

TECHNICAL REQUIREMENTS

**for web development of platform PARTNER SPACE "015"
(within the project "PAGOSTE"
"New mechanisms of partnership-based governance and standardization of vocational
teacher education in Ukraine"
№ 609536-EPP-1-2019-1-DE-EPPKA2-CBHE-SP)**

CONTENT

1. GENERAL INFORMATION	3
1.1 INTRODUCTION.....	3
1.2 MAIN PURPOSE OF THE WEB-PLATFORM PARTNER SPACE "015"	3
1.3 PROJECT DESCRIPTION	3
1.4. TARGET AUDIENCE OF THE WEB PLATFORM.....	4
1.5. TASKS OF WEB PLATFORM	4
1.6. LIST OF INFORMATION ON THE WEB PLATFORM.....	4
1.7. THE COMPOSITION OF SERVICES PROVIDED.....	4
2. INDICATIVE STRUCTURE OF THE WEB PLATFORM PARTNER SPACE "015"	5
3. REQUIREMENTS FOR FUNCTIONAL CAPABILITIES OF THE WEB PLATFORM.....	8
3.1. REQUIREMENTS FOR THE WEB PLATFORM MANAGEMENT SYSTEM.....	9
3.2. REQUIREMENTS FOR ROLE MODELS OF USERS	11
4. WEB-PLATFORM USER INTERFACE REQUIREMENTS	12
4.1. GRAPHIC DESIGN OF THE WEB PLATFORM.....	12
4.2. ERGONOMICS.....	13
4.3. FRONT-END LAYOUT AND DEVELOPMENT.....	14
4.4. PERFORMANCE INDICATORS	15
4.5. APPROVAL OF DESIGN AND TRANSFER OF MATERIALS	15
5. REQUIREMENTS FOR FILLING THE WEB PLATFORM.....	15
5.1. COPYRIGHTING, EDITING AND LITERATURE REVIEW SERVICES	15
5.2 BACKUP AND RESTORE	16
6. SOFTWARE REQUIREMENTS.....	17
7. TESTING REQUIREMENTS.....	17
7.1. REQUIREMENTS FOR FUNCTIONAL TESTING	17
7.2. REQUIREMENTS FOR LOAD TESTING.....	18
8. NON-FUNCTIONAL REQUIREMENTS.....	20
8.1. REQUIREMENTS FOR INFORMATION PROTECTION.....	20
8.2 RELIABILITY REQUIREMENTS	21
8.3. INTEGRATION WITH EXTERNAL CLOUD AND INFORMATION SYSTEMS	22
8.4. SEO-OPTIMIZATION.....	23
8.5. REQUIREMENTS FOR THE MONITORING AND STATISTICS SYSTEM	23
8.6. REQUIREMENTS FOR DOCUMENTATION	24

8.7. CHANGE MANAGEMENT.....	25
8.8. OWNERSHIP ON THE SOURCE CODE.....	25
8.9. WARRANTY OBLIGATIONS	25
9. REQUIREMENTS FOR THE CONTRACTOR:	25
9.1 REQUIREMENTS FOR KEY SPECIALISTS.....	26
9.2. CRITERIA FOR EXCLUSION FROM THE LIST OF PARTICIPANTS	26
10. CALENDAR SERVICE PROVISION PLAN.....	26
11. STAGES OF PAYMENT.....	28
12. REQUIRED DOCUMENTS FOR PARTICIPATION IN WEB PLATFORM DEVELOPMENT.....	29
13. REPORTING DOCUMENTS.....	29
14. TERM.....	29
15. PROCEDURE AND TERMS OF PERFORMANCE OF WORKS	29
16. QUALITY OF SERVICE AND WARRANTY OBLIGATIONS.....	30
17. RIGHTS TO INTELLECTUAL PROPERTY	31
18. PLACE OF IMPLEMENTATION.....	31
19. OTHER CONDITIONS	31
20. APPENDICES	32
20.1 APPENDIX 1	32
20.2 APPENDIX 2	32
20.2.1 HEADER SAMPLE	32
20.2.2 SAMPLE OF "HOME" TAB	33
20.2.3 SAMPLE OF "EDUCATIONAL, EDUCATIONAL PROFESSIONAL PROGRAMS" TAB	34
20.2.4 SAMPLE OF "TRAININGS" TAB	34
20.2.5 SAMPLE OF "PROJECTS" TAB.....	35
20.2.6 SAMPLE OF "PROJECTS" TAB (MIDDLE OF THE PAGE).....	35
20.2.7 SAMPLE OF "GRANTS" TAB.....	36
20.2.8 SAMPLE OF "GRANTS" TAB (MIDDLE OF THE PAGE)	36
20.2.9 SAMPLE OF "PRACTICE" TAB.....	37
20.2.10 SAMPLE OF "PRACTICE" TAB (MIDDLE OF THE PAGE).....	37
20.2.11 SAMPLE OF PRACTICE REQUEST QUESTIONNAIRE.....	38
20.2.12 SAMPLE OF "WORK" TAB.....	39
20.2.13 SAMPLE OF "ADVANCED COURSES" TAB	39
20.2.14 SAMPLE OF "WORKSHOPS" TAB	40
20.2.15 SAMPLE OF "INSTITUTIONS OF HIGHER EDUCATION, INSTITUTIONS OF PROFESSIONAL PRE-HIGHER EDUCATION, INSTITUTIONS OF VOCATIONAL EDUCATION" TAB	41
20.2.16 SAMPLE OF "CALENDAR" TAB.....	42
20.2.17 SAMPLE OF "NEWS" TAB	42

1. GENERAL INFORMATION

1.1 INTRODUCTION

The PAGOSTE project "New mechanisms of partnership-based governance and standardization of vocational teacher education in Ukraine" - (hereinafter - the Project) is aimed at management in the field of teacher training of vocational education in Ukraine. Acquisition of a profession by teachers working in the field of vocational education is considered more difficult than in the system of general secondary education because here the relevance of their competencies not only affects students, but also the quality of vocational education in general and its functionality (benefits) for employers. A general criterion of quality is the confidence that the expectations of vocational institutions, motivation and competencies of future teachers can be agreed with each other.

Partnership-based governance is seen as a tool to address this issue by involving vocational institutions in activities such as curriculum development or teaching methods, and this may mean building a partnership-based governance system that goes beyond these two stakeholders. As decentralization is a key aspect of the modern vocational policy, partnership-based governance is in line with the political issues, while not questioning the traditional roles of responsible institutions.

1.2 MAIN PURPOSE OF THE WEB-PLATFORM PARTNER SPACE "015"

The purpose of the web platform is to improve the quality and relevance of training, retraining, professional development of teachers for vocational education in Ukraine. Web platform Partner space "015" is aimed at providing communication between students, teachers and stakeholders; creating conditions for professional development of teachers and exchange of experience; ensuring the implementation of mechanisms for the interaction of stakeholders in the training of teachers of vocational education.

1.3 PROJECT DESCRIPTION

This project is aimed at the development, implementation, launch, maintenance and promotion of the National Pedagogical Web Platform Partner Space "015" (hereinafter - Web Platform)", which is an information (and service) platform that provides comprehensive, detailed and reliable data on:

- internships and advanced training courses for teachers;
- places for pedagogical and industrial practice for students;
- employment in the specialty for graduates of higher education institutions;
- employment opportunities for young teachers and filling pedagogical vacancies in vocational education institutions;
- educational, educational-professional programs, which provide training for professionals in institutions of vocational and higher education;
- the needs of vocational education institutions in teachers by specialties;
- opportunities to obtain pedagogical qualifications for specialists without pedagogical education;
- placement of requirements for applicants for pedagogical positions, etc.

1.4. TARGET AUDIENCE OF THE WEB PLATFORM

The web platform target audience is

- students of higher education institutions in the specialty 015;
- teachers of institutions of higher, vocational and professional pre-higher education;
- employers (representatives of personnel services of enterprises, institutions, organizations);
- specialists who want to become teachers of vocational education, professional pre-higher education institutions;
- representatives of state and local authorities, public organizations;
- heads of institutions of higher, vocational and professional pre-higher education.

1.5. TASKS OF WEB PLATFORM

The web platform is developed to establish communication between students, teachers and stakeholders, dissemination of information about educational, educational and professional programs; trainings; projects; grants; practice; work; training courses; workshops; internship, etc.

1.6. LIST OF INFORMATION ON THE WEB PLATFORM

To improve the quality of training of teachers for vocational and professional pre-higher education institutions, providing communication between students, teachers, employers on the web platform it is necessary to place information about:

- educational and professional programs of universities that train teachers for institutions of vocational and professional pre-higher education;
- educational programs for advanced training and internships of teachers of higher, vocational, professional pre-higher education;
- places of practice for students of higher, vocational and professional pre-higher education;
- institutions and organizations that provide training and internships for teachers;
- job search for students/teachers, cooperation with job search platforms;
- forum for exchange of experience and communications;
- publication of grant and project opportunities for teacher training, academic exchanges, internships;
- planning and coordination of communication activities related to education or professional development of pedagogical staff of educational institutions;
- providing feedback and suggestions for improving the training of teaching and non-teaching staff of educational institutions.

1.7. THE COMPOSITION OF SERVICES PROVIDED

1. Development:

- Calendar work plan;
- Layouts of design and prototypes of the web platform;
- Web platform software functionality components;
- Working and operational documentation for the web platform;
- Preliminary tests of the web platform;
- Carrying out functional testing of the web platform Partner space "015";
- Carrying out load testing.

