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Victoria Lykova 1201420

WEB DESIGN OF AN ONLINE NEWSPAPER

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Tikkarinne 9 80220 JOENSUU FINLAND Tel. +358 13 260 600

Author

Victoria Lykova

Title

Web Design of an Online Newspaper

Abstract

The following thesis describes the challenging process of redesigning a news website. The goal of the project team is to create new layouts that resolves previously faced problems by focusing on usability and modern web design trends. The novel structure is based on responsive design, which includes grid, flexible images and media query usage.

The knowledge base contains basic information on programming possibilities, books and articles about web design tendencies, the importance of logical structure, graphically marked sections and categorizations, intuitive navigation, design affordances, social media integration, etc. The paper aims to provide a deeper understanding the necessity of minding user demands and seeking potential solutions to match them.

The practical part sets a goal to enhance the user experience, increase time spent on the webpage and its overall efficiency, solve previous layout imperfections, bring aesthetics, etc. The researched theoretical data and personal observations are to be applied.

A more concrete and proper evaluation will be done via statistical research a half a year after the website is launched. This will determine whether the project needs further improvements and which parts should be reconsidered. The website's potential is discussed in this thesis according to target group feedback, the team's analysis and the first statistical data.

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1 INTRODUCTION

In the second half of the 20th century humankind entered a new era: the information society. Information started playing a significant role both globally and individually. It gave a lot of new opportunities to people: from technological to social ones. The internet along with numerous advanced electronic devices made information very accessible. Social networks, blog platforms, streams and other social media increased the quantity and quality of communication between people worldwide. An impressive amount of opportunities in working, education, entertainment and problem solution appeared. One can hardly imagine a field the internet is not involved in.

Mass media, nonetheless, did not have such a bright picture: their traditional ways of delivering information to people started falling into decay. Newspapers, radio and even television became less popular. Computerization and globalization, thus, forced the field to seek new forms of information collection, storage and transmission. Eventually, traditional mass media transferred to the Web.

In the 1980s-1990s, the origin of the Internet, web design did not have the image it does have now. To be more exact, the meaning of web design itself had not fully developed yet, nor had the web designer occupation. Websites' displays started with vibrant colours, default system typography, black outlines, blue links, animated GIF pictures, rectangular 3D-looking buttons, etc. Some attempts at creating user-friendly interfaces were made; however the effect was quite the opposite. The numerous animations which were supposed to guide a visitor through content in fact distracted them from the target of their search. Gradient or plain coloured background made texts poorly readable and caused eyes to get tired. Touch-points concerning important materials were hardly considered or even unavailable. In other words web design of that time did not live up to the desired usability and aesthetics.

Web technology made great progress over 15 years, and web design is focused on user's experience as a priority now, one that has not yet reached perfection. In online news the

question of usability and ways to create a user-friendly, informative and interactive resource is still crucial; mostly due to its structure complexity and the massive amount of information involved. Compared to traditional mass media, web news possesses all the features of newspapers, radio and television at once. Moreover, it includes user interaction. It is a massive workload to find a solution to create a clean, logical, useful and capturing web page while it requires fitting brand identity, navigation tools and informative links, endless stream of topics and its library, supportive pictures and videos, live broadcast, commercial banners, etc. in one single web resource.



Picture 1. The New Your Times¹ front page in the late 1990s and now.



Picture 2. TIME² in the late 1990s and now.

¹ URL: http://www.nytimes.com/

This thesis aims to study the ways of creating a layout of a news website by using the latest design trends, concepts and philosophy, applying up-to-date technologies and experimenting. The purpose of this work is to find a solution of how to improve users' experience with graphic design via an example of redesigning an already existing web newspaper, *Petrozavodsk-govorit*³.

2 FRAMEWORK

2.1 PTZ-govorit

Petrozavodsk govorit is a unique project in Karelia, a federal subject of Russia, which was first launched in the summer of 2015. It is a union of two local newspapers and a television channel:

- o TVR-Panorama a region-wide newspaper;
- Petrozavodsk a city newspaper;
- NIKA+ a Karelian television station.

Petrozavodsk-govorit is the first news website in Karelia which is developed by a multimedia editorial office including journalists, photographers, cameramen and other crew members.



Picture 3. Logo.

² URL: http://time.com/

³ Petrozavodsk is the capital city of the Republic of Karelia, Russia. The website name translates as "Petrozavodsk speaks". The shorter name is *PTZ-govorit*. Web page's URL: http://ptzgovorit.ru/

The primary goal of the project was to create a web space where residents of Petrozavodsk and Karelia as well as visitors would be informed of everything happening in the region of Karelia and worldwide. On a single web page it combines the latest news, journalistic investigations, interviews, surveys, reviews, picture galleries, reports, contests, tips, promotions, billboards, etc. By accessing the website users can find anything they want to know of day-to-day life in Karelia and more. The potential audience is various: from people who wish to be kept up-to-date to those who are simply looking for weekend activity suggestions.

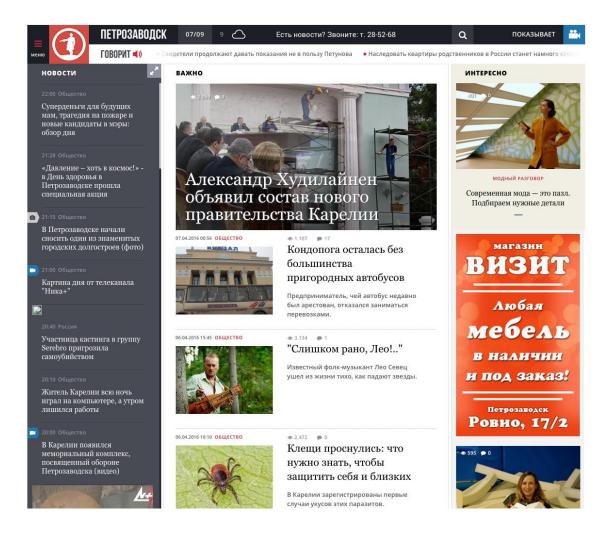
Launching this project was a big success making *Petrozavodsk govorit* one of the most visited web resources in Karelia: based on *Liveinternet*⁴ statistical data of different periods of time *PTZ-govorit* is a top-three leader in Karelia by views. However, as the year passed, it became clear that the project still had plenty of room for development. Thus, the developers formed a team with old and new members to continue working on the website.

2.2 Basic structure

Besides general elements appearing in most websites such as header, footer, advertisement banners, *PTZ-govorit* is logically divided into three big sections which represent the main categorization system of the resource: *News*, *Interesting* and *Important*. *News* is comprised of relatively short materials presented in chronological order. It may include articles on any specific topic existing on the website: politics, economics, culture, sport, accidents, etc. *Important* is a section of more serious and long-length materials mostly of political, social and economical life or crime. It represents events, reports, analytics, investigations, etc. *Interesting* is an entertaining category containing interviews, contests, cultural events, special projects and others. Each of these sections is created to ease the search of topics of interest to users, separate potential audience and form a logical structure.

URL: http://www.liveinternet.ru/rating/ru/#period=month;geo=ru/814;group=media;

Liveinternet is a web statistics portal of Ventail Limited company.



Picture 3. The homepage view.

2.3 Problems

Despite the website being one of the top leaders of Karelian online news, the evaluation of statistics and user behavior research showed the page's weaknesses and necessity for further improvements in usability and aesthetics. The main problem statements will be discussed below. The possible solutions to the faced imperfections will be found via theoretical materials and industry research that follows in later chapters.

2.3.1 Nonfunctional header

The header is a web page's first impression on the visitor. Practically it is the first thing new users pay attention to while accessing the resource. Its main role is to provide visitors with an image of the given brand so that they are able to remember and recognize it afterwards. Websites that possess a complicated structure and great amount of content use headers as additional toolbars as well. This integration enhances its functionality and allows having more page space for other purposes.

As for the brand identity, the current header of *PTZ-govorit* provides the logo that is noticeably different from its original layout. Besides, the size of it is radically small, which makes it poorly visible.

2.3.2 Top-level hierarchy imperfections

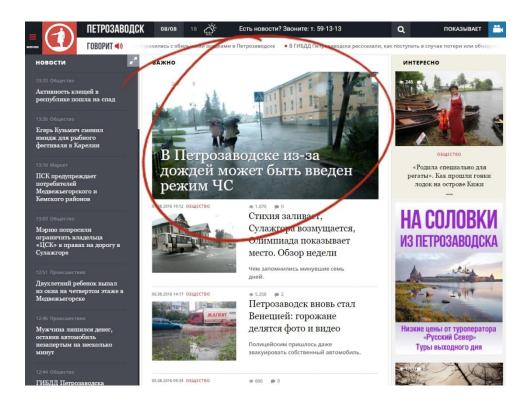
Besides ordinary news streams that people face daily, sometimes more crucial and meaningful events happen globally or regionally. It could be politics related cases, crime episodes, scientific inventions, serious accidents, contests announcements or anything that has to be covered urgently. Reports of those must be delivered to masses rapidly and be widely presented with a purpose to inform as many people as possible. It is also highly recommended to introduce important news on one's home page.

PTZ-govorit only has one announcement banner of an important article. Besides, this space belongs to a single category named *Important*, where topics from another big category, *Interesting* or short ones from the *News* section never appear.

Firstly, an article from any of these categories can be estimated as a large one and be placed on the top of other news. Thus, some structural changing must be made to avoid important materials to be left unnoticed in the stream chronology.

Secondly, sometimes there are more than one big event happening during a day or a week. One lively example would be: an unfortunate car accident in the morning and a

political scandal in the evening. Both of those can appear equally crucial to some in an audience, and, therefore, need to be visibly announced.

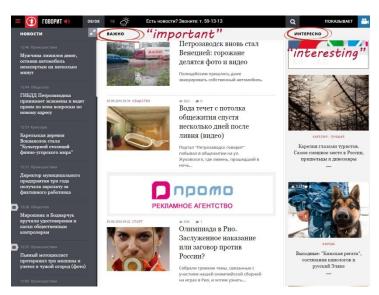


Picture 4. Top news announcement banner in PTZ-govorit.

2.3.3 Similar look of categories

Any news website should be logically structured and visually divided into sections of different issues. Those could be "all news", "top-rated weekly news", "important topics", "entertainment" etc. The user must understand where one section ends and another starts to avoid distractions.

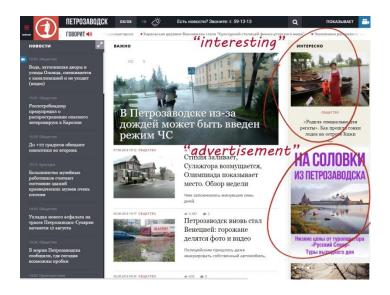
Two out of three general categories in *PTZ-govorit* have a visually similar design: *Important* and *Interesting*. This problem makes those sections compete with one another and lose the audience. In order to provide users with a better content browsing experience, this issue must be considered during the design process.



Picture 5. Categories' design similarity.

2.3.4 Advertisement distraction

Advertising is an irreplaceable part of most websites and the primary source of income at early stages. On the one hand, it delivers useful marketing messages to potential consumers: awareness of upcoming events, product releases, education possibilities, etc. On the other hand, the wrong use of it may not only bring on a weak user response, but even create annoyance and distraction to visitors, which affects the web page's popularity.



Picture 6. Competition between *Interesting* materials and advertisements.

Statistical research of the given web resources shows that advertisements do not grab full user attention and distract them from the main content. At the same time advertisement banners are fully visible and effective. However, it damages one of the website's categories, *Interesting*. Being placed together in the third column and having similar appearance, the *Interesting* articles are often unconsciously seen as commercials and ignored. Thus, the articles' emphasis and advertisement space need to be rearranged and redesigned.

2.3.5 Fast navigation absence

Providing visitors with easy and effective navigation opportunities is one of the keys to creating a user-friendly web space, since it gives them the opportunity to locate the most attractive and relevant content. All articles of potential interest must be reachable.

The navigation system in *PTZ-govorit* is not yet completely developed. Starting from the header, there is a search bar and a "hamburger⁵" button. None of the categories are shown until the user chooses the drop-down menu. In the main content below, all articles are presented chronologically, except for the announcement banner in the *Important* section. News continues down in all three columns until a user reaches button "upload more", where the web page basically ends. There are no sections like "top-rated news", "weekly most popular", "related news" or others to follow. To sum up, it is rather complicated to navigate the web page looking for materials one wants to read while there is such a lack of navigation tools.

 $^{^{5}}$ Symbol of three parallel horizontal lines representing a menu icon: Ξ

2.4 Working process and goals

In cooperation with engineers, consultants, advertisement agents and journalists, I became part of a team working on the redesign of the page's structure, interface and overall design, which is our purpose.

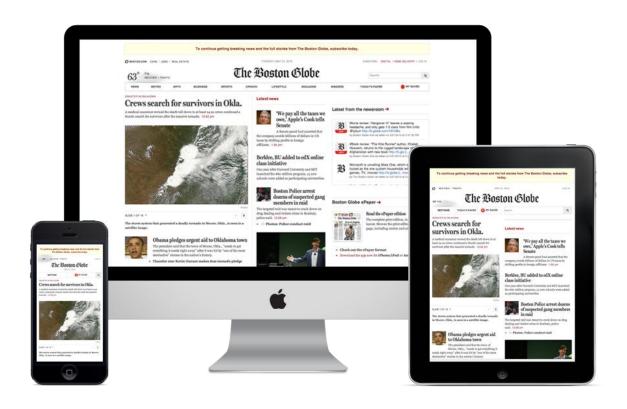
My responsibilities as a team member and a designer included:

- o Participation in meetings and idea generation
- Development and improvement of user interface
- Design of a new website structure
- Design of new layouts and graphic elements
- Implementation supervision

My goal as a designer is to work on creating an adaptive design model using a grid system. Basic professional knowledge in other fields will be applied to the design according to user needs and overall usability. This includes: modern trends in engineering, types of using technical tools, formats and ways of presenting advertisement materials, user preferences and behavioral factors which influence qualitative and quantitative features of the audience, create the structure and represent rules of text and video materials, emphasis, basics of typography and many other aspects.

