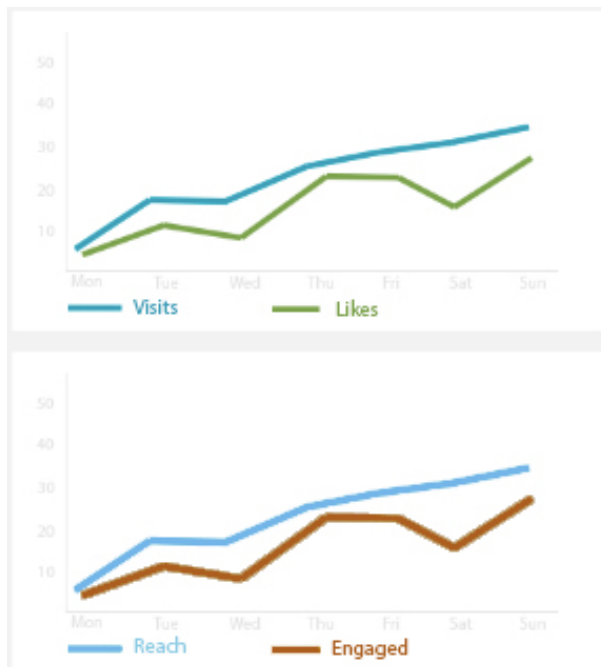


FIGURE FS 1. Facebook’s statistical element overview menu

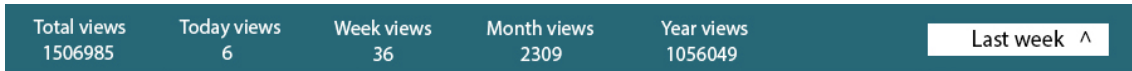


FIGURE FS 2. Facebook’s visual representation of the statistical element’s data changes over last week

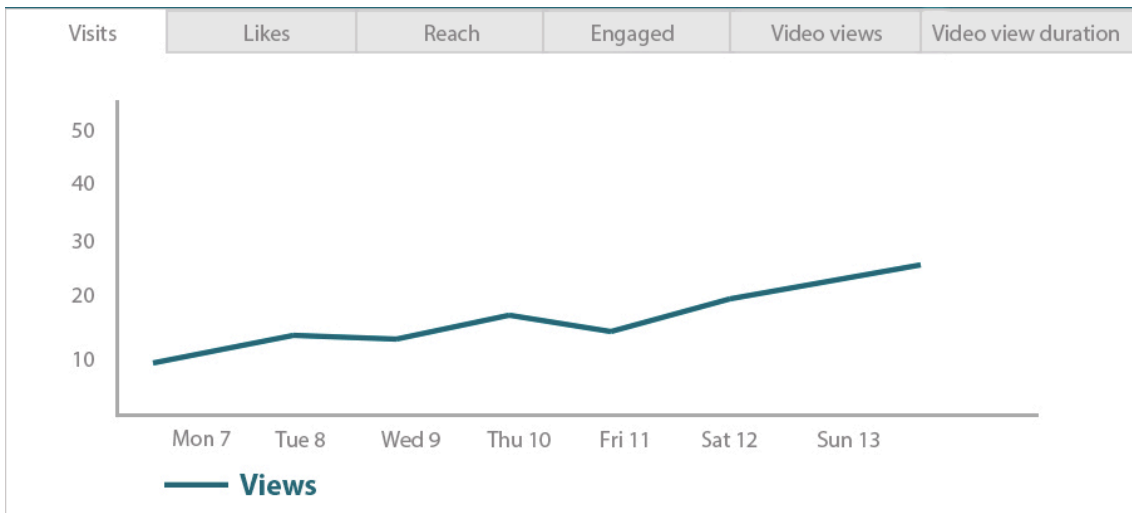


FIGURE FS 3. Facebook’s statistical element data on changes over last week

| Date | Views | Source |
|------------|-------|--|
| 06.10.2015 | 59 | Refferral from http://www.examplewebsite.com |
| 05.10.2015 | 30 | Embedded |
| 04.10.2015 | 28 | Natural |
| 03.10.2015 | 20 | Refferral from http://www.examplewebsite.com |
| 02.10.2015 | 49 | Embedded |
| 01.10.2015 | 37 | Refferral from http://www.examplewebsite.com |
| 30.09.2015 | 89 | Refferral from http://www.examplewebsite.com |
| 29.09.2015 | 30 | Embedded |
| 28.09.2015 | 28 | Natural |