2. Deployment of the web platform Partner space "015" on the hosting provided by the Customer and conducting experimental operation.
3. Filling in the web platform with content.
4. Provision of services in accordance with warranty obligations (technical support).
5. Providing a copy of the code in an archived version.

2. INDICATIVE STRUCTURE OF THE WEB PLATFORM PARTNER SPACE "015"

All items posted on the web platform must be distributed under the CC-BY 4.0 open access license and allow authorized users to leave comments. Not authorized users to leave a comment must fill in the fields: name, e-mail, message and check in google recaptcha of 2-3 version.

The web platform should be public, free, flexible, built on a popular CMS system (e.g. Joomla, WordPress), which is constantly updated and allows to create pages with simple types of content (photo, video, text, hyperlinks) for persons without special knowledge. It should support the creation and deletion of: materials, categories, tags, comments, additional fields, questionnaires, as well as caching, plugins, templates, etc. The web platform should have a convenient interface for administering a large number of articles. The creation of new content should take place from both the backend and the frontend after authorization on the site. Administration should be from the backend.

Section 1. "**Home**" (consists of elements presented in Appendix 2, in particular: slider (has a flexible setting of the event as a start and end date, transitions, hyperlinks, etc.), associated with a hyperlink to news or other important material for the administrator, four tiles with a graphic image and related to the relevant categories, calendar (can be both Google calendar and static with the ability to fill it by relevant user groups, news from certain categories, feedback forms and contact information) (see Appendix 2).

Section 2. "**For Students**"

–Educational, educational-professional programs (page with information about educational, educational-professional programs of educational institutions; at the top of the page there is search by category, has the form of a blog divided into 5 columns and 4 lines with a total of 20 items per page, number of pages are increased according to the amount of content; information is downloaded by administrators or editors. Information includes: images, text, hyperlinks and the ability to distribute content through social networks (social distribution buttons). After filling it, the person who created the item and who has filled in the form of notifications about a new message, view the publication in the personal account (see Appendix 2, EDUCATIONAL, EDUCATIONAL-PROFESSIONAL PROGRAMS);

–Trainings (the page where information about trainings is presented, has a calendar form; the information is downloaded by administrators or editors; at the top of the page there is search by category. Information includes: images, text, hyperlinks and the ability to distribute content via social networks) (see Appendix 2);

–Projects (the page on which the information about projects are presented, has the form of a blog divided into 5 columns and 4 lines with a total of 20 items per page, the number of pages increases according to the amount of content, information about current projects is downloaded by administrators or editors. The information includes: images, text, hyperlinks and the ability to distribute content through social networks (social media distribution buttons) (see Appendix 2);

–Grants (the page on which grants are submitted, has the form of a blog divided into 5 columns and 4 lines with a total of 20 items per page; the number of pages increases according to the amount of content; information about current grants is downloaded by administrators

or editors. Information includes: images, text, hyperlinks and the ability to distribute content through social networks (social media distribution buttons) (see Appendix 2);

–Internship (a page with information about places of practice; has the form of a blog divided into 5 columns and 4 lines with a total of 20 items per page; the number of pages increases according to the amount of content; information is uploaded by administrators or editors, there is search at the top of the page. Authorized users (students) can send a request for an internship in the chosen place. Information includes: images, text, hyperlinks and the ability to distribute content through social networks (social media distribution buttons) (see Appendix 2);

–Work (at the top of the page there is search by category, according to the specified search parameters; the results from current job search sites are presented (work.ua, robota.ua, jobs.ua) (see Appendix 2).

Section 3 "**For Teachers**"

–Advanced courses (the page where the information about the advanced courses is presented, has the form of a blog divided into 5 columns and 4 lines with a total of 20 elements per page; the number of pages increases according to the amount of content; information is uploaded by administrators or editors. Search for the category is provided at the top of the page. Information includes: images, text, hyperlinks and the ability to distribute content through social networks (social distribution buttons) (see Appendix 2);

–Trainings (the page where information about active trainings is presented has the form of a calendar; information is downloaded by administrators or editors; at the top of the page there is search by category. Information includes: images, text, hyperlinks and the ability to distribute content via social networks) (see Appendix 2);

–Workshops (a page with information about active workshops has the form of a calendar; information is downloaded by administrators or editors; at the top of the page there is search by category. Information includes: images, text, hyperlinks and the ability to distribute content through social networks (see Appendix 2);

–Internship (the page with information about internship applications has the form of a blog divided into 5 columns and 4 lines with a total of 20 items per page, the number of pages increases according to the amount of content; information is uploaded by administrators or editors; at the top of the page the user can make a search by category. Information includes: images, text, hyperlinks and the ability to distribute content through social networks (social distribution buttons) (see Appendix 2);

–Projects (the page on which the current projects are presented has the form of a blog divided into 5 columns and 4 lines with a total of 20 elements per page; the number of pages increases according to the amount of content; information about current projects is downloaded by administrators or editors. Information includes: images, text, hyperlinks and the ability to distribute content through social networks (social media distribution buttons) (see Appendix 2);

–Grants (the page on which information about grants are submitted has the form of a blog divided into 5 columns and 4 lines with a total of 20 items per page; the number of pages increases according to the amount of content; information about current grants is downloaded by administrators or editors by categories). The information includes: images, text, hyperlinks and the ability to distribute content through social networks (social media distribution buttons) (see Appendix 2);

–Work (at the top of the page the user can search by category, according to the specified search parameters; the information from current job search sites are highlighted (work.ua, robota.ua, jobs.ua) (see Appendix 2).

Section 4 "**Activities**"

Information on the most important local and international educational events authorized for publication on the web platform (filter of events by tag, category, time; archive of events).

–Calendar (calendar with the ability to fill only by administrators or editors, with the ability to subscribe to events and share them on social networks via social buttons; at the top of the page the user can search by category; according to the search parameters the results are highlighted; it is also possible to show all events, which can be sorted by date, to show events up to a certain date) (see Appendix 2);

–News. Dynamic content by topic (at the top of the page the user can search by category; according to the search parameters the results are highlighted). It is possible to filter by tag, time. Information includes: images, text, hyperlinks. The content is downloaded by administrators or editors (see Appendix 2);

Section 5 "**Partners**"

General information about institutions of higher education, professional pre-higher, vocational education, institutions that have signed a memorandum of partnership.

–Higher education institutions (the page with information about higher education institutions looks like a blog divided into 5 columns and 4 lines with a total of 20 items per page; the number of pages increases according to the amount of content; information is downloaded by administrators; at the top of the page the content can be searched by categories. The information includes: images, text, hyperlinks and the ability to distribute content via social networks (social distribution buttons) (see Appendix 2, Sample "INSTITUTIONS OF HIGHER EDUCATION, INSTITUTIONS OF PROFESSIONAL PRE-HIGHER EDUCATION, INSTITUTIONS OF VOCATIONAL EDUCATION»);

–Institutions of professional pre-higher education (the page with information about institutions of professional pre-higher education has the form of a blog divided into 5 columns and 4 lines with a total of 20 elements per page; the number of pages increases according to the amount of content; information is uploaded by administrators or editors. The information includes: images, text, hyperlinks and the ability to distribute content through social networks (social distribution buttons) (see Appendix 2, Sample "INSTITUTIONS OF HIGHER EDUCATION, INSTITUTIONS OF PROFESSIONAL PRE-HIGHER EDUCATION, INSTITUTIONS OF VOCATIONAL EDUCATION»);

–Institutions of vocational education (the page, which presents information about institutions of vocational education, has the form of a blog divided into 5 columns and 4 lines with a total of 20 elements per page; the number of pages increases according to the amount of content; information is uploaded by administrators or editors; at the top of the page you can search by category. Information includes: images, text, hyperlinks and the ability to distribute content through social networks (social distribution buttons) (see Appendix 2, Sample "INSTITUTIONS OF HIGHER EDUCATION, INSTITUTIONS OF PROFESSIONAL PRE-HIGHER EDUCATION, INSTITUTIONS OF VOCATIONAL EDUCATION");

–Institutions (the page where the information about the institution is presented, has the form of a blog divided into 5 columns and 4 lines with a total of 20 elements per page; the number of pages increases according to the amount of content; information about the institution is downloaded by administrators. The information includes: images, text, hyperlinks and the ability to distribute content through social networks (social distribution buttons) (see Appendix 2 "INSTITUTIONS OF HIGHER EDUCATION, INSTITUTIONS OF PROFESSIONAL PRE-HIGHER EDUCATION, INSTITUTIONS OF VOCATIONAL EDUCATION»).

Section 6 "**Association**"

Section in which there will be an opportunity to create, edit, delete content by the super administrator (Association). It is possible to leave messages, comments, after registration and without registration (required fields: message, name, e-mail). Super administrators,

administrators or editors can moderate a forum (create, edit, delete posts, sections) according to the category he/she can moderate.

Section 7 "**Forum**"

Forum with categories for students, teachers, events. It is possible to leave messages, comments, after registration and without registration (required fields: message, name, e-mail). Super administrators, administrators or editors can moderate a forum (create, modify, delete posts, sections) according to the category he/she can moderate.

Section 8 "**Personal account**"

Appears after user registration.

- Notification Center (notifications) (the ability to communicate with selected authorized users, super administrators, administrators or editors) (internal chat) (here come messages from the category Practice); Super administrators, administrators or editors are notified of the completion of the memorandum of cooperation. The notification center receives information about filling in the evaluation form of the educational, educational-professional program.

- List of requests (from interested persons: authorized users, administrators or editors).