I suppose the implementation of the current work will significantly improve the external appearance of the web page which, in its turn, will affect positively on the user. New tendencies and practical solutions of articles and other material presentation, navigation improvements and aesthetic enhancement will raise the popularity of the resource. An adaptive version on mobile phones will become more informative while advertisement modules will be more effective. Qualitative statistics of the web page will increase the viewing depth, the number of sessions and the time of reading. Thus, the website will attract more users.

In this thesis I will express all the theoretical bases and web design purposes, current trends and practical tools which are used in solving existing mass media problems, competing for users and creating a fine web environment.



Picture 7. Responsive design example. *The Boston Globe*⁶.

3 COMPULSORY ELEMENTS AND DESIGN TRENDS

Functionality defines the essential components of any given Internet source. E-commerce is targeted at sale, thus items like navigation, ordering forms, picture galleries and others

⁶ URL: https://www.bostonglobe.com/

should be of central focus in order to start a successful Internet business. An online portfolio must consist of the author's background, a presentation of his/her works and contact information for prospective clients. Blogs must have proper categorization and interactive features to attract people of similar interests. An online newspaper's main purpose is to deliver facts, events or opinions, and information to people all around the globe.

Compared to that on paper, Internet news also has some additional features. Firstly, it can be accessed from any user's location if a connection is available. Secondly, it differs by its urgency and efficiency of updating data: the latest news can change on an hourly basis or even faster. Furthermore, Gradushko, a professor of international journalism and literature, mentions the ability to archive information and command a large amount of memory: outdated articles are combined into an accessible database with searching possibilities. Internet sources also have the opportunity to interact with users: people can not only consume but create information, share opinions, participate in questionnaires and estimate works (Gradushko 2005).

These and other features create the idea of what components are essential for a web source and which services its structure should be equipped with. Let us consider some elements that online newspaper design must possess and its effective appearance to users.

3.1 Intuitive and Consistent Navigation

Since online newspapers' materials are not released in issues but in the shape of an information stream, developers must pay attention to how users would navigate the web page and find relevant and required data. With no proper browsing features, even the best designed web page would fail to encourage visitors to come back later. The navigation system is an important part of usability of any Internet resource.

Its importance is thoroughly discussed by Darryn in a blog devoted to Web Design. He mentions that navigation is not only a practical tool for searching, but also the evidence of numerous data presence. Furthermore, effective browsing tools might get users to look for more information and go from one topic to another increasing the time spent on the web source. In addition, navigation supports viewers with understanding principles of how the web page works. Finally, it works well with SEO and places the web page high. (Darryn 2013.)

According to Julia Blake, a web designer, a navigation system needs to be simple-to-use and intuitive. The best position for search tools is the top page area. As for the search button the best solution would be the left upper area as well, because people read from left to right thus left side is more noticeable (Blake 2014). However, if one takes a look at the currently most popular news websites such as *Yahoo News*, *BBC News Online*, *CNN*, *The New York Times*, *Washington Post* etc., not all of them use the left upper corner for searching tools: this space could be taken by the logo, and in this case navigation button is located in the right corner.

3.2 Sidebar

Along with navigation, the sidebar is another element that forms the user interface. It is a multifunctional column that usually appears on the left, right or both sides of a web page separately from its general content. If a web page contains one, the sidebar is often used for the following purposes: search box, recent content or categories, advertisements, offer notes, social sharing buttons or contact services, etc. (Blake 2014.)

Concerning web news specifically, sidebars are generally filled with commercial banners which take up a sufficient share of page's space. Advertisement service is an indispensable part in web design. Even so, the enormous amount of news content must be taken into consideration. Thus, the home page of an online newspaper is advised to use sidebars not only for commercial matters, but also to display some extra features or services which were previously missing due to a lack of free space. It is also a known fact how rapidly news is replacing old news every hour or even every minute; a lot of important

or entertaining content may thus be left unnoticed and not reach visitors. In this case the sidebar used for additional navigation purposes can partly solve this problem and give some of the older articles another chance.

3.3 Categorization

Most of mass media websites frequently publish materials on diverse topics in chronological order. It is critical to divide these into categories and be able to separate one issue from another in order to successfully perform searches, discover the required content or browse news of a specific field.

Categories generally improve the user interface and allow users to browse materials they would find captivating with ease. Categorization attracts users by isolating the topic of interest from other news, which may increase enthusiasm and time users spend on a website.

Categories are usually located on sidebars, navigation menu bar (Blake 2014) or hamburger menus. According to Louie A., the highest discoverability and efficiency would be achieved using tab bars (Louie 2014).

3.4 Primary and secondary content

In her article Julia Blake mentioned the necessity of dividing content into sections of importance. One must define which topics are big and critical and which materials are secondary and less serious (Blake 2014).

Indeed, in the news field it is common when events of high urgency occur and need to be delivered immediately to the reader. The developer must find a solution of how to emphasize those on the website. Topics of a high importance rate require a greater focus to be able to draw visitors' attention.

Many web news sources practice the presence of a special page zone for urgent notes on their home pages. For instance, developers generally use colourful and large announcements or previews before all incoming articles. Another exceptional example is using a collage bar of the most serious long-term weekly topics. This is located on the top position of all a page's elements. The Russian news website *TASS*⁷currently has this feature.

3.5 Social Media integration

As mentioned earlier, online newspapers differ from printed ones in their possibility to interact with users identically to all other types of web sources. Developers can provide the page visitors with relevant features. Besides, by only getting familiar with the content, viewers are able to evaluate material, share it with other people, contact editors, give overall feedback or discuss the topic publically.

Referring to Blake, including sharing, following and "like" buttons is irreplaceable for online press due to the "epoch of mass sharing" people can face nowadays (Blake 2014). Indeed, according to *Statista* company's statistics on social media usage, the number of its users worldwide increased by more than a billion from 2010 to 2016. Currently, over 2.2 billion people have a social network profile, and this rate tends to increase rapidly (eMarketer 2010-2015).

Thus, it could be concluded that frequent Internet users worldwide are very likely to keep at least one account in a chosen social network and read its news feed if one provides it. Placing follow and share buttons for each network used by potential visitors of a current online newspaper and keeping a social group in those will increase views and overall popularity of the source.

Specifically to the project case, web news must be integrated with the most usable networks in Russia and its regions. The newest statistics show the leading positions of

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⁷ URL: http://tass.ru/

social media nowadays: Vkontakte, Odnoklassniki, Facebook, Skype, Google+, Whatsapp, Viber, Instagram and Twitter. Vkontakte and Odnoklassniki have the highest rating: 39 percent and 32 percent of respondents. (Frolova 2016.)

3.6 Minimalism

An online newspaper is, first of all, a massive web resource that contains an endless stream of texts, their headlines and extracts, supportive pictures and videos, links, advertisement banners, toolbars, sidebars, etc. All of these components could even appear on a single page. One of the biggest parts of a designer's work here is to find a solution of how to present this enormous content and still remain user-friendly, informative and logically structured.

Minimal graphics as the design core is a recommended approach (Blake 2014). Simple and clean shapes, preferably straight lines, plain colours, easy on the eye fonts, avoiding textures, etc. is what underlies sophisticated online mass media websites. The essential points of using minimalism will be discussed in this section.

3.6.1 Design affordances, conventions & metaphors

One must never underestimate the importance of affordances, conventions and metaphors that are already developed in the web space. Ignoring the intuition and decision-making concepts while inserting icons or graphical elements might result in users' disturbance and miscommunication. Regardless of the purposes any website was created for, it appears as some interface due to its opportunities of user interaction. Usability and positive user experience greatly depend on the interface quality. Current web design trends define recommendations and rules of launching a satisfying online source. Affordances, design metaphors and conventions are part of those historically established features that forms elements of successful user interface definition.

Originally, the word "affordance" came from psychology and it meant actions that are physically possible (Gibson 1977). In design this term first appeared in a book of a design researcher, D. Norman: an object of design transmits a visual message of interaction possibility with it. For example, the shapes of a door handle which users intuitively put their hands on to open (Norman 1988).

In web design sphere affordances became a significant part of user interface. Icons, symbols, pop-ups, animation, etc. replaced instructions of how to interact with web content and made it easy to use its hidden services intuitively. A blue highlighted stroke gives a message that it is a clickable link; a button with a lettercard icon on it indicates that by clicking on it will send to e-mail or another kind of contact section.

According to Beliaev, a journalist, the simplest kind of affordances is explicit ones. It is an object with an obvious interaction message on it like a text or a symbol. Users do not have the need to activate their memory to remember or understand the function of a given element (Beliaev 2014:6-7). For instance: a button that says "Register" means "click to register". The user does not have to be advanced or experienced to interact with these elements.

Another two kinds of affordances are design conventions and metaphors. To recognize the object's function these require some effort to be made (Beliaev 2014, 8). The user might need the previous experience of interacting with the element or logical conclusions.

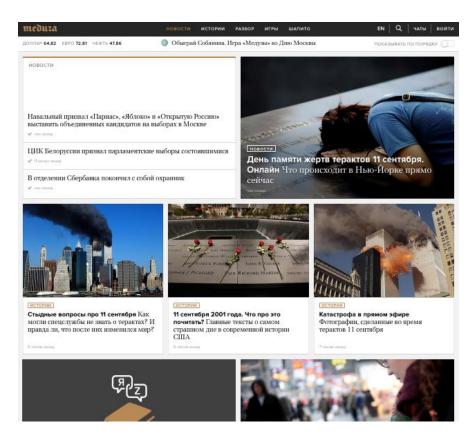
Design conventions are defined as a familiar signifier of an element for a user. These are often minimalistic and primitive clues of what function an object might consist of. These types of affordances are based on a user's habit and memory of interacting earlier (Beliaev 2014, 8). Underlined by lines, dashes, dots, coloured or animated with shades texts signify links. It does not include an obvious message of its function or interaction possibilities, but it did create a message for people that it is clickable. The situation is the same for some minimalistic symbols which do not provide a clear idea of its meaning but require memorizing: map symbols, road signs.

Design metaphors are graphical, created in a shape of a real life's object which expresses its function or purpose by its most important details: icons and logos. They are more accessible than conventions; users are not expected to have any knowledge. (Beliaev

2014, 8.) However, people could face problems with the exact function of an element while knowing what it generally relates to: a "Loupe" button may refer to "zoom" or "navigate" actions. Another less complicated example is the "House" symbol, which is a "home" button.

3.6.2 Card-based design

Inserting cards as web design elements is a modern trend in the industry. It was originally developed and used in the previous decade, however, gained its maximum popularity nowadays. Pinterest, Facebook, Linkedin and other most visited web resources are successfully using a card design approach presenting its ultimate cleanness and elegancy. Even the latest Windows system had fully adapted cards into its new design concept.



Picture 8. Meduza⁸. Card-based magazine layout.

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⁸ URL: https://meduza.io/

It is not only card-based design that brings minimalistic aesthetics to the web environment. According to Marc Schenker, a design news copywriter, this approach has a great impact on the overall page architecture by creating a harmony and logic of the content: an understandable hierarchy order, for instance. Furthermore, he mentions the importance of high-quality pictures to appear on a website and how greatly the card method itself is based on these images, automatically taking a web resource to a new level of perfection. In addition, any content in the shape of cards enhances the usability and user experience by the ease of its appearance and usage: browse cards and click on the one that promises more information. Besides, it is believed to be the best for mobile view transformation due to the shape simplicity and universality (Schenker 2015).

3.6.3 Black on white

Multiple studies have estimated the effect of colour and contrast of text and background on readability: for example, Austin State University of in Nacogdoches survey⁹ (Scharff & Hill 1996). The result of those experiments is widely known: black on light grey or white combinations have the best user response.

Since online news is a web resource that mostly offers reading materials for visitors, the colour scheme has a crucial point. Before adopting any combinations, one has to make sure users can read long content with no harm to their eyes. Thus, black on white or black on grey are by default the best solutions in web news design and provide people with high-quality visual experience. Short texts or headings may appear with a different colour scheme. However, the possible effects need to be considered.

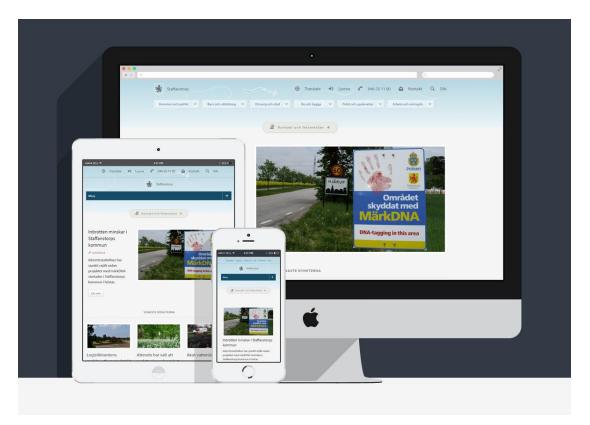
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⁹ URL: http://www.laurenscharff.com/research/survreslts.html

RESPONSIVE DESIGN AS A BASE

Nowadays, accessibility and usability take the lead among other features of web sources. In the web design world these play a crucial role in achieving success in Internet Marketing for all kinds of web sites, web news is thus not an exception. The choice of web design approach techniques might affect the whole design vision on a future web source, so it is essential to study these methods before the first sketches.

Responsive web design is a type of web design which can automatically adapt a range of digital devices with different screen sizes and shapes by resizing or by employing panning or scrolling (Einfoway Company 2013). This is a modern design technique, the creation of which changed the whole developers' view of the field. It allows solving numerous problems of Internet sources usage via all types of devices.



Picture 9. Example of Responsive design. Staffanstorp¹⁰.

¹⁰ URL: http://staffanstorp.se/

Shortly, a high resolution web page width could be divided into sections of different importance rate, and subsequently those elements could be placed in a given order one after another vertically while displaying on smaller screens' resolution (Picture 1). A more detailed description follows.