FIGURE T1. Twitter main menu

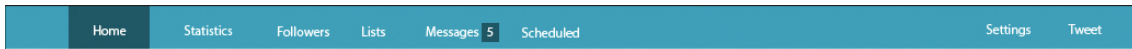


FIGURE T2. The table of key elements of Twitter

| TWEETS | FOLLOWING | FOLLOWERS |
|--------|-----------|-----------|
| 25 | 135 | 178 |

FIGURE T3. Global Trends of Twitter

GLOBAL TRENDS

- # TREND 1
- # TREND 2
- # TREND 3
- # TREND 4
- # TREND 5
- # TREND 6
- # TREND 7
- # TREND 8
- # TREND 9
- # TREND 10

FIGURE T4. Local trends of Twitter

LOCAL TRENDS

- # TREND 1
- # TREND 2
- # TREND 3
- # TREND 4
- # TREND 5
- # TREND 6
- # TREND 7
- # TREND 8
- # TREND 9

FIGURE T5. Twitter stream



FIGURE T6. Graphics of analytical data of Twitter

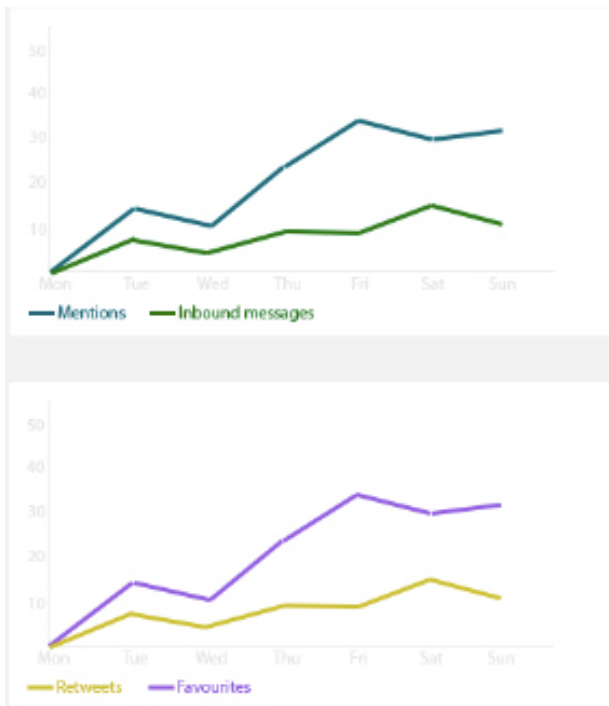


FIGURE TS1. Twitter’s statistical elements overview menu



FIGURE TS2. Twitter’s visualization of the statistical element changes over last week