3. REQUIREMENTS FOR FUNCTIONAL CAPABILITIES OF THE WEB PLATFORM

The web platform must be developed on the popular CSM system (for example, Joomla, WordPre etc.) and presented in Ukrainian with the possibility of automatic translation. The web platform should provide access to its functionality in stages, depending on the amount of content provided by the user.

Possibilities for the user:

- the user can register (both in a classic way and through social networks) or sign in if he has already been registered;
- the user can subscribe to selected categories of news, features and other types of dynamic publications and receive notifications about their updates;
- the user can comment on all available information on the site;
- the user has the opportunity to receive other services on the web platform;
- the user has the opportunity to register for an event or training course.

The functionality of the web platform should include the ability to create static pages, organize navigation between them and attach dynamic publications to them (act as categories). Static pages should display shortlists of different types of dynamic publications attached to them and allow the user to go to the full list of dynamic publications of the selected type (news, event, etc.) relative to the static page (category) from which the transition was made.

Search

The web platform must have the functionality of full-text live-search for all types of content presented on it with the ability to search for individual sections, categories, tags and data types, including the possibility of "fuzzy" search, which allows the user to search with typos. Search results should show the information sorted by relevance according to the designed display styles. Search results should also be able to filter by specified criteria.

Language selection function

The web platform must provide multilingualism (Ukrainian by default, other languages through the translation module). At the language switching stage, it translates to one of the selected languages of the web platform.

Social networks

It is necessary to provide links (in the form of icons) on social networks, in which the web platform is represented. Each text page has the possibility to distribute its content on popular social networks (such as Facebook, Twitter, etc).

Announcements and events (Calendar)

Announcements and events should be able to be attached to static pages (categories). It also provides the ability to users (both registered and guests) and the division into future, past and archive events (at the end of the time set in the CMS settings).

News

News should be able to be attached to static pages (categories). News provides several types of content, depending on which the appearance of their display should be changed in abbreviated and complete lists (video, photo or text information).

Partners

Educational institutions can (by prior registration and verification) prepare for publication and publish their profiles. Users (guests) can view the profiles and information of educational institutions and add them to favourites (and receive by e-mail all the information generated by the educational institution). An educational institution may create, publish, close, edit, view and delete information created by it.

3.1. REQUIREMENTS FOR THE WEB PLATFORM MANAGEMENT SYSTEM

Content management of the web platform should be provided by the Content Management System, which is a secure web interface with authorized access and a set of necessary functions and mechanisms for adding, modifying, deleting and structuring information located on the web platform.

No special technical skills, knowledge on technology or software products are required from the Customer's personnel to support the web platform and operate the web interface of the Content Management System, except for general skills in working with a personal computer, web browser and text editor.

The content management system is available at a special URL and is protected from unauthorized access by login and password. The HTTPS protocol with the corresponding SSL/TLS certificate is used for session encryption.

It is also necessary to provide an entrance to the personal account with the help of 2-factor authentication. Upon agreement with the Customer, RSA soft tokens, SMS messages, electronic messages can be used to confirm entry.

It is recommended to limit the sign-in of the super administrator (SuperSU) of the system to double authentication. The super administrator or administrator can add new administrators with a clearly defined category and access rights through the admin panel.

Key types of categories:

- Educational programs;
- Work;
- Practice;
- Advanced training courses;
- Internship;
- Events;
- Grants;
- Workshops;
- Trainings;
- News;
- Frequently asked questions;
- Projects;
- Articles;
- Tags.

The authorized user of the Content Management System must be able to perform the following actions:

- Adding, editing and deleting texts with hypertext information, media files, news, documents and other types of data;
 - Editing with WYSIWYG HTML text editor with support for standard functions and additional visual elements;
 - Editing the composition and position of menu items and section trees;
 - Download and delete files, create a hierarchical directory;
 - Adding, editing and deleting content types and thematic tags;
 - Web platform user management;
 - Working with web platform modules, such as sliders, tests, newsletters, accreditation, etc. (creating, editing, hiding and deleting);
 - Other web platform settings.
- In the control panel, the user receives information about the status of the system, access to view the log.

The following actions should be available for dynamic publications:

- Choice of content type;
- Create/edit/hide/delete publication, its title and content;
- Change of publication time;
- Postpone publication at the time specified by the administrator;
- Adding/changing/deleting categories, thematic tags, features of the main publication, fixing the publication at the top of the page;
- Making a publication in another language;
- For events - indication of the time and date of the event, the address of the event (text box with address recognition and coordinate adjustment), the need for accreditation;
- For courses - set different requirements for access to them. Ability to combine them into programs;
- Adding SEO-parameters to the publication: title, description, keywords, ogg-image;
- Preview before publication;
- Adding files;
- Creation of category and status;
- Creation of related publications;
- Select the static page/category/tag to which this publication is attached;
- View a list of dynamic publications with search, sorting by category, status, date, type and other attributes.

The administrator also can create/modify/delete publication categories and thematic tags.

The following actions should be available for static pages:

- Create/edit/hide/delete the page, its title and content;
- Changing the hierarchy and order of pages;
- Select a display template from the list;
- Creating a link to an internal or external resource or file instead of a page in the page tree;
- Submit the content of the page in another language;
- Adding SEO parameters: title, description, ogg image;
- View a list of publications with search option, sorting by category, status, date, type and other attributes;
- Preview before publication;
- View the list of pages in the form of a search tree;
- Add short lists of dynamic publications (events, news, frequently asked questions, etc.) linked to this page;
- Select a template to display linked lists of dynamic publications.

The following actions should be available for working with files:

- Download, move and delete files;
- Create/rename/delete folders;
- Filtering by type, sorting by date and file size;
- Search by files;
- Change the display - table, medium pictures or large pictures (preview);
- Delimit access to files.

For security reasons, the size and type of files are limited by agreement with the Customer.

3.2. REQUIREMENTS FOR ROLE MODELS OF USERS

Recommended hierarchy of system users:

1. External users - visitors to the web platform.
2. Internal (authorized) users of the web platform:
 - Super-administrators (representatives from Ministry of Education and Science of Ukraine, Institute of Vocational Education of the National Academy of Pedagogical Sciences of Ukraine, Association);
 - Web platform administrators (registered users to whom the super administrator has assigned the appropriate role);
 - Editors (registered users to whom the administrator has assigned the appropriate role);
 - Authorized users.

The main responsibilities of the super-administrator are:

- Full management of accounts and user roles;
- Adding new administrators;
- Removal of administrators;
- Filling and adding new information (content) to the categories: Educational, educational and professional programs; Trainings; Projects; Grants; Practice; Training courses; Workshops; Internship; Calendar; News, etc.;
- Editing the information (content) created by other users;
- Deletion/transfer of the content to the archive;

- All types of settings that are provided by the functionality of the action system in any sections;

- View the log of actions of authorized users (administrators, editors).

The main responsibilities of the administrator are:

- Full management of accounts and roles of editors and authorized users;
- Adding editors with access to the categories: Educational, educational and professional programs; Trainings; Projects; Grants; Practice; Training courses; Workshops; Internship; Calendar; News.

- Filling and adding new information (content) to the categories: Educational, educational and professional programs; Trainings; Projects; Grants; Practice; Training courses; Workshops; Internship; Calendar; News, etc.;

- Editing the information (content) created by editors;

- Deletion/transfer to the archive of the information (content) created by editors;

- All types of settings that are provided by the functionality of the web platform within a certain category;

- View the action log of editors and authorized users of a certain section of the web platform.

The main responsibilities of editors are:

- Filling and adding new information (content) to the categories: Educational, educational and professional programs; Trainings; Projects; Grants; Practice; Training courses; Workshops; Internship; Calendar; News, etc.;

- Creation of new thematic tags, categories of publications, etc.;

- Editing the information (content) created by them;

- Deletion/transfer to the archive of the information (content) created by them;

The main possibilities for authorized users are:

- View all open content of the web platform;

- Send requests for practice;

- Comment on news and other information;

- Creating, editing and deleting their messages on the forum;

- Communication with selected authorized users, administrators, editors via internal chat (Message/Notification Center);

- View requests (from stakeholders: authorized users, administrators, editors).

4. WEB-PLATFORM USER INTERFACE REQUIREMENTS

4.1. GRAPHIC DESIGN OF THE WEB PLATFORM

The contractor must develop a modern graphic design for all pages, interface elements and text markup of the web platform. The design should be easy to understand, attractive, meet the desired image of the Customer's organization and design standards of state websites of Ukraine.

The design of the web platform must maintain a stylistic balance (See Appendix 1). The structure of the content and all graphic elements on the pages must have distinctive handwriting. The design should be unique, regardless of the platform. The color scheme and style of design elements is chosen in accordance with the wishes of the customer, namely in

the style of the Branbook of the Ministry of Education and Science of Ukraine (See Appendix 1).

Static and dynamic contexts must be different. Graphical design of interface elements must be developed in all states:

- Menu: open, closed, when hovering;
- Links: in normal condition, when hovering, clicking, visited;
- Buttons: active, inactive, when hovering, when pressed;
- Input fields: active, inactive, input error;
- Checkboxes and radio buttons: selected, not selected, inactive.

The web platform should not be overloaded with graphic and visual effects (animation, video, etc.), they should not distract from the main content of the web platform. The total set of effects and the number of fonts should not slow down the loading speed of the web platform.

Graphic elements must be optimized for the Internet. If illustrations or icons are used in the design of the web platform, they must be made in a single style. Icons should be clear and easy to read. The animation of elements should be moderate and smooth. Video players must be organically integrated into the design of the web platform.