4.1 Why "Mobile First"

Generations of the late 1960s and younger - the children of the digital age - have all witnessed how the Technological revolution changed mankind every decade. From the times when personal computers and the World Wide Web became accessible globally, to those when mobile phones turned into pocket personal computers (PPC) or mp3¹¹ player replacements and finally into smartphones. It is beyond controversy that sensational performance improvement in mobile technology is thoroughly changing our everyday lives. As the 2G¹² appears mobile devices have been discovered to be used in many other ways rather than communication only. 3G and 4G which emerged afterwards were a global success in the industry as *The Boston Consulting Group*, a well-known management consulting firm, proved in its marketing research which would be mentioned next (The Boston Consulting Group 2013).

Smartphones are no longer a luxury as network charges have decreased dramatically since 2005. According to *The Boston Consulting Group* (report 2015), maximum data speed mobile subscriptions fell by 40 percent each year between 2005 and 2013¹³ and 45 percent of people now would prefer smartphones over home internet. Since marketing research foundation lays in factual numbers, the results of it is cogent and show how mobile devices took the lead in digital technology. Chase Jarris, a famous photographer,

¹¹ audio file format

¹² a system for mobile phones, characterized by digital technology, internet access, and a short-message service (HarperCollins Publishers 2012)

¹³ 95 percent from 2G to 3G, and 67 percent from 3G to 4G (The Boston Consulting Group 2015)

perfectly described the domination of mobile devices in the digital technology industry: "The best camera is the one that's with you" (Jarris 2009).

Thus, as well as advantages, new problems occurred to web designers since such numerous devices have fast access to the Internet. Web page layout based on printing principles is now no longer relevant. Creating mobile versions of different formats of a web resource is expensive and laborious. The central question in web design that motivated years of research thereby was how to adapt smaller devices for users to obtain maximum internet surfing experience with ease and quality.

Developed in 2010, responsive design became the most efficient solution at reaching the satisfaction of users with any type of devices. Since the web news is a frequently updating source that can be used by people on a daily basis and might be accessed from elsewhere rather than the home internet it is essential to provide users with a positive experience.

4.2 Mobile version imperfections

A mobile version is a different approach to accessibility using various devices. It is still used by some companies for specific reasons. It is a separate sub-website, a mobile-friendly version of a desktop one, which can be a subdirectory of a primary web page or can use a different domain URL¹⁴, sometimes might be called "Adaptive Web Design" (Description follows).

Before launching the web source the question of using this technique or a responsive one was always raised by developers. The discussion of features of one or another approach, their advantages and disadvantages, must be considered carefully before making the final choice. A comparing table created by *Allwebco Design Corporation* company's members gives a clear image on differences of these methods.

¹⁴ Uniform Resource Locator, reference to a web resource including its full location on network (OS X Dictionary v2.2.1 2015)

Both of these choices are fully responsive for desktop, tablets, mobile phones and other devices and passes *Google Mobile-Friendly Test*¹⁵ (Allwebco Design Corporation 2016). However, user experience, maintenance cost, designing principles or loading speed may vary depending on the quality of developers' work or method possibilities regardless of their effort.

Firstly, Allwebco Design mentions that responsive design implementing is technically more difficult and requires much complicated coding compared to mobile version programming. On the other hand, a mobile version demands a separate web page to maintain, which is easier to code, but implies twice as much work, which also mean a higher maintenance cost (Allwebco Design 2016).

Secondary, the table shows that the responsive design method is less mobile-friendly than the mobile version due to numerous bugs and errors that may occur and slower loading data caused by extra web page elements or the speed of Media Queries¹⁶ code to respond (Allwebco Design 2016). However, personal experience shows that loading speed or error difference is minimal and entirely depends on a developer's qualification. Bugs appear in both design methods regardless of their implementing principles and only an engineer's proficiency can solve them and minimize their occurrence. Speed limitations, in turn, depend on the quality a certain design itself: if it suits the requirements and basis of responsive design method, it does not affect the speed significantly. In addition to speed limits, some web experts like Armen Ghazarian claim that a web page redirecting to its mobile version takes longer time than loading a single web page, regardless of the device used (Armen Ghazarian 2014). In shorter words, this part of the *Allwebco Design* statement is questionable.

Furthermore, *Allwebco Design* stands out that responsive design has more design freedom due to its limitations: a single web page should respond to many devices at once (Allwebco Design 2016). However, let us take a look at the common examples of both techniques.

¹⁵ Online service by Google Developers which estimates usability of a chosen web page according to its display view on multiple resolution parameters

¹⁶ Feature of CSS that enable webpage content to adapt to different screen sizes and resolutions (TechTerms 2015)



Picture 10. Forefathers¹⁷, Responsive Design.



Picture 11. *Instaforex*¹⁸ 2016, desktop view and mobile version.

Properly considered web design using the responsive method not only follows an overall style of a given brand, but also has a winning outlook compared to a mobile-friendly secondary web page. Although responsive web design is more challenging, it may benefit both design-wise and brand identity-wise, and thus it requires no extra work and cost for a marketing department, which was pointed out in *Designmodo* web design blog (Ghazarian 2014).

To summarize, both of these techniques have their own advantages and disadvantages. It is a developer decision which of these methods would benefit more from a company web resource.

Responsive design implies a single web page to administers, which decreases maintenance work and costs, a single URL address to search for with ease and no waiting

¹⁸ URL: https://www.instaforex.org/ru/forextrainer

¹⁷ URL: http://forefathersgroup.com/)

for redirecting, no cost for extra marketing matters and having no harm for brand identity. On the other hand, responsive design is technologically complicated due to its comparable novelty and limitations in design caused by its system principles. Furthermore, overall user experience may have its losses.

The mobile version, in turn, might have improved user experience without much programming effort, fast loading data and possible benefit in SEO. On the contrary, it requires an additional web page to maintain, which is reflected in the amount of work and money being contributed; likewise, the method implies a customer to remember different URLs to access a web page or facing automatic redirecting feature, which also takes time. Furthermore, a mobile version needs additional SEO and marketing work. While implementing a mobile-friendly secondary web site, it is also important to take into consideration the difference between touchscreen and keyboard navigation that a certain device type might have: mobile version would appear different depending on the gadget.

For a young web site project like the one our team is developing, responsive design technique is a preferred solution due to its advantages which have crucial importance at early stages: lower cost, brand identity benefits, easy SEO, no need for additional marketing, high-quality user experience etc.

4.3 Basic knowledge of Responsive design

The term "responsive design" was created and used for the first time in Ethan Marcotte's article of May 2010 in which he criticized the idea of programming and publishing web pages separately on each device type and raised a question of enabling web pages to adapt automatically to different formats. His article in "A List Apart" magazine and topically related book *Responsive Web Design* (Marcotte 2014) became an instant success. Being deeply impressed by John Appson views on the sphere, Ethan Marcotte, an independent web designer, brought the basic concepts of a new web design trend, which rapidly changed existing web development methods and gave a lot of opportunities to present Internet resources in advanced and adaptive ways. This ingenious approach allowing web pages to automatically adjust pictures, menus, fonts and any other web content in relevant

size and shape, while being browsed by devices of any formats, changed the developers' view on the whole web design matters.

The E. Marcott book faced its opponents, as the topic began to expand. Aaron Gustafson, a professional web designer, published a new book, *Adaptive Web Design: Crafting Rich Experiences with Progressive Enhancement* (Aaron Gustafson 2011), where he claims that it has missing pieces of modern responsive design concepts. He suggests that readers consider details, rather than the whole picture and basics only, and states that "progressive enhancement" (see description below) is a crucial part of web design. Specifically to E. Mascotte and others, he points at the fact that they are not aware of "web standards" (Zeldmann 2011). Comparing both books readers can see the collision of two terms: "adaptive" by Gustafson or "responsible" by Mascotte. Obviously, if neither of the methods can be preferable or leading, the combination of both could become a golden standard every developer is looking for. However, experts are still arguing discussing these terms (Easy Designs LLC 2011).

As Gustafson believes "responsive" design should be an integral part of an "adaptive" approach, which is question by a number of experts. The main difference of these two design philosophies lays in the presence of "progressive enhancement" and "more holistic approach to web design in that it also takes into account varying levels of markup, CSS, JavaScript and assistive technology support" as was mentioned in Gustafson's blog (Gustafson 2011). Progressive enhancement involves a reverse concept of the design phases: firstly designers create layouts for mobile phones or other simple devices, secondary - for PC of different formats. As for other approach methods more complicated programming is included. Personal opinion and views of other opposite expects conclude that "adaptive" is not always necessary. To specify, considering how to implement both simple and complex devices design could be done at the same time. The whole design concept cannot be influenced only by the appearance of it on small screen gadgets: many important design points could be missed or avoided. To find a solution to this collision, further studies could be arranged: a new methodology that could include both terms essential concepts and be developed in a less complicated shape.

However, observing many engineers' reviews and taking personal opinion into account it can be concluded that Marcotte's book is more valuable in certain ways due to its practical

use and could have been a must-have on every web designer bookshelf: in everyday life and real cases designers and developers only use knowledge presented in this book although it does not clarify all points of responsive design, while more specific information is applicable in more complicated and rarer cases. As for the visual part of this project, web newspaper design, Marcotte's book has enough background to support the design process. Moreover, Gustafson's book brought a lot of confusion to many readers and believed to be "best read" after completing a couple of other books of the same topic.

To summarize, until 2010, the actions or design of web developers had their limitations due to a printing field influence, 'the web medium' as Allsopp (2000) would call it. Even though developers tried to find a solution on how to transfer web content to smaller screens (*Audi* case 2000), their first attempts were not as successful as they could expect: after applying codes and implementing "mobile versions" for web-pages they concluded that the resulted image of a given web-page on different display formats is still uncertain. Thus, flexibility needed to avoid those limitations is a target of a responsive design methodology. Shortly, a high resolution web page which could be divided into sections of different importance and subsequently those elements could be placed in a given order, one after another vertically. The idea eventuated into basic responsive design "ingredients", the creation of which was described in details by Ethan Marcotte in his book that was mentioned before. Those are three new core web definitions and some extra elements to complete the overall outlook of all sized screens which would be briefly described in the next chapter. By means of these main components, a clearer understanding will be acquired.

4.3.1 Flexible grid-based layout

The word "grid" is generally defined as a framework of spaced bars that are parallel to or cross each other (Random House, Inc. 2016). In design, it is supportive rulers placed on the working space (paper, blank document) using specific parameters with the same measure values between lines. Basically, a flexible web grid looks similar to a typographic one which was created by graphic designers Jan Tschichold, Emil Ruder and Josef Muller-

Brockmann (Grid Systems in Graphic Design 1996), to design better proportions for printed pieces, with the only difference being that web grid is transformable, unrestricted by size and capable of changing columns order depending on which device has access to it (Ethan Marcotte 2010, 48-60).

A grid is commonly divided into 12 equal columns with equal gaps separating them. Usually, its fixed parameters are: grid full width 960px (pixels), column width 69px. The fixed system of 960px sets needed pixel parameters command only for outer grid bounds depending on the different device standard dimensions (which are set manually), thus the adaptability of a web model is accomplished. The next step is to create a construction based on a percentage correlation between elements on the page and a known manually measured element. Thereby, all objects and elements will have percentage measurements instead of pixel ones, resulting in a proportional connection between them and in any screen size they would appear with the same overall outlook.

However, the core moment in grid systems is the elements location. The idea of columns is their ability to reorder transferring to a smaller display device. According to this feature all design elements must be placed inside those columns ("containers"). For instance, if a given screen size is only able to fit 6 of 12 columns, elements on the right 6 columns would appear below the first half of the page by scrolling down. And this is the main idea of web page fluidness. Contents that did not have enough space on a display and could not look proportional would be moved down, required order respectively.

As a result, when all components parameters are targeted, the web page would adapt the grid according to certain screen formats.

4.3.2 Flexible images

Typography and vector elements would change proportionally to fit the required grid. However, different methods must be applied to images that a web page may consist of. Grids would not change the image size or crop automatically without going through certain steps. For instance, placing a big format picture straight in the ready-made grid would

result in the original size picture taken dramatically large space on the web page. Vector components around the expected image would be located right, while others would conflict with the inserted picture, overlie it as can be seen in the example. This happens because the image is wider than the program module (Marcotte 2010, 88-96).

Flexible images technique is a solution for a proper picture display. To make an image fit one column with its width one must set a 100 percent parameter to image max-width. This would make a picture fit a maximum of 69px in width and then correct the size proportionally (fixed height and width), through percentage correlation after opening web page using a different format device. A similar principle could be used for video and other media files which have an invariable width value. The flexibility of images also makes it possible to use background patterns that consist of repetitive images which do not significantly affect page loading time as if the background was a single image. Proportion matters are fixed with background-size command, similar to as max-width method. The cropping of images can be done by overflow: a hidden command that will hide those picture sides which had been conflicted with column limit.

However, a number of exceptions can be considered. Marcotte mentions an Internet Explorer issue in his book (Marcotte 2010, 94). According to his notice, the max-width feature is not available in Internet Explorer 6 or earlier versions. Most of those browses are based on JavaScript on the basis of expression filter which evaluates the picture size and manually changes it. The problems can only occur in image qualities of some obsolete browsers which cannot display high resolution pictures with required visual characteristics.

4.3.3 Media queries

To secure element display transformations and overall design outlook detailed testing must be arraigned (Marcotte 2010, 123-127). For instance, web pages with a big panorama in the heading look complete and proper on large dimensional screens, but on landscape orientated ones (e.g. tablets) the big picture might cover most of the user's viewpoint including texts and functions below the image, which not only reflects the overall design but also decreases usability. Developed media queries commands can reveal and fix those

problems. To support the technical parameters of devices, a set of different page styles must be generated and added. Media queries assess the width and height of a browser or the screen, the orientation of the tablet or the mobile phone and many more. It is commonly the highest priority to check the viewpoint width of various devices. Media queries allow adding a table of styles to the web resource whose parameters would change as the web page is opened using any type of devices.