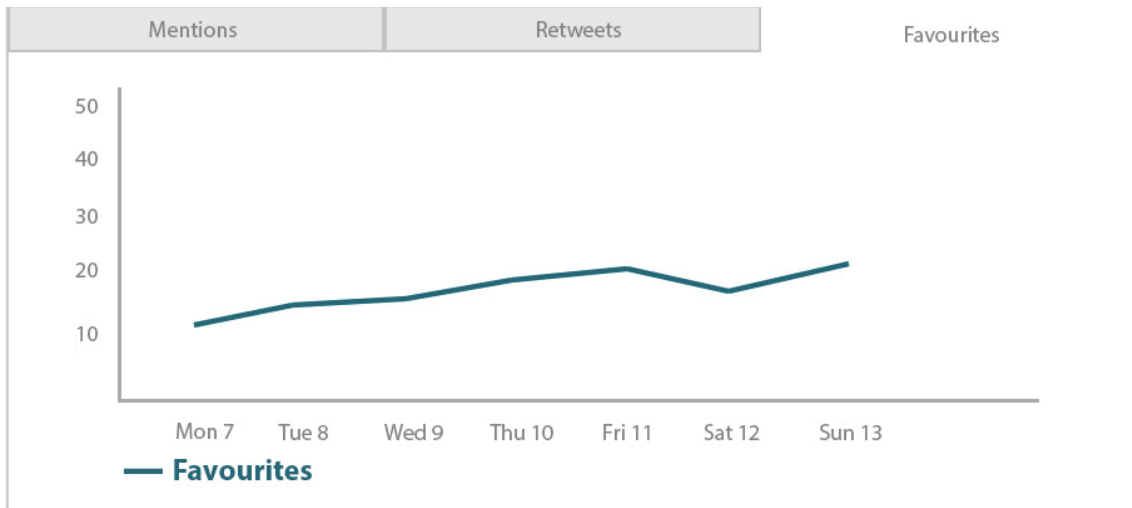


FIGURE TS3. Twitter’s statistical element data on changes over last week

| Date | Favourited by | Retweeted to | RT | Favourited | Message |
|--------------|---------------|--------------|----|------------|--|
| 08.09, 12:30 | @contrapio | 153 | 5 | 2 | This a mention of @contrapio. The mentions ... |
| 09.09, 12:30 | @contrapio | 153 | 5 | 2 | This a mention of @contrapio. The mentions ... |
| 11.09, 12:30 | @contrapio | 153 | 5 | 2 | This a mention of @contrapio. The mentions ... |
| 12.09, 12:30 | @contrapio | 153 | 5 | 2 | This a mention of @contrapio. The mentions ... |
| 12.09, 12:30 | @contrapio | 153 | 5 | 2 | This a mention of @contrapio. The mentions ... |
| 12.09, 12:30 | @contrapio | 153 | 5 | 2 | This a mention of @contrapio. The mentions ... |

FIGURE TF1. Twitter’s followers overview menu and visual representation of changes over the last week

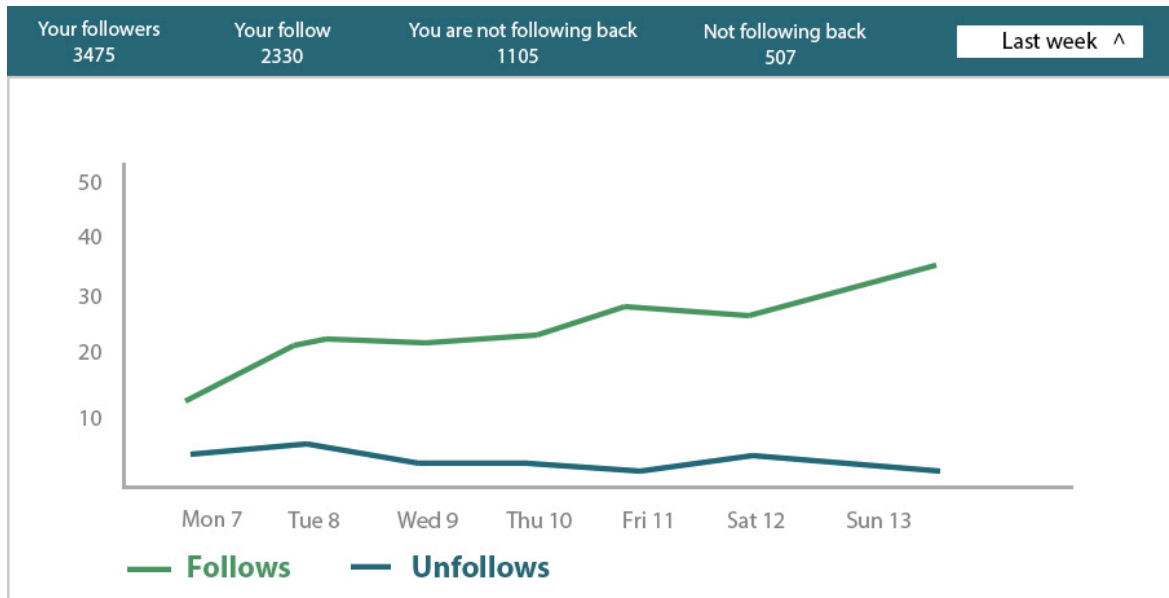


FIGURE TF2. Twitter’s follow action list

- Follow**
- Follow Followers**
- Follow Followed**
- Follow List**
- Follow a Copy&Paste list**