The design solution of the web platform must comply with the general principles of graphic and web design (See Appendix 1):

- Composition. The composition of the web platform should be based on a modular grid. All design elements must be subordinate to it, be standardized and behave systematically. Any principle, element, effect, graphic technique must correspond to the general concept and be repeated more than once.

- Colors. There should be no more than three colors on the page. Shades and halftones are allowed. It is not allowed to use a dark background for large arrays of text. The color scheme should not interfere with the perception of information. You cannot use color as the only visual means of conveying information that indicates an action or distinguishes a visual element from others.

- Fonts. Fonts should be large enough and easy to read. The page should have no more than two (maximum three) different fonts, no more than three types of each typeface. It is desirable to use no more than two types of text formatting.

- Text. The text should fill no more than 60-70% of the page width. The optimal line length should be no more than 80 characters. The line spacing in the lines typed with the same pin should be identical, but each pin has its own. The recommended size of the line spacing is 110-120% of the size (depending on the headset). The paragraph indent must be strictly the same, regardless of the size of the set of individual parts of the text.

- The background of the pages should not be the image. The background should be mostly light and monotonous, clean, contrasting for the main information content of the web platform.

All interface elements should be easily recognizable on monitors with any contrast and brightness, as well as on mobile devices. All images and fonts must be properly licensed.

4.2. ERGONOMICS

Ergonomic solutions of the web interface of the web platform must have a user-friendly logical construction of the information architecture with a certain set of appropriate graphical, textual and functional components.

The model of page structure and transitions between them should be:

- Simple (minimum number of actions to solve basic problems);

- Clear and obvious (minimum amount of information that the user must enter to solve the problem);
- Hereditary (navigation should work on the same principle for all types of pages);
- User-friendly (simple and clear controls that do not require training to work with them and take into account the characteristics of users at different levels).

The depth of embedding (logical transitions) of the web platform should not exceed five levels. Building logical connections within a certain functionality should be convenient and intuitive.

The user interface of the web platform should be designed so that the user constantly understands his/her current position in the structure of the web platform and has the opportunity to return from any page to the main page of the relevant section or to the main page of the web platform.

The user must have a reasonable set of necessary tools to perform certain actions within the relevant process (lack of functions that are not required to solve basic tasks). All interactive elements should be made in a convenient and clear presentation with a set of appropriate textual and/or graphical information prompts.

Pages should not be overloaded with information and graphics.

4.3. FRONT-END LAYOUT AND DEVELOPMENT

Working with the layout of the web platform involves the creation of all templates (types) of pages of the web platform based on a consistent graphic design. The layout must meet the following requirements:

- HTML 5 hypertext markup language;
- Cascading CSS3 style sheets;
- Adaptability: the layout should display correctly on most common devices (smartphones, personal computers, laptops, tablets) and provide design versions for the main control points: 320 px, 767px, 991px 1350px, 2560px;
- Cross-browser: the web platform should display correctly on all common modern versions of browsers (IE> = 10, Edge> = 12, Firefox> = 52, Chrome> = 57, Safari> = 10.1, Opera> = 44), as well as on standard browsers for mobile operating systems (IOS Safari> = 10.3, Android Browser> = 67, Opera Mobile> = 46, Chrome for Android> = 74, Firefox for Android> = 66), providing support for at least 92% of users according to the site www.caniuse.com;
- Correct display when disabling graphics or prohibiting the use of scripts by the user;
- Animation of images, buttons, links, blocks by means of CSS3;
- Mechanisms to assist in entering and receiving information, contextual clues;
- Validation of data for individual fields, field combinations (telephone numbers, e-mail addresses, etc.);
- Video playback with sound, long page loading animation and flickering animation are not allowed;
- Illustrations must be of appropriate quality, size and all necessary technical parameters; image deformation is not allowed;
- Images should be designed for high-resolution displays (Retina);
- Any internal link from the web platform should open in the same window (the opposite is allowed only in the case of a valid reason for the need for such behaviour).

Pages don't have to look perfect in every browser, but users should have access to the information and features they need, no matter what browser or device they're using.

4.4. PERFORMANCE INDICATORS

To optimize the operation of the web platform, the following requirements must be met:

- HTTP/2 should be used for internal resources;
- Images should be in next-generation formats (JPEG 2000, JPEG XR and WebP) with better compression performance than older counterparts (JPEG and PNG). They will load faster and consume less cellular data;
- Images must be the correct size: the page should never serve images that exceed the version displayed on the user's screen to avoid losing bytes and slowing down the page load time;
- Text resources should be compressed to minimize shared network bytes;
- Off-screen images (images displayed below) should not be part of the initial page load, slowing down its display. A similar strategy for images, as well as for JS, HTML, CSS and other resources, will speed up the page load time;
- Fixed static assets should be cached for a long time (a year or more) whenever possible. It is recommended to configure the compile tool to insert a hash into the names of static files so that each is unique;
- CSS and JS files should be minimized to improve page load performance;
- Links should point to current resource locations to avoid redirection. It is especially important to avoid redirecting the resources required for CRP (Critical Rendering Path - the path that the browser takes before it displays the page);
- The size of the DOM should not exceed 1500. It is recommended to remove unshown nodes from the downloaded document and create them only after the appropriate user action;
- It is recommended to avoid the use of external scripts that are dynamically entered via `document.write` in order not to delay the display of the contents of the main page for users on slow connections;
- It is advisable to use the cache for difficult and frequent database queries.

4.5. APPROVAL OF DESIGN AND TRANSFER OF MATERIALS

The contractor must provide at least 3 different design concepts. If the design concept provided by the Contractor satisfies the Customer, it has to be approved within 14 working days from the date of submission. In this case, the Contractor can send the Customer up to 3 iterations of revisions that do not affect the overall structure of the pages and their style. Modifications to the design after its approval, as well as its differences with the approved prototypes are allowed only with the additional consent of the parties.

If the presented concepts do not meet the requirements of the Customer, the Customer must send a reasoned refusal and indicate the relevant reasons, together with additional requirements.

Upon completion of the design development, the Contractor shall provide the Customer with a detailed guideline, which will describe the colour scheme, fonts, modular grid and other principles on which the web platform design is based.

The set of used fonts must also be transferred to the Customer.

Recommended colours and fonts are presented in Appendix 1.

The recommended page structure is shown in more detail in Appendix 2.

5. REQUIREMENTS FOR FILLING THE WEB PLATFORM

5.1. COPYRIGHTING, EDITING AND LITERATURE REVIEW SERVICES

The Contractor must provide a full range of content coverage, including review of existing content, elaboration of new content and partial creation of unique content.

The content itself has different types:

- Type 1. Existing content. Located mainly on the websites of PAGOSTE project participants and other web platforms and ready for transfer to the web platform.
- Type 2. Draft content. Articles for literary proofreading and revision.
- Type 3. New content. Description of web platform pages.
- Type 4. Archived content. Information on past events, projects, follow-up, materials, webinars and other information obtained.
- Type 5. Statistical and analytical data.

Content is submitted in Ukrainian with automatic browser translation. The Contractor must be flexible in providing services, recognizing that some months may be more busy than others, and be able to manage resources flexibly. The Contractor must have experience/understanding of the work and be aware of the challenges and opportunities facing him.

Filling in content

The database during the period of web platform development and testing is filled with appropriate test impersonal data, in the necessary and sufficient for the development of test scenarios quantity and quality. The data must comply with security policies. Insufficient or incomplete content cannot affect the timing and quality of development and testing of the functional part of the web platform.

5.2 BACKUP AND RESTORE

Information backup is fundamental to the reliability and resiliency of a web platform. The Contractor must provide a documented backup plan that define the system backup procedures. The backup plan aims to provide complete and sufficient information in the backups.

The system should automatically perform regular backups of all critical elements, including file system data and database in encrypted format. Backups should be stored in an off-site storage location or preferably in secure cloud storage. Backups will be checked regularly to ensure the integrity of the backups at least once every 5 days.

Disaster recovery/management

The Contractor must provide a disaster recovery plan that is properly documented, verified, and maintained to ensure that in the event of a serious crash of the web platform or corrupted database, a substantial level of service is provided.

The disaster recovery plan should include:

- Emergency procedures that describe the immediate actions to be taken in the event of a serious incident;
- Troubleshooting procedures that describe the actions that need to be taken to relocate key activities or support services to the backup system.

The contingency plan should include:

- Recovery procedures that describe the actions that must be taken to return to normal operation in the initial system;

- Special contingency plan for critical applications (pre-designed, documented and tested);
- Determining the reports that will come into force after the announcement of the accident.

Each component/aspect of the plan must have a designated person and a backup. The test plan must be developed and documented; periodic tests should be performed to verify the effectiveness of the procedures; the test results must be documented for verification; the disaster recovery plan should be regularly updated to ensure its continued effectiveness.

6. SOFTWARE REQUIREMENTS

The software consists of:

- System Software;
- Application software (AP).

The software of the web platform should reflect the specifics of automated functional tasks of users and provide:

- Support of generally accepted modern international standards for open systems;
- Compatibility and integration;
- Support for operation in a heterogeneous hardware environment;
- Be written in the language of the latest stable release, optimized for heavy workloads and virtualization; at the discretion of the Contractor, but with the authorization of the Customer;
- Well-designed deployment mechanism using a modern Docker platform or other flexible, fast and modern mechanism;
- Scalability (cluster, server virtualization).

The Contractor must provide recommendations for the composition of system-wide software:

- Front-End;
- Back-End;
- DBMS;
- Operating system;
- Web server;
- Monitoring;
- Testing;
- IDE for development (support);
- Mail transfer agent (MTA - mail transfer agent).