5 DESIGN PROCESS

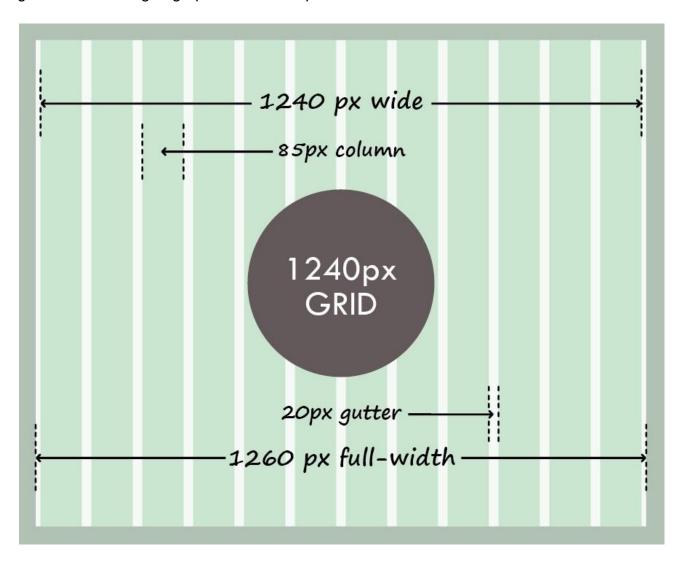
Now that we gathered enough background knowledge of the online news field it is time to move directly to the actual prototype stage. The current goal is to create a new layout that will solve problems of the previous version and match nowadays trends in web design. Sketching and modelling will be supported with constant group meetings focused on ideation and evaluation.

Website design requires massive effort and time. Thus, a proper working plan is highly recommended to be considered. In the given case, new structure development was chosen to be a starting point of the practical part. Web architecture solutions will give a clear vision on how to avoid problems which have been faced previously and ease the following graphic model creation stage.

Creating a new structure scheme is an effective choice to start the web design process. Firstly, the website structure defines the future visual outlook of pages. Secondly, it is a crucial step in creating usability and allows reconsidering its core questions: logical element location, clear content sections, navigation possibilities, hierarchy, etc. Moreover, since we apply a grid system into the website, structure drawing will plan desktop view transformation into mobile view as well as other devices with smaller screen resolutions.

5.1 Grid layout

The tool which has to be included in schematic layouts of all web pages is a grid template. For the current website it was decided to use a 12-column 1240 pixels grid with 1260 pixels of its full width, 1240 pixels of content width, 85 pixels of column width and 20 pixels of gutter width. The grid graphic scheme is presented in Picture 12.

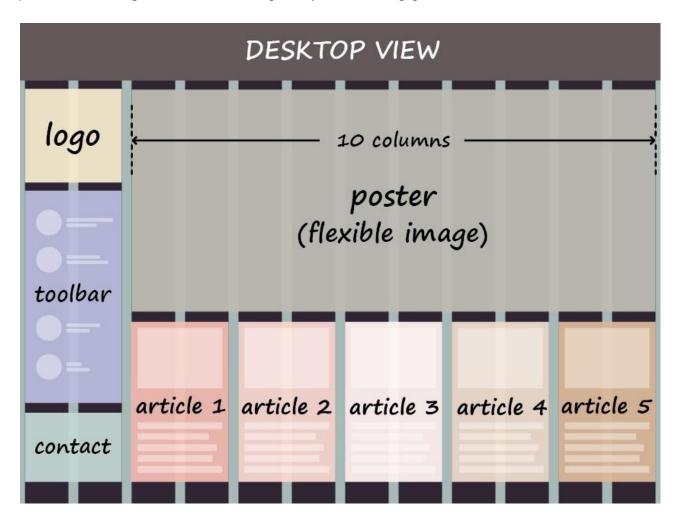


Picture 12.1240px Grid system.

The green columns represent the area of content and gutters are its limitations. Elements can take any numbers of columns to fill, depending on the resolution of smaller devices (usually 2, 3 or 4 columns per element); however, there must always be a free space of 20 pixels between them. While transforming into mobile view, active columns will be divided by gutters and placed rationally on a smaller gadget layout.

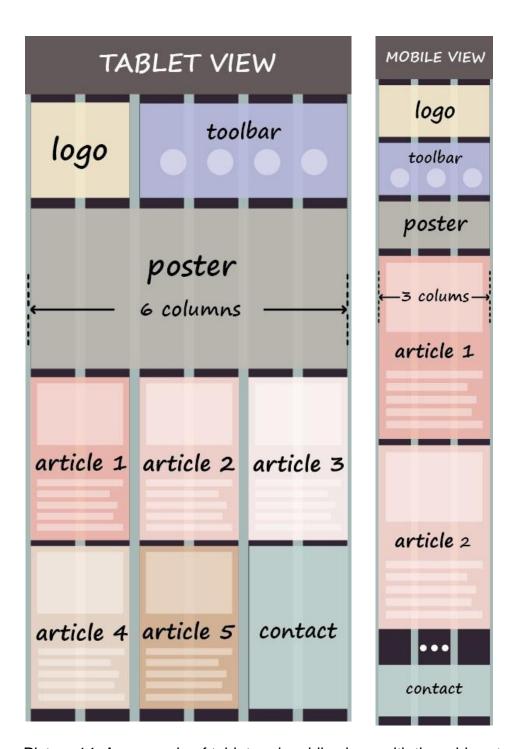
Let us have a better understanding of how the grid works using the following example. This principle of elements relocation will be applied to the project matter. Thus, a visual explanation of how the grid system appears in practice is necessary.

As an example, there is a simply structured web page layout consisting of a logo, the company's poster, a toolbar, five articles and contact information. All components are placed according to the 12-column grid layout, minding gutters.



Picture 13. Example of a desktop view with the grid system usage.

The logo, a toolbar, contact information, and articles were roughly chosen to fit two columns. The poster took ten columns, which is much larger than smaller screen devises can display. However, as discussed in the previous chapter, elements in the grid system can automatically change their resolution by percentage to appear in less columns. Picture 14 shows how other devices would display such website content.



Picture 14. An example of tablet and mobile views with the grid system usage.

As we can see all the elements presented in desktop view have been rearranged and the original content reasonably adapted to the new limited space. While prototyping the given website the same principle will be used, which guarantees the ability of the web page to appear properly on any device users have. It is highly recommended to plan the future mobile version view at the very beginning.

5.2 Subpages structure

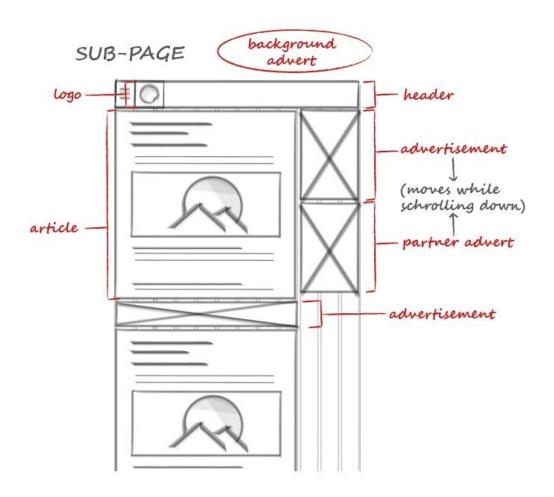
In collaboration with other team members we considered a number of a new structure variations that would present the content more winningly and rationally. It was also decided to start web architecture design with subpages: from comparably simple inner pages schemes to the complex main page.

As it has been mentioned, *PTZ-govorit* has three main categories that divide materials: *News*, *Important* and *Interesting*. Thus, these pages' structures are to be improved via teamwork.

News is a category that includes mostly comparably short materials appearing in chronology. It may relate to any specific topics that are also presented on the website: politics, economy, accidents, culture, sport, etc. This category has the biggest number of articles published daily: approximately 80.

Important is a category of serious topics which has a bigger length than most news. It often represents political events, criminal reports, economy issues, analytical reviews, journalistic investigations, exclusive materials, etc. One article per day published is a minimum amount.

Interesting is an entertaining category including interviews, special projects, cultural news, billboards, competitions, etc. These materials are published daily with a minimum of one article.

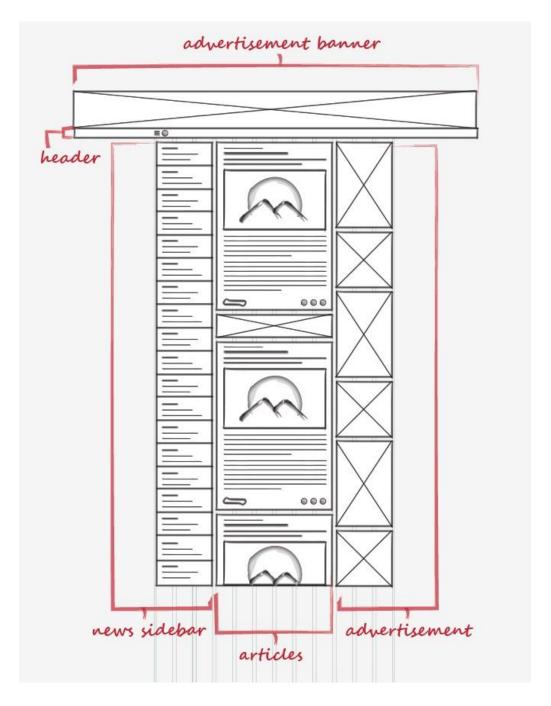


Picture 15. Subpage structure of the old version.

As seen, these three categories differ by content, length and, thus, focused audience. However, the layout for all of them is completely identical, which brings up questions about structure usability. For example, the layout implies reading material one after another by scrolling the page down: it is efficient with the *News* section where articles are short, but not for *Interesting* and *Important* materials which may take pages to finish browsing a single article. Furthermore, there are very little navigation possibilities on these pages: in fact only an option to switch from one category to another category. The best solution would be creating different structures for these categories.

New web architecture for the *News* section has the following changing. Firstly, due to a short articles' length, nine columns were considered as an unreasonable use of space. In this case materials of this category were decided to be presented in six columns instead and the rest of them would be used for the navigation sidebar of the main page. In addition

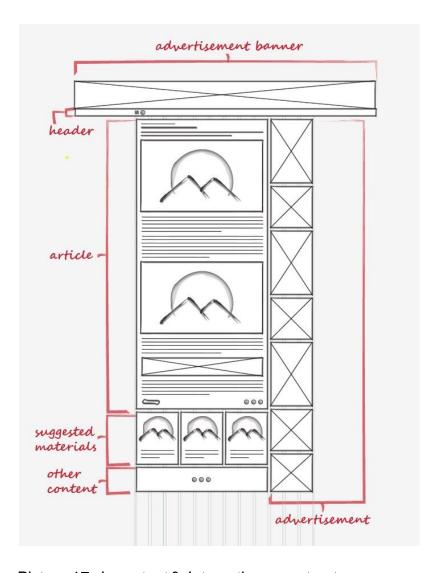
the article that the user is reading will be highlighted in the sidebar for a better content browsing experience. Secondary, it was chosen to use less commercial banners inside the content area (one panoramic banner per two materials instead of one after each) and more on the right three columns, where the advertisement follows the reader while scrolling the page previously. This action would reduce unnecessary disturbance and allow visitors to focus more on the page's content. The new structure scheme is presented in Picture 16.



Picture 16. News new structure.

The number of first articles will be preloaded and browsed by scrolling until users reach "load more" button, other content and footer below.

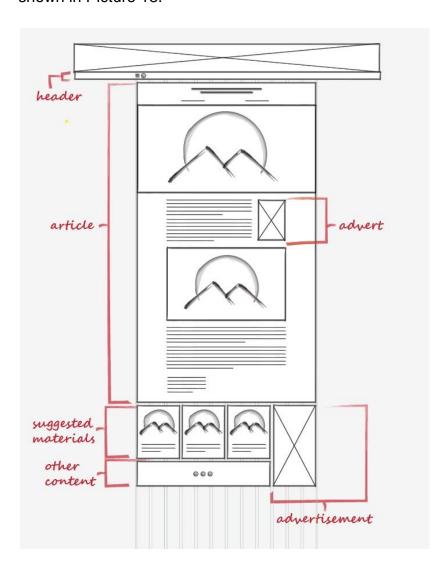
The next categories to redesign are *Important* and *Interesting* sections. As mentioned, articles of these types have serious or entertaining topics and a much longer length. Materials are considered to be read with higher attention and focus. In this case the sidebar is not present on this layout making more space and reducing external elements for a complete experience of topic's concerned or attracted audience. On the page there will be only one article preloaded taking the first nine columns of the layout. Advertisements will remain on the right side taking three columns. Moreover, there would be banners inside materials graphically separated from the main text. The visual structure plan of these sections is shown in Picture 17.



Picture 17. *Important & Interesting* new structure.

As the material opened ends, the page will be continued with "news suggestions" part and other content until it reaches the footer on the very bottom.

It was also decided to create an additional layout for special articles: the so-called "exclusive" ones. Special projects, contests, picture galleries and other materials which would contain great quality pictures and long texts will be presented in a different form. This layout will take the full grid space and only obtain one commercial banner. An article here is a central focus. The opening picture will be the largest and take twelve columns; other ones – from eight to twelve columns, depending on its value. The text will be aligned centrally as well as other elements. The goal of the further design would be to make the layout present these materials as the "cream of the crop" content. The possible structure is shown in Picture 18.

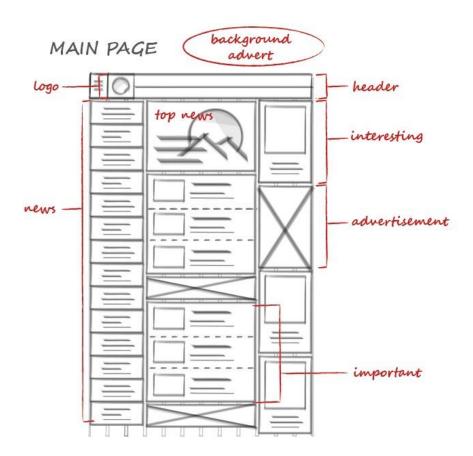


Picture 18. Longread new structure.

The article will end with suggested materials and following content.