FIGURE TF3. Twitter's unfollow action list

| Unfollow |
|---|
| Inactive for the last 20 days |
| Not followed back for the last 20 days |
| No avatar |
| Force no avatar |
| Force no description |
| Force inactive 20 days |

FIGURE Y1. YouTube's main menu



FIGURE Y2. The table of key elements of YouTube

| VIDEOS | SUBSCRIBERS | VIEWS |
|--------|-------------|-------|
| 25 | 13500 | 31273 |

FIGURE Y3. Top 10 Videos

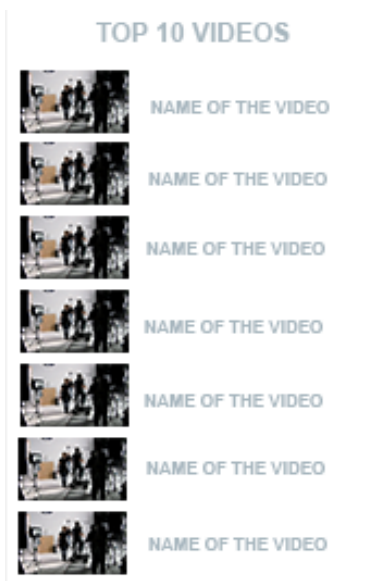


FIGURE Y4. Worst 10 Videos

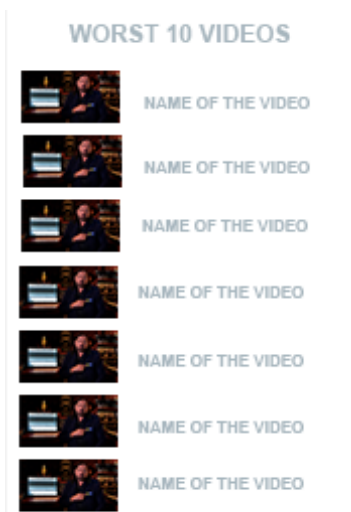


FIGURE Y5. YouTube stream

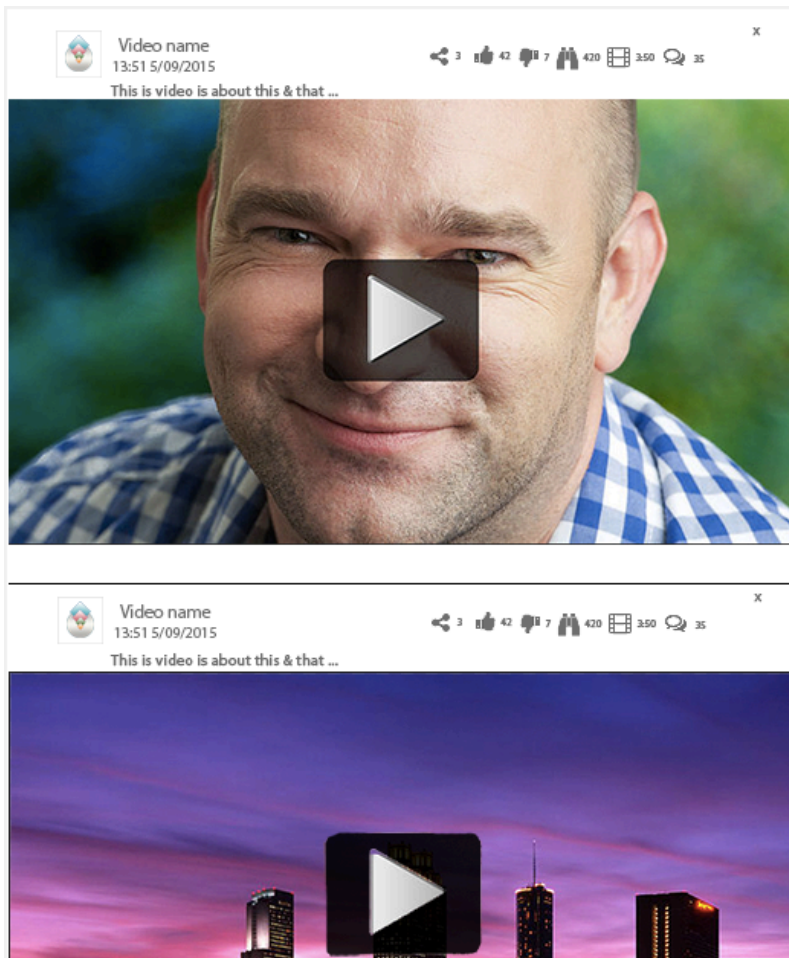


FIGURE Y6. Graphics of analytical data of YouTube

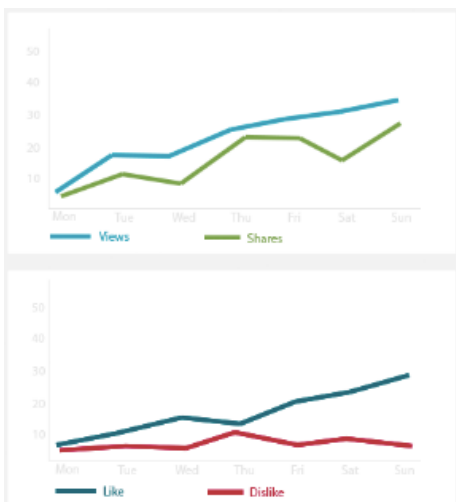