7. TESTING REQUIREMENTS

7.1. REQUIREMENTS FOR FUNCTIONAL TESTING

Functional testing is carried out in connection with the need to test the functionality of the web platform and aims to achieve the following goals:

- Determining the compliance of the software with the requirements stated in the Product Requirements Document;
- Detection and documentation of software product defects;
- Testing the process of interaction of the web platform with CRM;

- Checking the compliance of the interface with the stated requirements (ease of use, checking the functionality of the forms);
- Determining the compliance of the web platform with security standards, identifying vulnerabilities.

To achieve these goals, the following tasks must be performed:

- Testing strategy is created and selected;
- Test cases and scripts for testing prepared;
- Analysis of results performed, defects and vulnerabilities are identified;
- A report describing the results of functional testing has been developed; if necessary, regression testing was performed;
- Correction of all errors done.

Restrictions of testing

Prior to testing, the document "Testing Program and Methodology" must be agreed with the Customer, in which all testing scenarios, as well as the testing plan must be presented.

Before testing, the version of the software installed on the test benches is fixed and does not change during the functional testing, except in cases of elimination of errors that interfere with further testing, in agreement with the Customer.

For functional testing, equipment must be used, the capacity of which is sufficient to achieve all the objectives of testing.

Testing strategy

For functional testing, specialized software provided by the Contractor and agreed with the Customer is used. The procedure for testing is described by the Contractor and agreed by the Customer in the document "Testing Program and Methodology".

To monitor the hardware servers, standard tools and utilities that are part of the operating systems or other software provided by the Contractor and agreed with the Customer are used.

The Contractor analyzes test results and prepares in the form of reports. The Contractor controls the correction of all detected defects. If necessary, performs regression testing.

Test results

Upon completion of testing, the Contractor shall provide the Customer with the following materials:

- Testing plan;
- Methods of functional testing;
- Specification of testing;
- Test protocols and summary on results of functional testing;
- Reports describing the results of functional testing, identified vulnerabilities, successful and unsuccessful test cases;
- Final report on functional testing.

7.2. REQUIREMENTS FOR LOAD TESTING

To assess the performance of the web platform, it is necessary to conduct load testing, which includes performance load testing and stability testing.

Goals and objectives of load testing

Load testing is carried out in connection with the need to update the capabilities of the systems and is aimed at achieving the following goals:

- Determining the maximum performance of the systems (the test results determine the maximum intensity of operations at which the system meets the requirements for response or processing time, various parameters are taken into account: the number of concurrent users, the maximum amount of processed data, etc.);
 - Reliability check (the results of testing determine the ability of systems to work for a long time under load);
 - Fault check (assessment of the impact of failures of related systems on the performance of the tested system, checking the ability of the systems to recover after the elimination of failures in related systems); based on the testing results, a list of systems and interfaces in which failures critically affect the performance of the web platform is provided;
 - Identification of "bottlenecks": the testing results determine the list of factors that limit the performance of the systems (lack of hardware resources, lack of system resources, limitations), as well as a list of critical indicators that require monitoring during operation.

To achieve these goals, the following tasks must be performed:

- Indicators of load and productivity of the System - typical and peak;
- document "Testing Program and Methodology" is developed and agreed with the Customer;
 - Testing scenarios are prepared;
 - The analysis of results is executed, "bottlenecks" are revealed and the offer concerning the increase of productivity of Systems is developed;
 - A report has been developed describing the results of stress testing, identified "bottlenecks" and proposals for optimization and modernization of the systems.

Restrictions on testing

Before testing, the Customer must agree to the document "Testing Program and Methodology", which presents all testing scenarios and testing plan. Prior to testing, the version of the software installed on the test benches is fixed and does not change during the load testing (except in cases of elimination of errors that prevent further testing) in agreement with the Customer.

Testing strategy

Specialized software provided by the Contractor and agreed with the Customer is used for load testing.

The procedure for conducting load testing is described by the Contractor and agreed with the Customer in the document "Testing Program and Methodology".

To monitor the hardware servers, standard tools and utilities that are part of the operating systems or other software provided by the Contractor and agreed with the Customer are used.

In the testing environment, the typical and peak load and performance values obtained for the System at which the load testing will be performed must be achieved.

Indicators of typical, peak load and performance of the System are provided by the Customer before the beginning of testing. If the performance of the Systems does not allow testing from any profile, additional testing under reduced load must be performed to determine the points of degradation of the Systems.

Performance indicators

During load testing, the system performance indicators should be monitored:

- Response time of operations;
- CPU load on servers;
- Memory utilization on servers;

- Utilization of I/O subsystem on servers;
- Working with the disk subsystem (I/O Wait);
- Download of network resources.

Testing results

Upon completion of testing, the Contractor shall provide the Customer with the following materials:

- Methods of stress testing;
- Reports describing the results of stress testing, identified "bottlenecks", proposals for optimization and modernization of the System;
- Final load testing report.

8. NON-FUNCTIONAL REQUIREMENTS

8.1. REQUIREMENTS FOR INFORMATION PROTECTION

In order to protect the information, it is planned to create a system of information protection. Information protection should be carried out by counteracting the threats that can be expected as a result of the infringer's actions at all technological stages of its processing and in all modes of operation of the web platform, in accordance with the developed Information Protection Plan.

The following information protection requirements must be implemented:

- If a web page contains links to information resources of another web page, the conditions of operation of the latter should not violate the security policy established for this web page;
- The requirements for protection of the integrity and accessibility of the publicly available information posted on the website, as well as the confidentiality and integrity of the technological information of the website must be implemented;
- Information processing technology must meet the requirements of the information security policy defined for the system that ensures the functioning of the website;
- Requirements for ensuring the integrity of publicly available information on the website and the confidentiality and integrity of technological information require the use of technologies that ensure the implementation of controlled and authorized access to information and the prohibition of uncontrolled and unauthorized modification.

The set of means of information protection should provide software and hardware implementation of security policy in terms of:

- Prevention of attempts to affect the integrity, confidentiality and availability of information;
- Creation of a mechanism and conditions for prompt response to external and internal threats and prompt notification of web platform administrators about the facts of unauthorized access to information;
- Implementation of control over user actions by web platform administrators;
- Registration and processing of detailed data on events in the system related to information security;
- Ensuring the availability of web platform resources for authorized and unauthorized users.

To ensure security requirements, the structure of the information security system should include:

- User identification;
- Means of protection of information from unauthorized access;
- Access control and identification tools;
- Means of control, management and identification for remote access to the System;
- System shielding means;
- Antivirus protection tools in the System;
- Means of anti-virus protection of the System's servers;
- Means of protection against attacks;
- Means of protection against DDOS;
- Patch management process;
- Password policy control;
- Data encryption;
- Detailed logging.

The protection of web platform components from unauthorized access should be performed as a result of the following measures:

- Client-server session. When working with the web platform via the Internet, it is performed only according to the https protocol (protection by means of SSL/TLS certificate);
- Access to the administrative part of the web platform only by a certain combination of login/ password/EDS with a limited number of attempts.

To ensure the smooth operation and protection of the components of the System from unauthorized access and other cyber threats, it is proposed to implement the following:

- To access all components of the System, it is recommended to use a network screen (FortiGate) with appropriately configured access rules;
- To protect against cyber threats (DDOS attack), it is recommended to use a firewall (FortiGate) with properly configured specialized software;
- HTTPS protocol with the corresponding SSL/TLS certificate is used to encrypt the session between the user and the system;
- To protect servers where the system web platform is installed and loaded, it is recommended to use the Nginx reverse web proxy server with properly configured rules;
- Information access to the database server is configured only from the server where the relevant system components are located.

Information security

The web platform should include a set of measures to ensure the required level of integrity, accessibility and confidentiality of information. Safety requirements can be clarified at the stage of the technical design of the solution.

8.2 RELIABILITY REQUIREMENTS

The reliability of the web platform should be ensured in the following areas:

- Ensuring the efficiency of the web platform;
- Saving web platform data.

Reliability is ensured by:

- Use of modern technologies of application software development and quality testing;
- Backup of modules and their elements;

- Mode of automatic analysis of the current state (in real time) and recovery in accordance with the regulations of restoration work;
- Organization of systematic backup and archival storage of information on web platforms;
- Prompt replacement of software and hardware that has failed;
- Compatibility of hardware and software;
- Hardware and software protection from unauthorized software and hardware interference;
- Archiving and backup of any data entered.

Maintenance of working capacity should be provided at the failure of one or several modules at the expense of their redundancy. This should require minimal attention from the web platform administrator to the response to the elimination of the consequences of module failures. In this case, the means of information exchange, as well as software and hardware must ensure the storage of data on the web platform.

Data storage should ensure the integrity and relevance of data in case of software and hardware failures, errors, through the use of appropriate software and hardware tools and solutions, backup, etc.

Data preservation should be provided in the following cases:

- Power off the hardware;
- Failures of technical means of information processing;
- Errors, failures, or destruction of software and/or hardware.

Composition and quantitative data of software reliability indicators

The system must have means of protection against unintentional data corruption and incorrect user actions.

The server software must support:

- Restoration of data integrity in case of their destruction;
- Blocking destructive operations and unauthorized access;
- Switching data processing from emergency to backup server;
- Keeping an electronic log of emergencies;
- Warning about the achievement of critical performance by the server.