This change in structure solves a number of previously faced problems. Firstly, the navigation from one material to another is now arranged and allows people to find more articles of their potential interest, which could increase the time spent on the resource. Secondary, the layout is clean and logical, an essential feature of a user-friendly interface. Moreover, there are now visible differences between categories, which also allow users to be more familiar with the website's architecture. Besides, the advertisement part has the necessary improvements. In general, the new structure is expected to bring more positive feedback from the visitor.

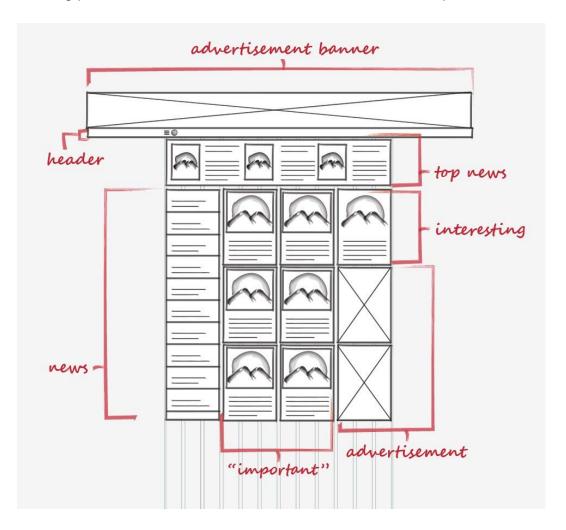
5.3 Homepage structure



Picture 19. Previous homepage structure.

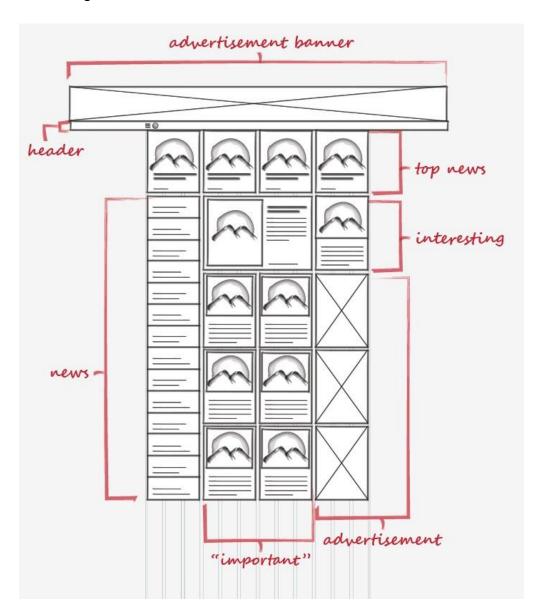
As we have a more detailed image of inner website's structure and possible looks, now it is time to work on the main page and its architecture. In this chapter a number of draft schemes will be presented and evaluated. Next the process will be continued with more specific design and concrete element outlook. After its final prototype is created, the same design style will be applied to sub pages according to preferable layout and composition.

The major problems of the old main page were generally pale design, nonfunctional header, the lack of the best content announcements, poorly working advertisement, no emphasis on materials from the *Interesting* section, very limited navigation options, etc. The new layout is aimed at solving these cases and creating a better user interface. Seeking possible solutions, several of sketches were made, presented in Picture 20.



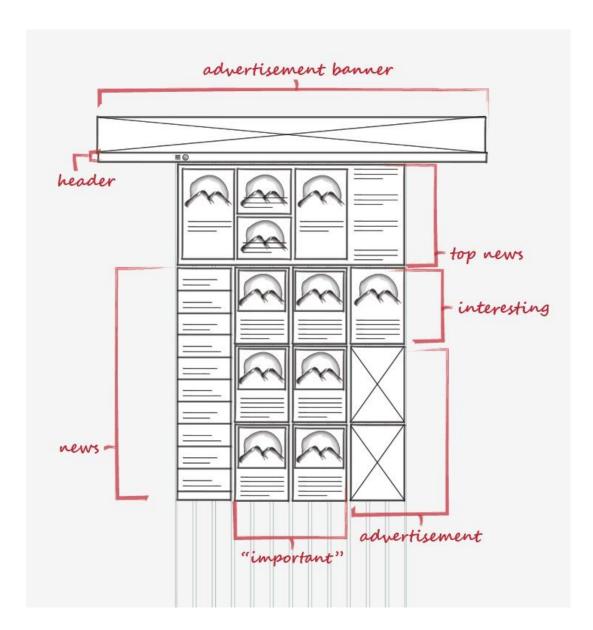
Picture 20. The main page structure I.

This example has three top daily news announces presented at the top and a card system for the *Important* section. However, implementing this scheme would bring other problems: a similar look of top news regardless of their categories and concurrence of *Important* and *Interesting* articles. Thus, alternative solutions need to be found.



Picture 21. The main page structure II.

This layout has a visible difference between *Important* materials and *Interesting* as well as graphically separated daily top cards. Nonetheless, advertisement banners might compete with *Important* news cards horizontally. To be able to better understand the pros and cons of this page architecture, a few quick prototypes could be drawn.



Picture 22. The main page structure III.

This structure could solve the top news problems; however, after the grid was applied it was clearly seen that it was not possible to group images according to the layout and keep their standard resolutions. In order to avoid technical errors and aesthetic disproportion it is preferable not to crop pictures too differently from today's most common resolutions, for example 4:3 or 16:9 as horizontal to vertical ratio. Therefore, the structure of top required further discussions.

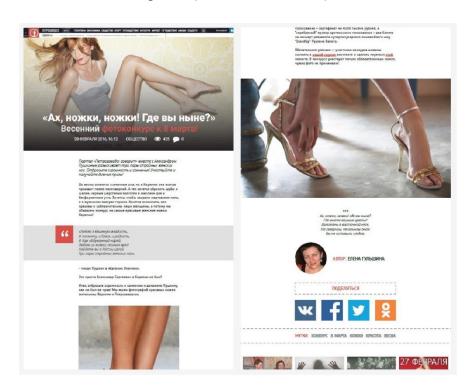
After a couple of examples of possible page architecture was made, there are still questions appearing regarding if the new layout would solve previously faced problems and

work effectively in general. Thus, the discussion was decided to be continued after couple of more detailed prototypes based on what we have now will be presented.

5.4 Design drafts

In this chapter several graphic sketches based on structural layouts will be presented in order to support discussions with some visual images of how the website might look. This will help to understand the possible solutions of how to avoid problems of previous design and to ease the ideation process in general.

The sketches that will be shown are not detailed, but present the general idea of a possible layout to be applied to the future design. They also might consist of some experimental design of elements for further consideration. As a warm-up the first draft design was created for the longread (exclusive material).



Picture 23. Longread draft.

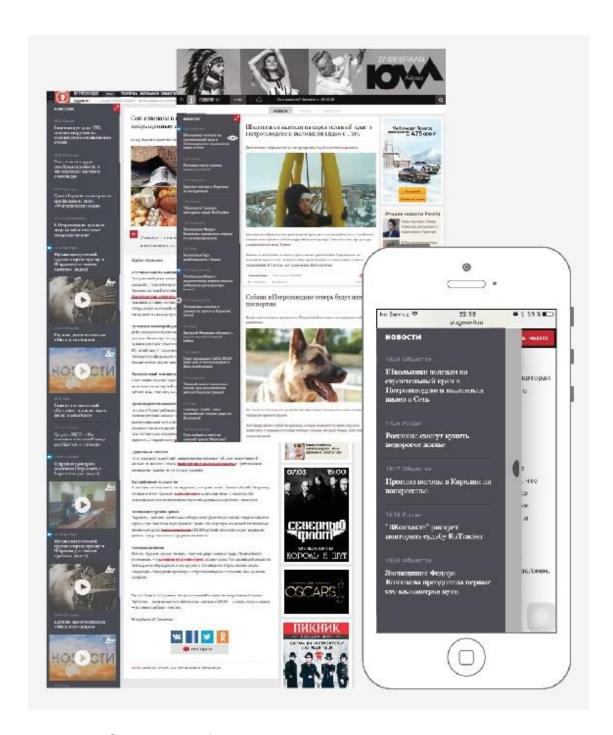
This sketch was drawn to see if the layout that includes twelve column pictures and eight column texts works both practically and aesthetically. After discussing the result, a few notes and conclusions have been made. Firstly, the old font which is used on the website now needs to be replaced with a different and more suitable one in order to create a modern look of the page. Secondary, colouring a part of a heading in the brand colour, which is red, is an idea to be applied to all future layouts as a tool of brand identity. Thirdly, longreads as well as other materials can be implemented as pop-up windows. Moreover, long and serious articles could be provided along with a brief description of an author of the writing. Besides, it is a fine idea to colour in-text links in red as well and use this colour widely on the website. In general, the sketch received positive reviews and is considered to remain similar, but improved and detailed, shown in the final prototype stage.

The next quick prototype was created for reports including photo galleries to see if the usage of picture sliders is reasonable or neccessary. In this sketch the same layout was used as in the one before, and the original slider was designed. The result showed that using this will allow for saving significant space on the page and ease the reading process. Thus, picture sliders will be applied in the future design in case of numerous images in the material. The prototype is presented below.



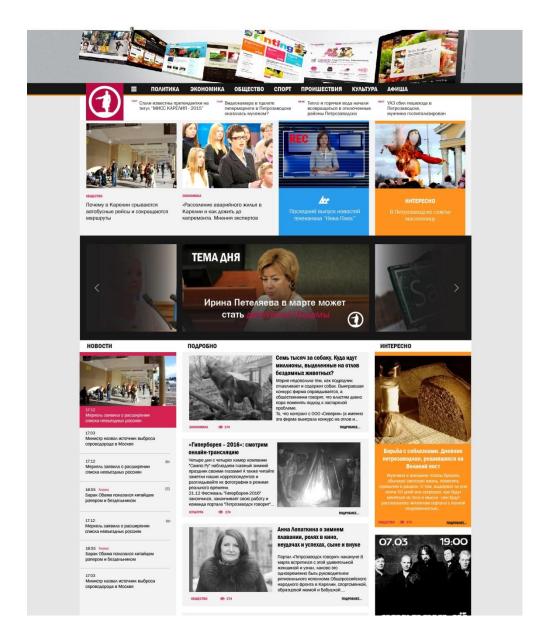
Picture 24. Photo gallery draft.

After that numerous sketches were made of the inner pages based on the original elements with new layouts applied. It was concluded that the new structure of those is working well and when the main page final design will be done, subpages will be implemented with the new style and architecture.



Picture 25. Subpages drafts.

As the concept of inner pages was clearer, various drafts of the main page were drawn afterwards. The key question of these prototypes was the usability of the content architecture. Specifically, top announcements, advertisements and news cards were under discussion as the most complicated matters, including positioning, emphasis, outlook, features, etc.



Picture 26. Homepage draft I.

After the sketches presentation, the team made several decisions. Firstly, the picture slider on the homepage as a solution to fit more of the top rated news takes too much space and makes it impossible to see the following content without a lot of scrolling. Thus, another way needs to be found. Secondary, texts which are missing pictures or other graphical elements are dragging too little attention to be applied to the top side of the page. However, a text slider can be considered next. Thirdly, it is necessary to possess at least one commercial banner within the first two rows of top materials, so it is also visible right after accessing the resource. Moreover, there must be some limitations to bright colours to

be measured in later works. Again, this is not a magazine layout, but a more serious one. In addition, it is a great idea to colour the pictures of "important" articles in black and white in order to emphasize the surrounding content and separate the section from others.



Picture 27. Homepage draft II & III.

6 FINAL DESIGN: HOMEPAGE

In this chapter all the gained knowledge of web design and personal reflections will be processed and applied forming a new layout for the homepage. As a designer I will make sure that all elements and segments will follow a unique and united style connected to each other and to the brand itself. The interface is supported with tools minding affordances, creating space for improved navigation features, content with a clean and logical structure visually divided for quick user adaptability, commercial banners working productively, etc. The design process will be starting from the very top of the page and

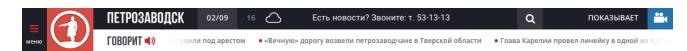
ending at the bottom: step-by-step in vertical order. (For versions picture comparison see Appendix 1.)

6.1 Header

The homepage is the face of a website, the object of the first impression, and the header is its crucial part, which is always visible without scrolling. The designer should pay a lot of attention and make a great effort while developing the upper page's side.

The main problem of the previous header was its lack of functionality. At the same time one must never use too many elements on the top of the page, since it is the first thing users would see, and one of the goals is not to make any distraction or confusion as the first impression. Thus, the header needs to be simple, logical and minimalistic.

The old header consists of the logo, "hamburger" button that opens the categories list, date, weather report, office contact number, searching button, the *Petrozavodsk pokazivaet* button linked to video news section and scrolling text. The top is believed to have some extra pieces as well as missing ones. Furthermore, there must be a solution found to emphasize the video news button, since research on the number of clicks in that area is minimum. Thus, people do not notice that button or do not know its function.



Picture 28. Previous header.

In the new version it was decided not to include scrolling text due to its ineffectiveness, but to add an open list of categories for faster navigation, a calendar button for a similar purpose, social network sharing buttons for more complete integration and a currency report. Furthermore, references were added to a special company's project named *Encyclopedia of Karelia*, which is a universal guidebook of the facts of Karelia like of its history, nature, science, education and other spheres. After numerous tries and discussions the header was finalized as presented in Picture 29.



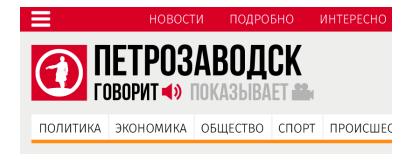
Picture 29. New header.

The header now consists of three levels for a special purpose. The *Red* layer is a quick menu: hamburger button, the general categories, social network buttons, date and contact number. The *grey* one has secondary data, more navigation features and brand identity: logo, weather report, currency report, searching button, calendar button, switching button between the written articles section and a video news one and the *Encyclopedia of Karelia* references. The *white* level is a specific categories list like "politics", "economy", "society", "sport", etc. The purpose of creating such structure for the header is to make it transformable: as a reader is scrolling down, the transformed and smaller version of the header will follow the user as a useful navigation bar as shown in Picture 30.