FIGURE YS1. YouTube's statistical element overview menu

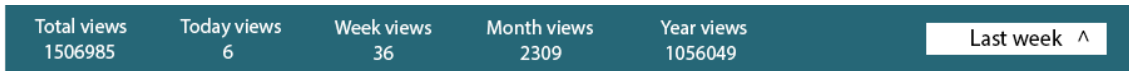


FIGURE YS2. YouTube's visual representation of the statistical element's data changes over last week

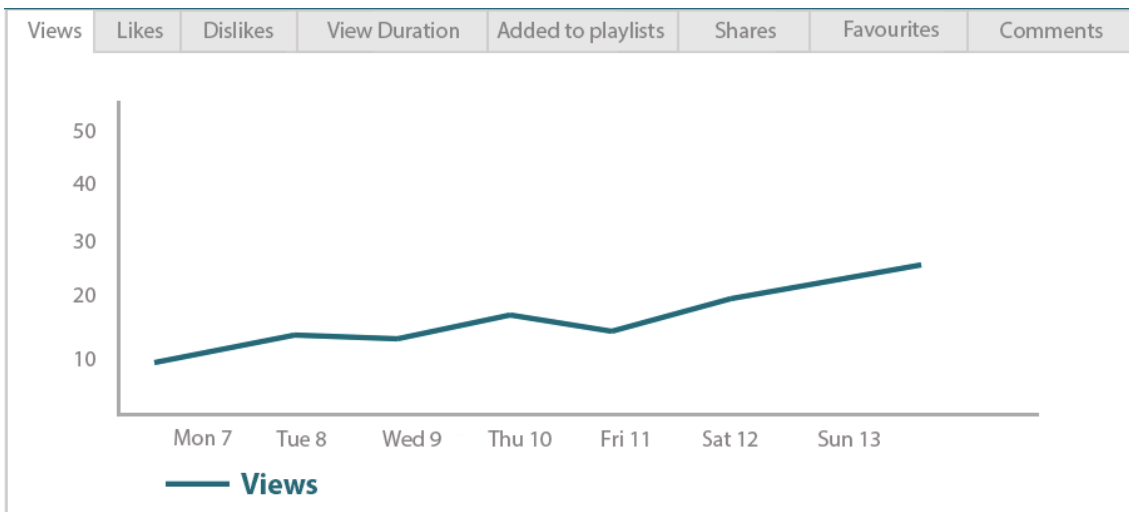


FIGURE YS3. Detailed YouTube's statistical element data on changes over last week

| Date | Views | Videos | Source |
|------------|-------|----------------------------|--------|
| 06.10.2015 | 59 | Task video 1, Task video 2 | |
| 05.10.2015 | 30 | Task video 13 | |
| 04.10.2015 | 28 | Task video 1, Task video 2 | |
| 03.10.2015 | 20 | Task video 1, Task video 2 | |
| 02.10.2015 | 49 | Task video 1, Task video 2 | |
| 01.10.2015 | 37 | Task video 1, Task video 2 | |