The web platform must comply with the security and other requirements for the websites of government agencies (see <http://zakon3.rada.gov.ua/laws/show/z1022-02>) and the audit requirements for compliance with the provisions on the protection of information of the State special communication and information protection services of Ukraine.

The web platform must comply with the General Data Protection Regulation (EU) 2016/679 ("GDPR") - this is EU legislation on data protection and confidentiality for all persons in the European Union (EU) and the European Economic Area (EEA). This also applies to the export of personal data outside the EU and the EEA.

8.3. INTEGRATION WITH EXTERNAL CLOUD AND INFORMATION SYSTEMS

Unification of data when integrating with external sources should be provided. The process of development should provide for the possibility of further integration of the web platform with:

- Google maps;
- Microsoft Office 365;
- Google apps;
- Postal system.

The tools of the web platform should provide the ability to integrate with other information systems.

8.4. SEO-OPTIMIZATION

SEO-optimization is provided by the following provisions:

- Each page of the web platform when creating in the administrative system must have a unique SEF URL in a human-readable form;
- Ability to edit SEO-parameters of the page (title and description); if meta tags are not specified individually, they are generated automatically according to the template;
- Availability of robots.txt and sitemap.xml files;
- Any test version of the web platform will be closed to web crawlers in robots.txt until it is officially launched on the main domain;
- It is also recommended to close system folders and other folders, pages and files that should not be accessible to web search engines before starting;
- Ability to automatically generate alt and title properties for images;
- Setting up 301 redirects to the main mirror of the web platform; redirect from www addresses to addresses without www or vice versa;
- Setting the appropriate redirects for the transition from old links to new ones according to the transition matrix;
- Semantic block layout of templates;
- Correct handling of 404 errors;
- Optimization of web platform download speed (caching, gzip);
- Connect tools for webmasters Google Analytics and Search Console;
- Each page must have basic metadata Open Graph: og: title, og: type, og: image, og: url.

8.5. REQUIREMENTS FOR THE MONITORING AND STATISTICS SYSTEM

A monitoring system developed for a web platform or external monitoring mechanisms should be used for monitoring.

The system must provide self-diagnosis, logging and recording event logs of software operation.

In the event of emergencies or errors in the operation of the web platform, self-diagnosis tools should store a sufficient set of information needed to identify the problem.

Self-diagnostics and processing of diagnostic information in the context of each component of the web platform, its business process and operations should be performed. Each transaction of the web platform must have its own unique numbering, in case of incorrect operation of which the System must record an error with the transaction number in the event log of the System.

A configurable system administrator notification mechanism should be developed. A procedure for escalating messages to the management of the structural unit in accordance with the established process of self-diagnosis events in cases of critical errors or failure of system components should also be developed.

Messages should be divided into:

1. Information warnings about borderline situations:

- Warning about exceeding the response time of the system components;
- Warning about approaching the limit value of the system operation parameters;
- Warning about reaching the maximum bandwidth of the channel;
- Warning of critical and blocking errors;
- Notification of critical situations;
- Notification of inoperability of System components;
- Notification of reaching the limit value of the System operation parameters due to processing pending.

The System must be able to send messages:

- E-mail;
- SMS to mobile phone.

The analysis of web platform visits should be performed using a statistics collection system. The use of Google Analytics tools is proposed as such a platform. It is necessary to develop a system for collecting statistical information that tracks data on content and the dynamics of updating information on the web platform of the System.

Access to the statistical information collection system should be provided in real time.

The Statistics Collection System must operate around the clock (7 days a week, 24 hours a day) and have a user interface with a choice of time series and other parameters.

The Statistics Collection System should collect the following information:

1. Statistical information about web platform visitors:

- Number of unique visitors;
- Number of repeat visitors;
- Regions (countries) from where the transition to the System's web platform took place;
- Devices and operating systems used by visitors;
- Time of visit the web platform;
- Time spent on the web platform;
- Page traffic;
- Information on the Internet resources from which the transition to the web platform took place;
- Information on search phrases for which the transition to the web platform took place;
- Information about the search servers from which the transition to the web platform took place;
- Information about the pages of the web platform on which the user has stopped browsing;
- Information on the number of links to related web platforms that are also involved in the project.

8.6. REQUIREMENTS FOR DOCUMENTATION

The documentation should include:

- Working and methodical documentation;
- Backup and recovery plan;
- Software source code with comments on the deployment and management of applications in environments that support containerization;
- Testing report.

List of methodical documentation:

- General instructions for software deployment and configuration;
- Operational documentation;
- Load testing protocol;
- Administrator's guide;
- User's guide.

8.7. CHANGE MANAGEMENT

During the development of the web platform, warranty service and technical support for the web platform, the Contractor does not have direct access to the modification of the web platform. If necessary, this access is granted in each case according to an agreed procedure.

The Contractor must use a testing environment that can be easily synchronized with the standard version of the web platform. All works related to development, testing and modifications is performed in a testing environment. The results of these works are implemented on the active web platform, if they are approved by the Customer.

8.8. OWNERSHIP ON THE SOURCE CODE

The Contractor is obliged to transfer the final product according to the schedule. The final product, all software source code, intellectual property, documentation and all items related to this product are in the exclusive possession of the Customer.

8.9. WARRANTY OBLIGATIONS

The Contractor provides warranty (technical) support within 24 months from the date of signing the Act of acceptance-transfer of services provided at the last stage in accordance with the Calendar Plan. Warranty support means the Contractor's obligation to correct the detected defects and errors free of charge.

9. REQUIREMENTS FOR THE CONTRACTOR

- The company must be a resident of Ukraine, officially registered and pay taxes.
- The company's representatives responsible for communication with the Customer must be located in Ukraine.
- The company must have experience in developing similar products (web portals) for other large companies, international or public organizations.
- The company must present a reference list, which includes a list of corporate clients with contact phone numbers.
- The company must have a proper experience, recommendations (at least 3).
- Proven portfolio for the development and maintenance of web platforms similar in scale.
- Impeccable business reputation. The category "business reputation" is used in understanding the totality of confirmed information about a potential contractor, which allows to conclude that its activities meet the requirements of law and professional ethics in the relevant market.

9.1 REQUIREMENTS FOR KEY SPECIALISTS

- Experience in the field in which the company plans to attract these specialists.
- Portfolio and resume of each of the key specialists, indicating education, work experience.
- The recommended (optional) availability of certificates of international format, which would confirm the declared level of competence of key specialists will be considered as advantage.

9.2. CRITERIA FOR EXCLUSION FROM THE LIST OF PARTICIPANTS

Potential developers will be excluded from the list of potential contractors if:

- they have been convicted by a court on any charge related to participation in criminal groups, corruption, fraud, money laundering;
- they are in a state of bankruptcy, liquidation, insolvency or compromise settlement of the borrower's obligations with creditors, or in any other similar situation resulting from a procedure of the same type or subject to a procedure of the same type;
- a court decision that has entered into force, established a violation that affects their professional reliability, or indicates a serious violation of professional ethics;
- they do not fulfill their obligations to pay social security contributions, taxes and fees, in accordance with the legislation of the country of registration.

10. CALENDAR SERVICE PROVISION PLAN

List of services	Result	Term (approximate)
<p>Preliminary stage.</p> <ul style="list-style-type: none"> -Clarification of information and technical requirements for development of the web platform -Comprehensive analysis of the information needed to develop a web platform 	<p>Technical requirements are updated and approved by the Customer</p>	<p>Up to 5 working days</p>

List of services	Result	Term (approximate)
<p>1. Development of information architecture and web platform design 1.1. Prototyping of web platform interfaces; 1.2. Web platform design.</p>	<p>Prototypes of web platform interfaces agreed with the Customer; Web platform design agreed with the Customer; Design layouts and source files are made;</p> <p>(Prototypes of the interface and design can be developed by the Contractor at the same time as the development of components and modules, but must be provided and agreed with the Customer before the start of the layout).</p>	<p>Up to 20 working days</p>
<p>2. Web platform development 2.1. Layout in accordance with the developed interfaces and design of the web platform; 2.2. Development of web platform components and modules; 2.3. Elaboration of the web platform documentation.</p>	<ul style="list-style-type: none"> - A prototype of the web platform is developed and transferred to the Customer; - The general description of the web platform is made and transferred to the Customer; - The Customer has been provided with a preliminary testing report of the web platform. 	<p>Up to 60 working days</p>
<p>3. Web platform deployment and testing 3.1. Deployment of software on the complex of technical means of the Customer; 3.2. Web platform optimization; 3.3. Functional testing of the web platform; 3.4. Load testing.</p>	<ul style="list-style-type: none"> - General instructions on software deployment and configuration are elaborated and transferred to the Customer; - The plan of backup and restoration of the web platform is developed and transferred to the Customer; - Testing protocols prepared and transferred to the Customer, results of functional testing of the web platform are summarized; - Testing protocols and results of load testing of the web platform are prepared and transferred to the Customer; - Reports with a description of the results of load testing are prepared and transferred to the 	<p>Up to 10 working days</p>

List of services	Result	Term (approximate)
	<p>Customer, "bottlenecks" are identified, a proposal for optimization and modernization of the Web Platform System is presented;</p> <ul style="list-style-type: none"> - Statistics on load testing of the web platform are transferred to the Customer. 	
<p>4. Filling in information and acceptance testing of the web platform</p> <p>4.1. Filling the web platform (pages and internal information systems) with information in accordance with the agreed structure;</p> <p>4.2. Carrying out acceptance testing of the web platform;</p> <p>4.3. Execution of the protocol of acceptance testing of the web platform;</p> <p>4.4. Execution and signing of the act of acceptance of the web platform for experimental operation;</p> <p>4.5. Web platform documentation development;</p> <p>4.6. Collection and review of existing content;</p> <p>4.7. Content development and translation.</p>	<ul style="list-style-type: none"> - The web platform administrator's manual is elaborated and transferred to the Customer; - The user manual of the web platform is developed and transferred to the Customer; - Working and methodical documentation is developed and transferred to the Customer; - The source code of the software with comments is transferred to the Customer; - Dump of the web platform database is transferred to the Customer; - Operational documentation is developed and transferred to the Customer; - Trainings on how to work with CMS and portal administration are conducted; - Starting content to launch the web platform is submitted. 	<p>Up to 5 working days</p> <p>Paragraphs 4.1, 4.6 and 4.7 should be carried out in parallel with the other stages within 60 working days</p>

11. STAGES OF PAYMENT

Payments are made in stages, as described below, and only after the submission of reporting documents on the work performed. The final payment will be made after the submission of the final invoice and other reporting documents.