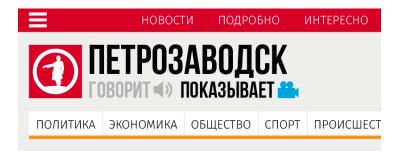


Picture 30. Transformed new header.

The problem of the unusable video news button was solved by a graphically clearer switching option: in the logo below the word *Petrozavodsk* there are two more buttons, *govorit* ("speaks") and *pokazivaet* ("shows") and the inactive section is faded, while the active is coloured.



Picture 31. Inactive video news section.



Picture 32. Active video news section.

Furthermore, new 50 weather icons in certain resolution were created in order to fit with the new style. The calendar button was also self-designed to follow the common website's shapes. Other icons are standard.



Picture 33. New weather icons examples.

To summarize, the result has all the necessary improvements: the brand identity concept, fast navigation features, transformation possibility, special project involvement, a clear and logical layout, minimalism and a united style.

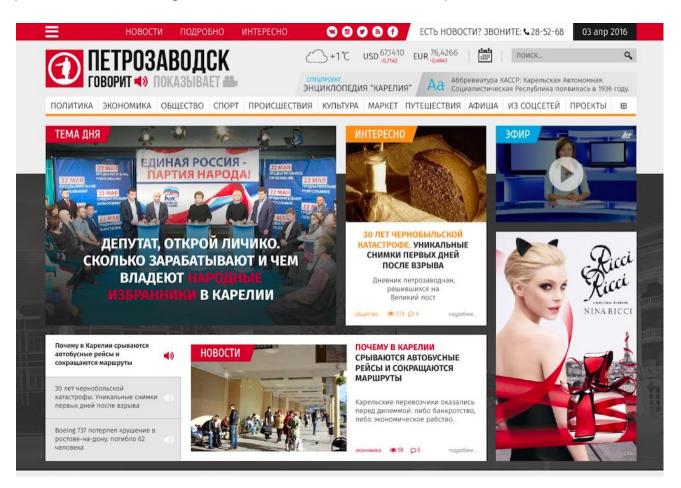


Picture 34. Palette & Fonts.

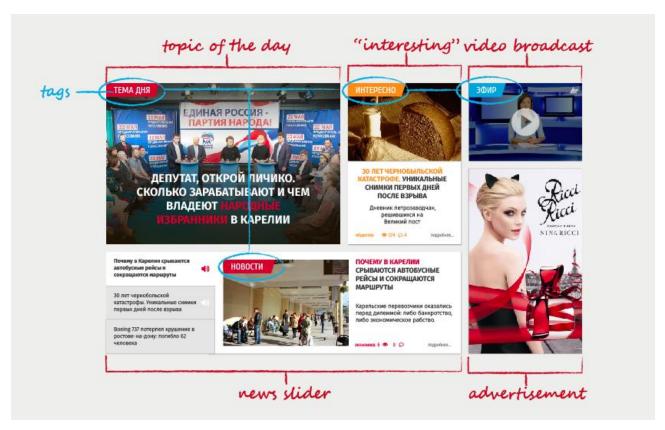
6.2 Top section

Due to the lack of urgent news announcements and competition between categories for the place on the top page, it was decided to create some space of 12 columns by width below the header only for the top-rated materials from different categories. Later journalists will manually edit this zone by placing the most valuable articles there.

As already mentioned, there is only one announcement of the top news in the previous version, which is too little for the resource that provides a great amount of information of different topics daily. Furthermore, *PTZ-govorit* is a union of two newspapers and a television station. However, features such as online broadcasts, which is technically possible, is still missing and thus needs to be added in the top area as well.



Picture 35. New top section.



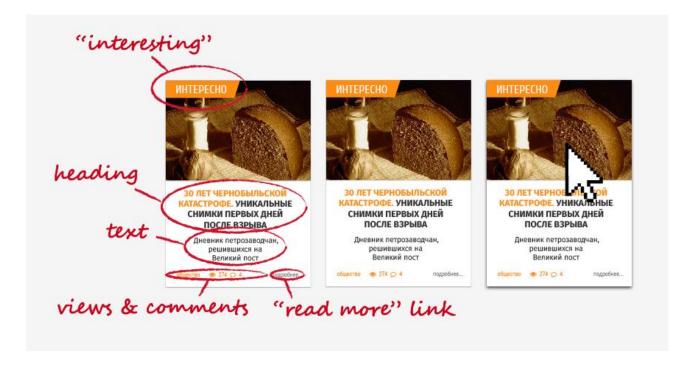
Picture 36. Top section structure.

The biggest space of the top will be devoted to the topic of the day as for the most urgent and relevant information published lately. To make it appear graphically different from other kinds of content, it will be presented as a card with a picture that takes its full space and the heading on top of it. For a better understanding of what the card provides users with there is going to be a bookmark-looking category named "top of the day" in the shape that follows the style of *Encyclopedia* from the header by the same angle and coloured red as a brand identity element and a reference to "news" in general. The heading will have the biggest font size to emphasize the material's current importance, and a couple of its words will be coloured in red as the website's signature element. Furthermore, the card will be animated: a hovering mouse on that card darkens the picture.



Picture 37. Topic of the day. Card animation.

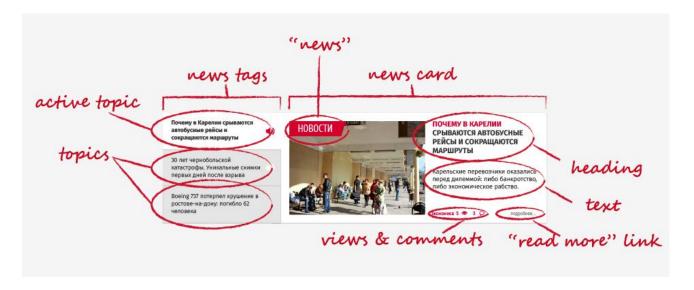
The next card will relate to an *Interesting* top material to decrease the competition between categories. It will have a page's unique card style with the presence of orange colour referring to the *Interesting* section as a signature. Below the text there will be "views" and "comments" numbers as well as a "read more" link that sends a user to the material's inner page. The bookmark will be also present there in orange colour and named "Interesting" as a guide to readers. A stronger shadow behind the card which will be applied as an animation to all cards on the website.



Picture 38. Card structure.

Next to *Interesting* there will be a video broadcast window tagged with television station's trademark blue colour. The video starts automatically as the page is opened. There will be a toolbar appearing after hovering the mouse on it with "pause", "volume" and "full screen" features.

Finally, there will be additional important news announcements presented as a slider below. By clicking one of the three news headings on the left, articles and pictures on the right side will be changed to the material that had been clicked on.



Picture 39. Slider structure.

To conclude, this top layout solves the previous competition between categories by adding space for the daily most urgent topic, top *Interesting* material and three more important articles in the slider. The commercial banner is no longer conflicting with content due to a visible different look. Furthermore, the panorama picture on the background graphically differs from this whole "top-rated" section from other following materials and elements on the page.

6.3 News columns

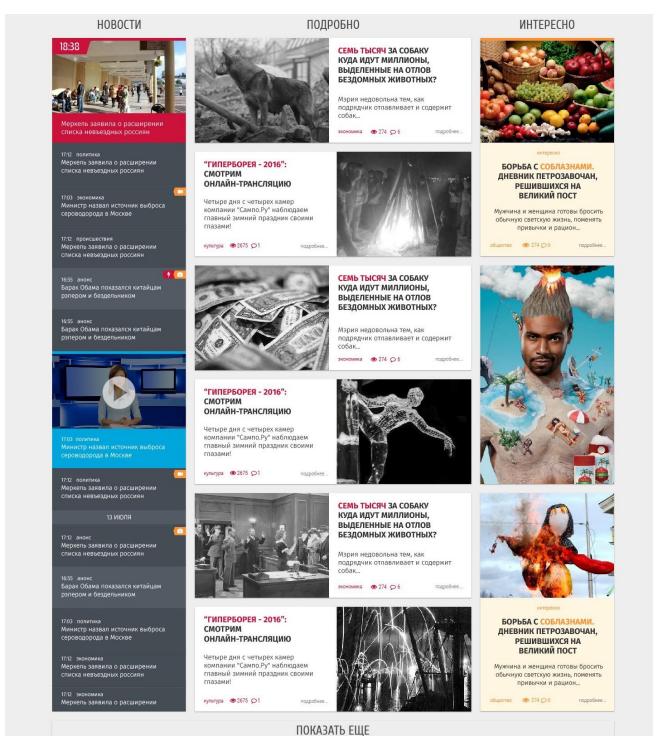
Below the top section there is general content divided into columns representing the main website's categories: *news*, *Important* and *Interesting* columns. The key point here is to

make sure those materials do not conflict with each other by typical outlook and advertisement banners are not distracting users from the primary purpose they have visited the page, reading.

The general content layout is similar to the original one: the news topics sidebar on the left columns, *Important* articles in the middle, and *Interesting* materials along with advertisement banners on the right. However, it was decided to apply cards to news elements as well as to other objects.

The news sidebar now has the last news announcements highlighted in red. Video and other special material will be emphasized as in-sidebar cards. Topics that include a picture gallery or video are marked with special icons. The materials which users are reading at the moment is also highlighted.

The *Important* news in the middle column is provided with horizontal cards different than *Interesting* ones' style in order to appear more clear and logical to readers. The main difference lies in orientation (horizontal *Important* and vertical *Interesting*), colours (black and white photos and presence of red colour in *important* section, colourful pictures and presence of orange in *Interesting* one) and size in general. As in all cards there is a shadow animation as the mouse hovers over the material and turns a black and white picture into something colourful in addition to that. Materials are visibly separated from each other avoiding users' confusion. To read the full article visitors need to click on the card or the "read more" link.



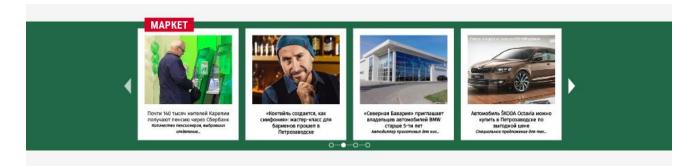
Picture 40. New column layout.

Interesting articles have a different card style: vertical orientation, light orange background, colourful pictures and presence of its signature colour. These will resolve the likeness problem between commercial and articles. Advertisement banners in this column appear after every two Interesting topics.

Below the three columns there is a "show more" button to load more of the cards. To separate the general content from the other sections, there is again a contrasting next one following below.

6.4 Market & Billboard sections

During the discussions it was planned to include new sections into the website. The first one is *market*, which consists of advertisement articles or text advertisements, which do not imply a poster only. The second new section is a *billboard* of upcoming events: cinema, museum, theatre, sport related and other.



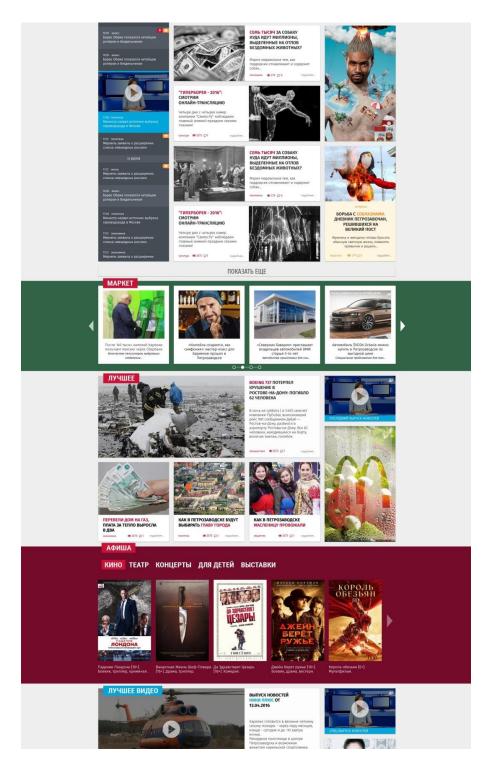
Picture 41. Market section.



Picture 42. Billboard section.

These parts now appear as sliders between general content, which visibly divide the page into structural areas of different matters. Thus, speaking from the top, there is the top news

section, then strongly contrasting it a three-column general content, followed by a graphically accentuated *market* slider, and a top-weekly news section after that, etc. Therefore, *market* and *billboard* not only works as additional features of the website, but also create a more logical architecture of the resource by its individual design.



Picture 43. Graphical separation of sections.

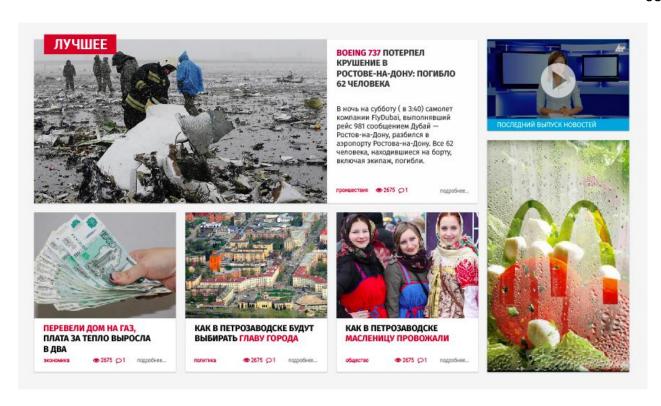
These sliders consist of promotional cards of different subject, a toolbar to switch between categories (cinema, theatre, concerts, etc.) and the ability to browse all the cards horizontally without redirecting to an actual page of matter.

Market exploits the commercial potential of the web resource. Billboard of entertaining occasions also was grown into a new special project: detailed descriptions of a great amount of events happening in Petrozavodsk every day. The uniqueness of this project is as a solution to citizens believing that there is nothing interesting going on in the city. However, the real problem here is the lack of information and promotion provided by event hosts. Thus, PTZ-govorit is not only an online newspaper, but also a potential web portal for people to use on a daily basis.

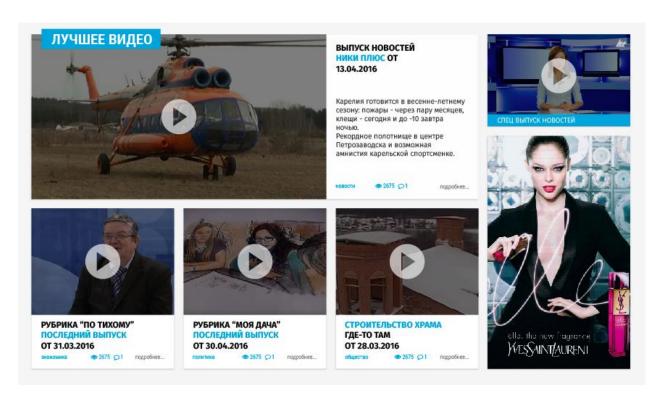
6.5 Top-rated Weekly News & Top-rated Video

After both the *market* and *billboard*, sliders there are sections devoted to top-rated weekly news and top-rated videos that are automatically chosen according to the number of views and comments. The structure of these parts was designed similarly to the top-rated daily one, which was presented previously: cards, supportive tags and a place for advertisement. This same style becomes a signature layout for any "top" announcement making these sections more recognizable and understandable for a user as well as saving the overall page's style. Furthermore, these parts are graphically separated by the according to sliders that frame them.

Sections include "top" news. However, for a different period of time or multimedia used, these layouts have their own element style: special tags, red colour for text news and blue colour for video news.



Picture 44. Top weekly news layout.



Picture 45. Top videos layout.

6.6 Footer

The footer of the website consists of general information about the resources as required: the name of the web page, a brief and more detailed description of the project, rating, contacts, advertisement price-list catalogue, social network links and copyright. The background has a panorama picture related to the city: draft picture currently.



Picture 46. New footer.

6.7 Final view

New layout design provides sample colours and fonts, which can be reconsidered and replaced if needed. It is strongly advised not to use more than 2-3 fonts or too many brand-related colours on a website. For the general font Fira Sans was chosen as a final solution due to its clean and easy-readable look. Bebas Neue as being a signature font in the logo is also present on the page, as well as Cuprum as a font with a similar and matching overall style. Brand colours, red and grey, are the main ones used throughout the page. Additional colours to emphasize or differ certain content parts were chosen using different pallets that generated using signature tones. The significant presence of white, as recommended, was considered and applied as well.



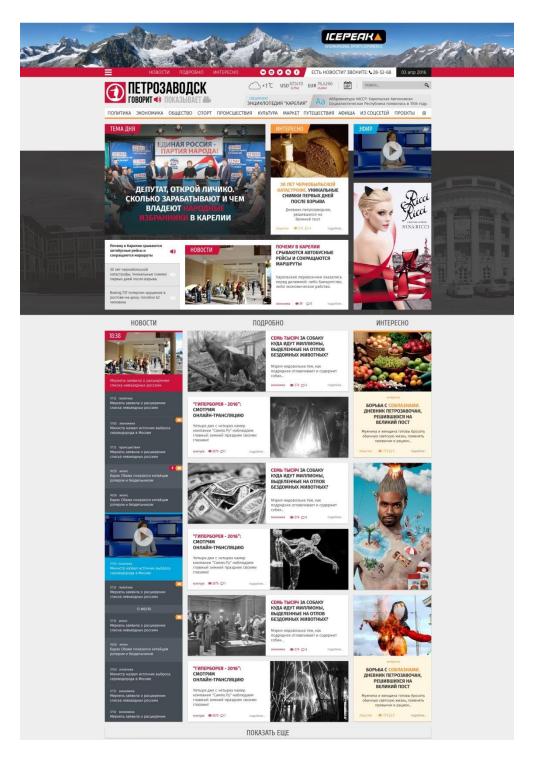
Picture 47. Possible colour schemes.



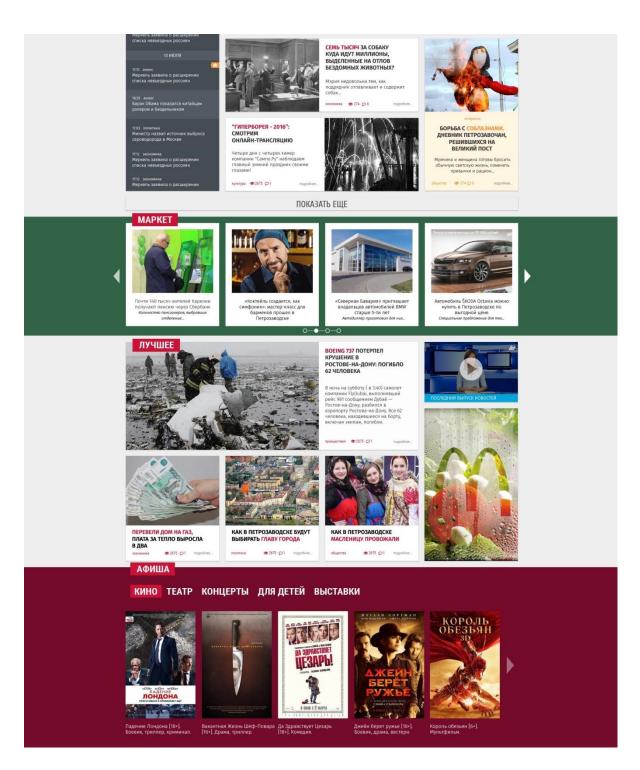
Picture 48. Final palette & fonts.

After joining all elements and segments together we receive a clean, logical and user-friendly homepage layout. Sections with inserted coloured panoramic background divide the page into contrasting parts of different matter and ease the usage and recognition of the resource. Each section is rationally structured and ordered. Materials of particular categories are not conflicting and competing. Navigation features are improved, which makes the time spent on the resource productive and satisfying. Sidebars and sliders

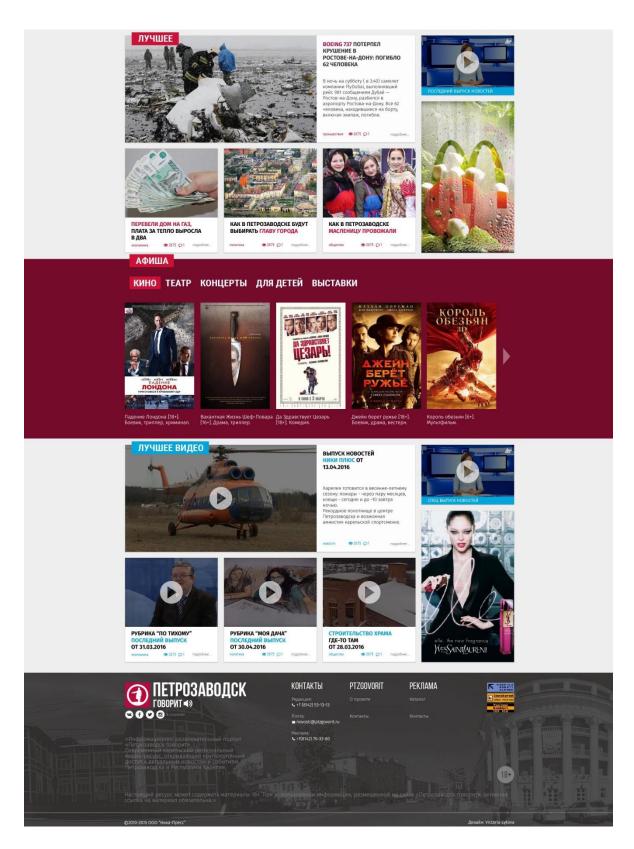
support users in finding content according to their interests. Design affordances are considered and included. Certain elements like icons, shapes, graphical effects and colours match the general minimalistic design concept. To sum up, the created structure and style went well together and organized a better web environment.



Picture 49. Homepage. Part I.



Picture 50. Homepage. Part II.



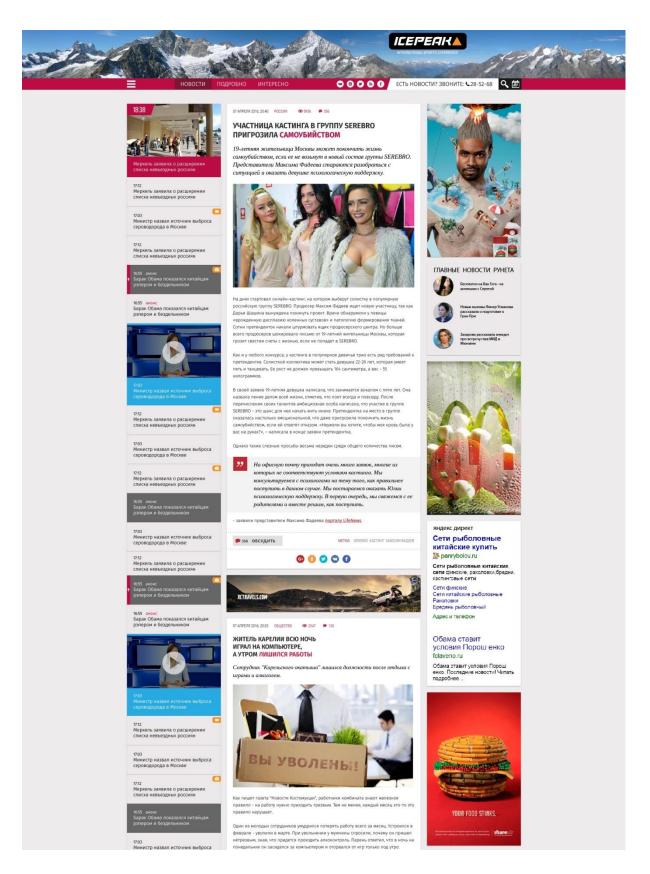
Picture 51. Homepage. Part III.

7 FINAL DESIGN: SUBPAGES

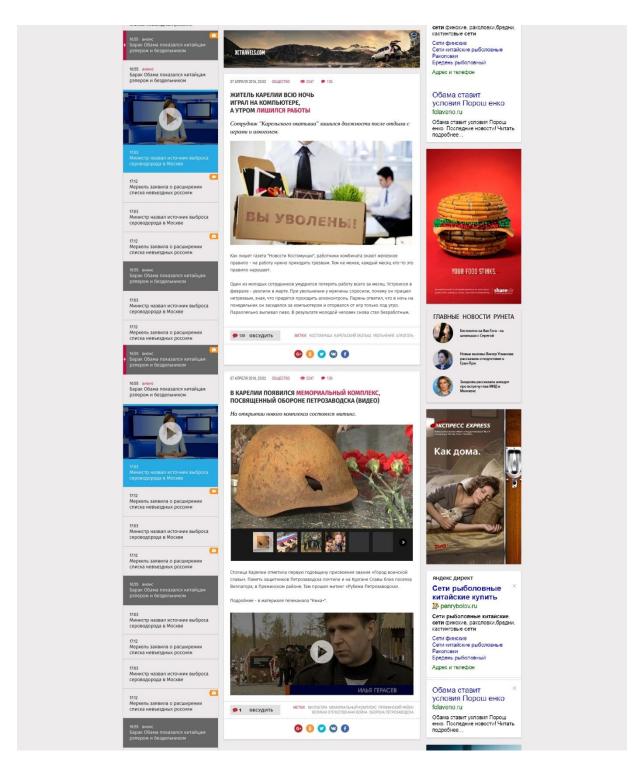
As planned, after the design of the homepage is ready and approved, similar styles and graphic elements are to be applied to the subpages according to their new structure, which was developed in the beginning of the working process. Thus, identical colour pallettes, fonts, icons, card view and other components will be present. In this chapter the following pages will be finalized: the subpages of *News*, *Important* and *Interesting* categories and the longread layout for exclusive content.

7.1 News

As discussed, since the *News* category consists of comparably short articles, content area will take six columns of width instead of nine as it used to be, allowing additional navigation features. Thus, the final layout of the news subpage will contain the sidebar on the left, a stream of preloaded articles in the middle, and the advertisement column on the right. Materials will be presented in cards of similar design as in the homepage; however, this will be extended with social sharing buttons, a discussion option and picture sliders or video materials when possible. Between cards after each two articles an additional commercial banner will appear. After reaching the end of an article, a new card will be automatically loaded, creating an endless news steam, which would increase usability and view depth. The currently viewing material will also be highlighted in the sidebar. The result of applying the lately developed style according to new architecture is shown in Pictures 52-53.



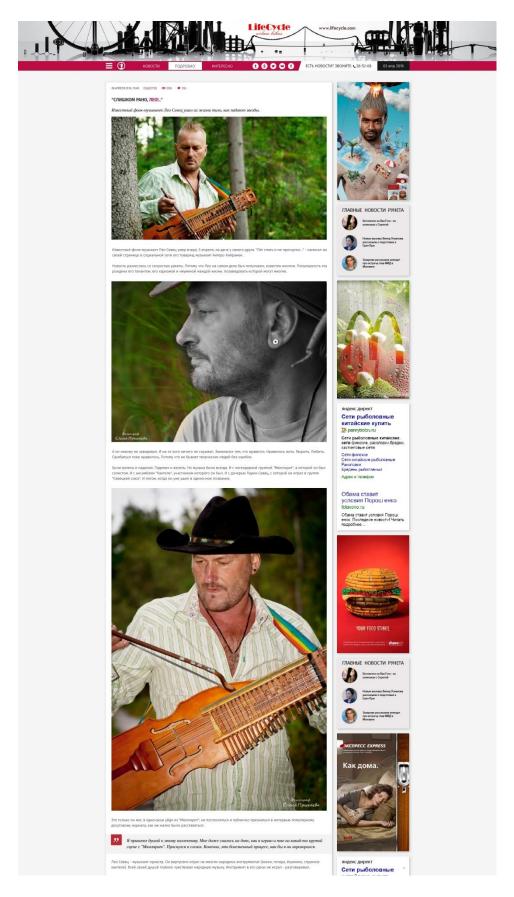
Picture 52. News layout. Part I.