Payments are made according to the following schedule:

№	Stages of payments	% of the total amount

1	Stage 1 - Development of architecture and web platform design. Web platform development.	20
2	Step 2 - Deployment and testing of the web platform. Filling in content and testing the web platform. Transfer of the web platform and all rights to it.	80

All payments are made after the submission of reporting documents in accordance with the above-mentioned stages, which is proof of work made (invoice and act of work performed).

Payment is made solely on the basis of the original invoice, within 15 working days.

The invoice and the act must be in 2 original copies.

Payment is made in Euro by bank transfer to the Contractor's bank account.

The Contractor is responsible for all taxes and other payments in accordance with the legislation of Ukraine. Taxes, fees or charges for the Government of Ukraine shall be paid by the Contractor in accordance with the amount received.

12. REQUIRED DOCUMENTS FOR PARTICIPATION IN WEB PLATFORM DEVELOPMENT

The Contractor must provide the following documents for participation:

Confirmation of a legal entity, availability of an account in foreign currency (EUR), confirmation of experience in developing web platforms (with a portfolio of at least three projects), the presence of a professional team (with a CV of each team member).

The commercial offer must not exceed the amount of EUR 10,000.

Proposals over the above mentioned amount are considered formally unacceptable.

13. REPORTING DOCUMENTS

The Contractor shall provide the Customer after each completed stage:

- act of work performed (with a full description of work performed);
- invoice;
- accompanying documents confirming the execution of works.

If the reporting documents are not submitted in full - this may be the basis for delayed payment.

14. TERM

The development of the web platform is expected to begin in September 2021, and its estimated duration will be until February 15, 2022.

15. PROCEDURE AND TERMS OF PERFORMANCE OF WORKS

1. The Contractor shall start providing services from the date of receipt of a written technical requirements from the Customer.

2. The provision of services is carried out in stages, in accordance with the Calendar Plan.

3. The Contractor shall start providing services at each stage of the Calendar Plan in accordance with the written request from the Customer. In case of early performance of the current (next) stage, the Contractor, with the written consent of the Customer, begins to perform the next stage.

4. The list of documentation and results of services as subject to execution and delivery by the Contractor to the Customer during and after the expiration are determined by the Calendar Plan.

5. The list of services and documentation for each stage specified in the Calendar Plan may be specified by the Customer in writing with the Contractor.

6. Acceptance of the results of the provided services is carried out taking into account their compliance with these technical requirements and the Calendar Plan.

7. Upon completion of each stage of the Contractor shall submit to the Customer within 5 (five) days the Act of acceptance-transfer of services provided at the relevant stage with the result of the relevant stage of services in accordance with the Calendar Plan.

8. Acceptance and evaluation of services provided in stages is carried out within 5 (five) working days from the date of provision by the Contractor of the Act of acceptance-transfer of services provided by the Customer with the participation of the Contractor in accordance with the Calendar Plan and the technical requirements for web development of platform PARTNER SPACE "015". Based on the results of the assessment, the Customer draws up a Protocol with a conclusion on compliance (non-compliance) of services provided with the technical requirement for web development and Calendar Plan, as well as in case of non-compliance with the technical requirement for web development and Calendar plan, indicating the list of necessary revisions.

9. The Customer within 10 working days from the date of receipt of the Act of acceptance-transfer of services provided at the relevant stage, is obliged to send the Contractor a signed Act of acceptance-transfer of services provided at the relevant stage or submit a reasoned refusal to accept them.

10. In case of motivated refusal of the Customer to accept the results of services at the appropriate stage, the parties shall draw up a bilateral document with the list of necessary revisions and deadlines in the form of a protocol with a conclusion on compliance (non-compliance).

11. The Contractor is obliged, without additional payment, within 10 (ten) working days or at another time agreed with the Customer in accordance with the protocol with a conclusion on compliance (non-compliance) of services, which contains a list of necessary improvements, eliminate the identified shortcomings.

16. QUALITY OF SERVICE AND WARRANTY OBLIGATIONS

1. The Contractor shall provide the Customer with services, the quality of which corresponds to the technical requirement for web development, the provisions of the legislation of Ukraine and the generally accepted conditions for the provision of such services.

2. The Contractor provides warranty (technical) support within 24 months from the date of signing the Act of acceptance-transfer of services provided at the last stage in accordance with the Calendar Plan. Warranty support means the Contractor's obligation to correct the detected defects and errors free of charge.

3. If during the warranty (technical) support defects in the work or its non-compliance with the technical requirement for web development, the Contractor undertakes to eliminate errors, malfunctions, malfunctions of the software that was created/upgraded/provided by him during the provision of services under the time agreed by the Parties.

17. RIGHTS TO INTELLECTUAL PROPERTY

1. The Contractor shall transfer (alienate) to the Customer in full all property rights of intellectual property (property rights of the author) to any objects of intellectual property rights created by him within the framework of this technical requirements. The Contractor has no right to further use the objects of intellectual property rights created by him under this technical requirements for commercial purposes or for any other purpose, or in any way, without the prior written consent of the Customer.

2. The Parties have agreed that the moment of transfer (alienation) by the Contractor and the moment of acceptance by the Customer of exclusive intellectual property rights to the object of intellectual property rights created by the Contractor is the moment of signing by the Parties of the relevant Act of transfer of services.

3. The transfer to the Customer of exclusive intellectual property rights to the objects of intellectual property rights (hereinafter - the web platform) includes the transfer (alienation) by the Contractor to the Customer:

- the exclusive right to use the web platform;
- the exclusive right to allow the use of the web platform by others;
- the exclusive right to prevent the misuse of the web platform, including prohibiting such use, by other persons;
- other property rights of intellectual property established by the legislation of Ukraine.

4. After the transfer of the results of the provided services, the Customer will own all exclusive property rights of intellectual property, established by the current legislation of Ukraine on the results obtained during the implementation of this technical requirements.

5. The territory covered by the intellectual property rights transferred to the Customer on the web platform is the territory of the whole world without restrictions.

6. The term of validity of the intellectual property rights of the Customer on the web platform is equal to the maximum term of such rights in accordance with the current legislation of Ukraine.

7. The Parties have agreed that payment for the transfer of intellectual property rights to the Customer on the web platform (software) and all its components (developed under the terms of this technical requirements) is included in the cost of the Contractor's services.

8. If the Customer and/or the Contractor will be sued by third parties for infringement of copyright, patent rights, trade secrets and other rights of such third parties in relation to services provided by the Contractor to the Customer under this technical requirements, the Contractor undertakes to resolve all claims of such third parties on its own and at its own expense and to reimburse the Customer for all costs incurred by it as a result of such claims.

18. PLACE OF IMPLEMENTATION

Kyiv, Ukraine.

19. OTHER CONDITIONS

Taxes, fees or charges shall be paid by the Contractor in accordance with the amount received.

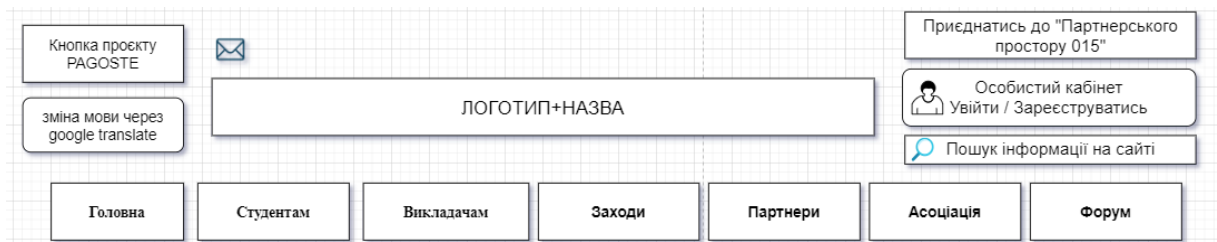
20. APPENDICES

20.1 APPENDIX 1

Samples of colors, fonts, effects are located by the link:
<https://www.figma.com/file/wp8DKuifFveY79SlwtoFvV/MON---Design-system?node-id=0%3A1>

20.2 APPENDIX 2

20.2.1 HEADER SAMPLE



20.2.2 SAMPLE OF "HOME" TAB

СЛАЙДЕР

<
Вересень 2021
>

Понеділок	Вівторок	Середа	Четвер	П'ятниця	Субота	Неділя
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4
5	6	7	8	9	10	11

Call Activity
Анонси / заходи

ОСВІТА

Call Activity

РОБОТА

Call Activity

ПРАКТИКА

Call Activity

ПІДВИЩЕННЯ КВАЛІФІКАЦІЇ
/
СТАЖУВАННЯ

Call Activity

Actor

Мотивуюче зображення

Мотивуючий текст

Новини
Call Activity

назва новини

назва новини

назва новини

назва новини

назва новини

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Мета і завдання онлайн-платформи