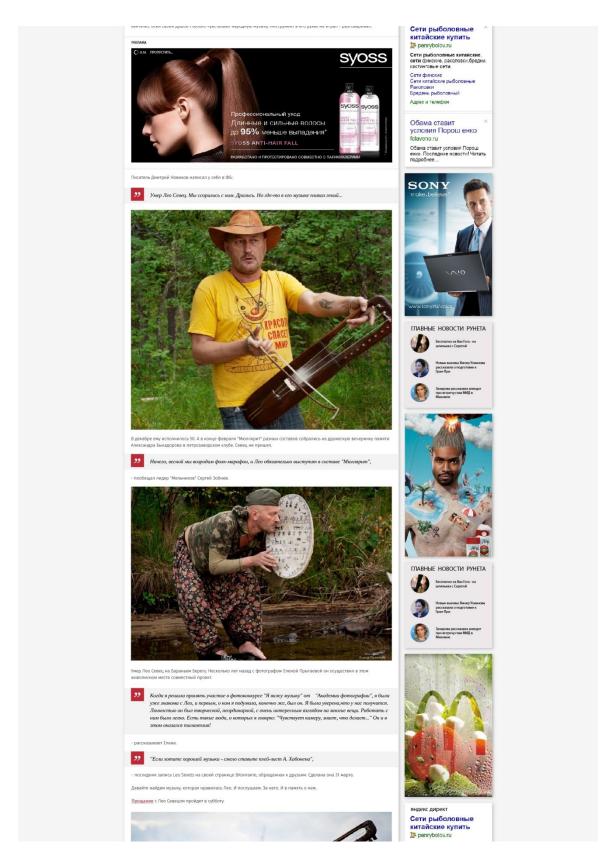
Picture 53. News layout. Part II.

7.2 Important & Interesting

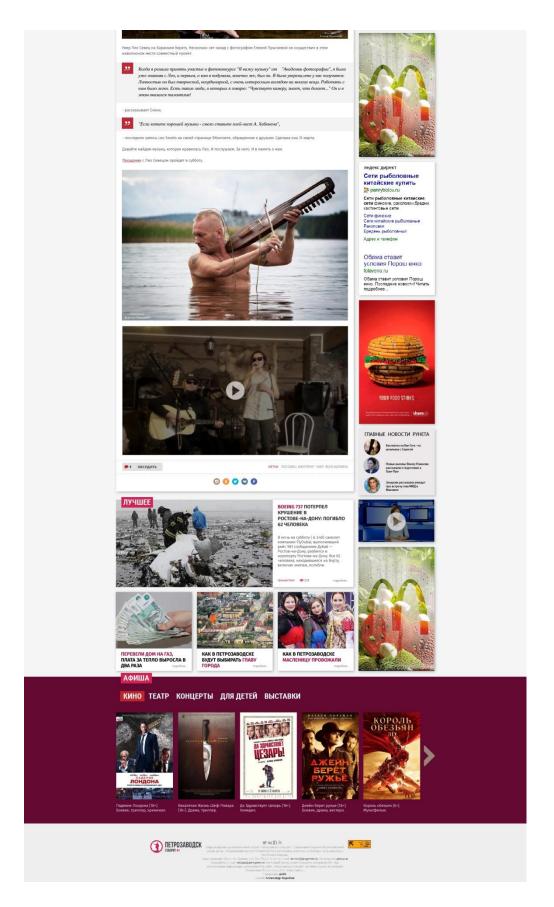
Compared to general news, articles of *Important* and *Interesting* mostly consist of long texts and numerous bits of further media: picture galleries and video. Thus, the subpage of these categories will appear as preloaded material when opened. Furthermore, in order to provide users with a better reading experience, an article will be presented in a wider area than other *News* using the space of the sidebar, which is not included in this layout. This means the page is missing an important navigation feature. The solution for this will be a "top news" section at the end of each article of this kind, allowing users to pick other material according to their interests. Concerning advertising, they will appear inside the article in a graphically separated area to minimize possible distractions. The result is presented in Pictures 54-56.



Picture 54. Important & Interesting layout. Part I.



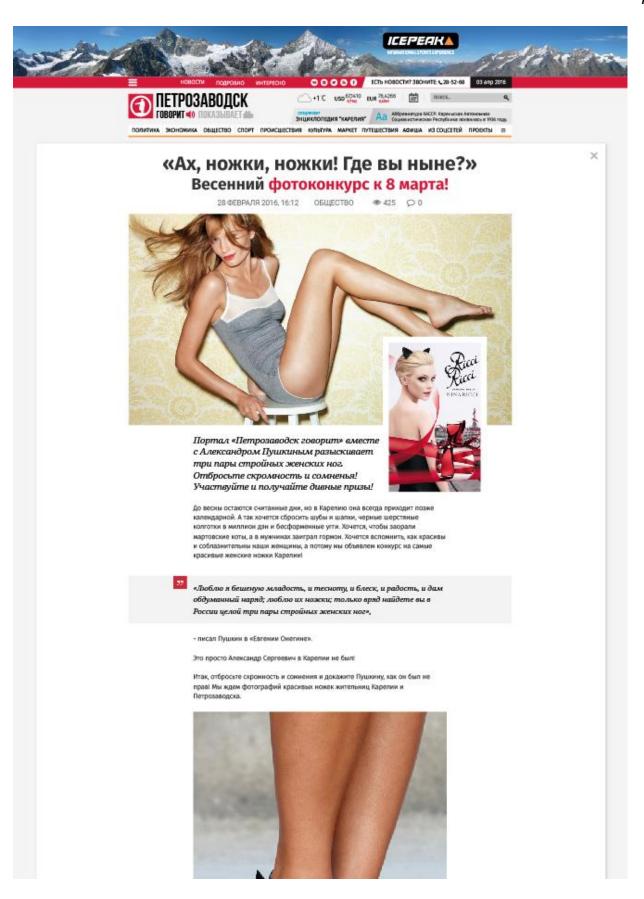
Picture. 55. Important & Interesting layout. Part II.



Picture. 56 Important & Interesting layout. Part III.

7.3 Longread

The longread layout aims to represent some exclusive content published on the website: journalistic investigations, special projects, contests and others. Therefore, these articles need to be represented in the most sophisticated way. This page will have the least number of advertisement banners, the biggest space devoted to content itself, the highest quality media, etc. At the same time, the design should not be too far from the style we have already generated. The use of identical fonts and brand colours is highly recommended in order to keep the resource recognizable.



Picture 57. Longread layout. Part I.



Отправляйте фотографии на адрес <u>yana-kozmina@yandex.ru</u> или оставляйте их под <u>этой</u> записью.

Фотографии принимаются до 8 марта включительно! 7 марта мы откроем голосование, а 9 марта подведем итоги. Две пары ножек вы выберите путем голосования, одну пару — редакционное жори, состоящее из исключительно жадних до красивых ножек, но объективных мужчин.

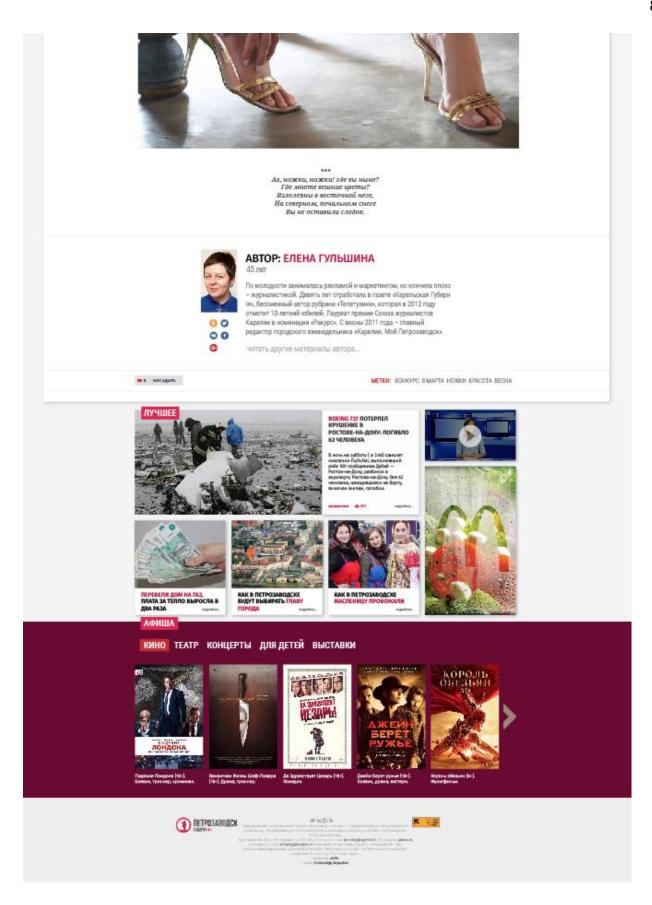


Обладательница самых красивых ножек по мнению нашей редакции получит сертификат на 6000 рублей на покупки в магазине белья "InDiva", победительница зрительского голосования - сертификат на 4000 тысячи рублей, а "серебряный" призер зрительского голосования - два билета на якицерт резидента суперповулярного комедийного щоу "StandUp" Руслама Белого.

Обязательное условие — участники конкурса должны состоять в нашей группе вконтакте и сделать перепост этой новости. В конкурсе участвуют только обладательницы ножек, чужих фото не принимаем!



Ах, ножки, ножки! где вы ныне? Где мнете вешние цветы? Вълелелны в восточной неге, На северном, печальном снеге Вы не оставили следов.



Picture 59. Longread layout. Part III.

8 DICSCUSSION

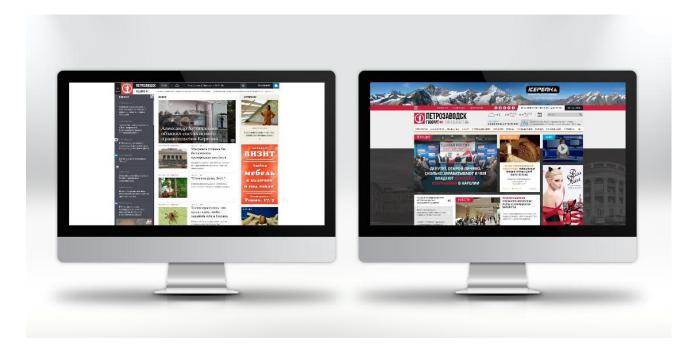
Although a nearly endless number of websites exist, not all of their developers paid enough attention to the user experience, which is the key concept in the design industry of most spheres. Achieving quality usability is a challenging process that requires great theoretical knowledge, numerous tests arrangements, deep observation, wide research and technical skills. Web developers must consider users demand in a high priority to be able to launch an unquestionably successful product. Creating a fine user-friendly web environment is a goal, the achievement of which would change people's image of daily web experience.

As a designer of the new version of the *PTZ-govorit* news website, I can state that every single graphical element on the pages was created based on a visitor's potential reaction and understanding, yet without ignoring its aesthetical features. The resource was taken forward to a new, different level which requires at least half a year to be accurately and fully evaluated by statistics and feedback. However, being first launched on the 2nd of September, the new website has already shown its potential. For instance, in a week of accessibility the reading (scrolling) depth witnessed an over four-time increase. Thus, visitors spend more time on the resource (See the Figure 1).



Figure 1. Visit depth after the first launch.

Overall, the new design is expected to face improvements in every aspect the team was targeting. Hence, the layout is completely new. It is also needs to be mentioned that further development might be in question as soon as proper statistical data is received. Thus, this launch is a first big step to an online newspaper's layout perfection in its general meaning.



Picture 60. Version comparison.

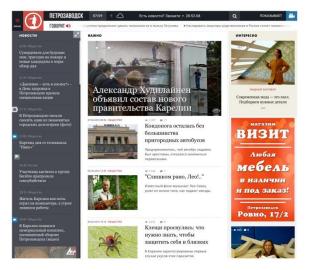
Yet, all team members and the target group is satisfied with the result we have achieved and is looking forward to its user response (See the group reviews in Appendix 2). Participation in this massive project was a rewarding and unforgettable experience: when comparing the first sketches and final prototypes, there is a visible and obvious growth of personal skills and professionalism. Having started as a novice in the web design industry, I achieved results my team members were positively surprised by: the ideation and design process did not need any other expert supervision. The final result is believed to be more than professionally competent. Joining this project was a successful start in trying a new occupation, and the number of acquired skills allows me to continue working in the field. Personally, I feel more confident and prepared for the possibility of working in graphic design industry in the future.

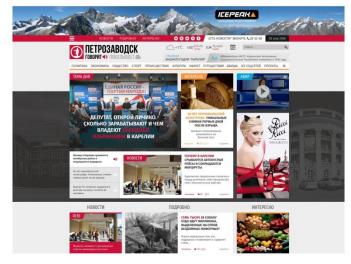
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Versions design comparison

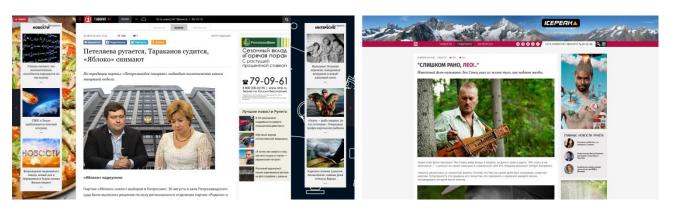




Picture 61. The home page comparison



Picture 62. The subpage comparison I



Picture 63. The subpage comparison II

Appendix 1 2 (2)



Picture 64. The subpage comparison III

Design feedback by the project team and the target group

New design allowed using modern approach and technologies in the layout, adaptive design implemented with Bootstrap framework, which solved numerous problems in further support and development of the website. Maintaining the page is now much easier,

- Timur Malikin, a technical director

- The design is clean, light and harmonic. Graphical elements of the home page and the three main website's categories create usability and positive experience for visitors. Chosen colour palette makes the page modern, stylish and memorable,
 - Elena Gulshina, a chef editor of the "Entertainment" section (including "Interesting" materials)
- New design successfully reached all the goals: organic transfer from short materials to expanded ones, easy website's navigation, proper advertisement placement. The desing follows modern trends and motivates users to read the pages with more interest,
 - Vitaliy Tarakanov, a web expert
- Now news appear elegantly and laconically on the mobile version. The choice of fonts are successful together for the main text, headings and citations. The usability of the website is greatly enchanced. The harmony of the palette is not distracting users from reading experience,
 - Andrey Smirnov, a chef editor of the "News" section