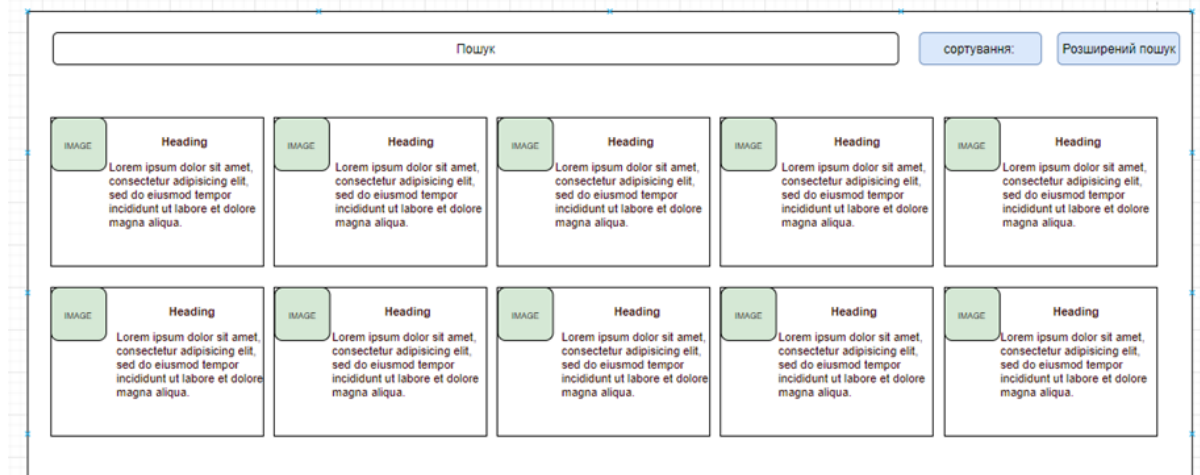
ВІДЕО ВИСТУП
ПРЕЗЕНТАЦІЯ ПЛАТФОРМИ

ФОРМА ЗМОРОТНЬОГО ЗВ'ЯЗКУ

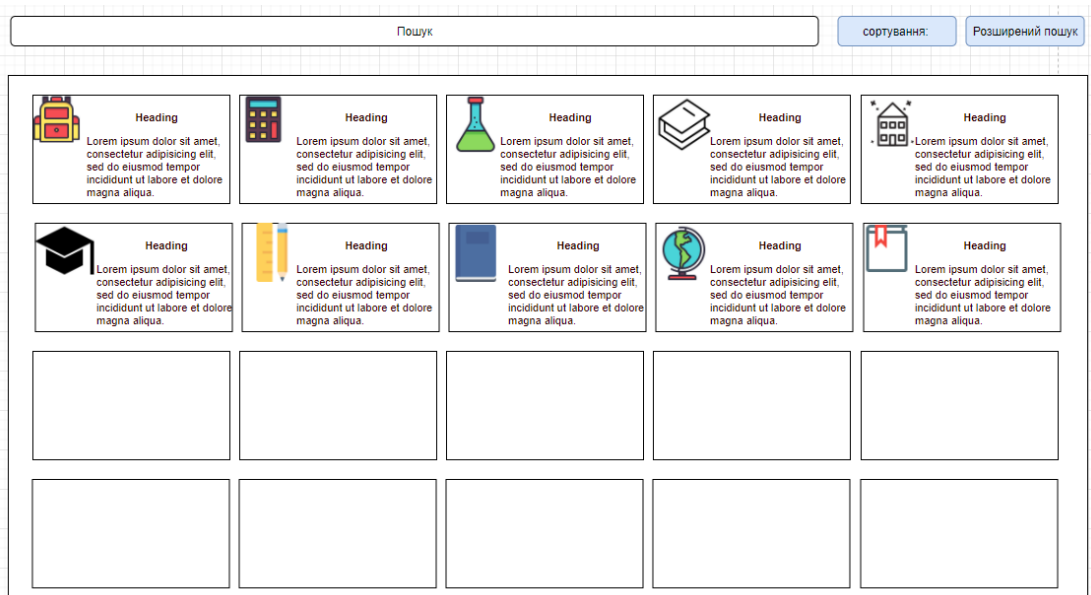
Контактна інформація

Футер





20.2.3 SAMPLE OF "EDUCATIONAL, EDUCATIONAL PROFESSIONAL PROGRAMS" TAB




20.2.4 SAMPLE OF "TRAININGS" TAB



20.2.11 SAMPLE OF PRACTICE REQUEST QUESTIONNAIRE



ЗАПИТ НА ПРАКТИКУ

Особисті дані

Прізвище:

Ім'я:

По батькові:

Контактний телефон:

E-mail:

Рівень володіння іноземними мовами:

Дата народження:

Сімейний стан:

Діти (кількість, вік):

Хронічні захворювання:

Додаткова інформація про себе, яку Ви хочете повідомити:

Адреса реєстрації (за паспортом):

Адреса фактичного проживання:

Освіта

Рік вступу до навчального закладу:

Повна назва навчального закладу:

Організаційна форма навчання:

Факультет:

Спеціальність:

Курс/група:

Вид практики:


Тема практики:

Початок практики (число, місяць, рік):

Закінчення практики (число, місяць, рік):

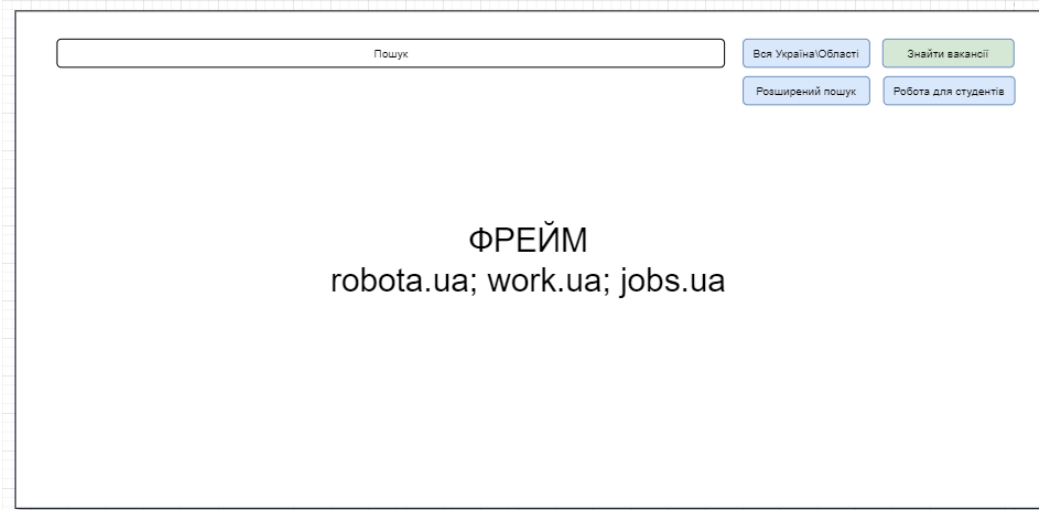
Бажане місце проходження практики:

Підтвердіть, що Ви - людина.

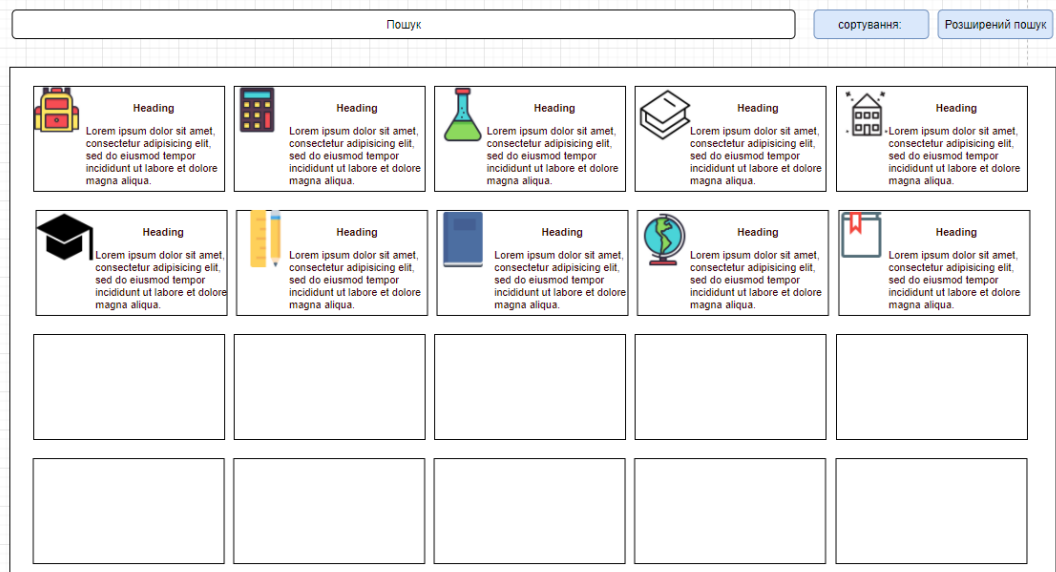


НАДІСЛАТИ











20.2.12 SAMPLE OF "WORK" TAB



20.2.13 SAMPLE OF "ADVANCED COURSES" TAB















20.2.14 SAMPLE OF "WORKSHOPS" TAB

Пошук					сортування:	Розширений пошук
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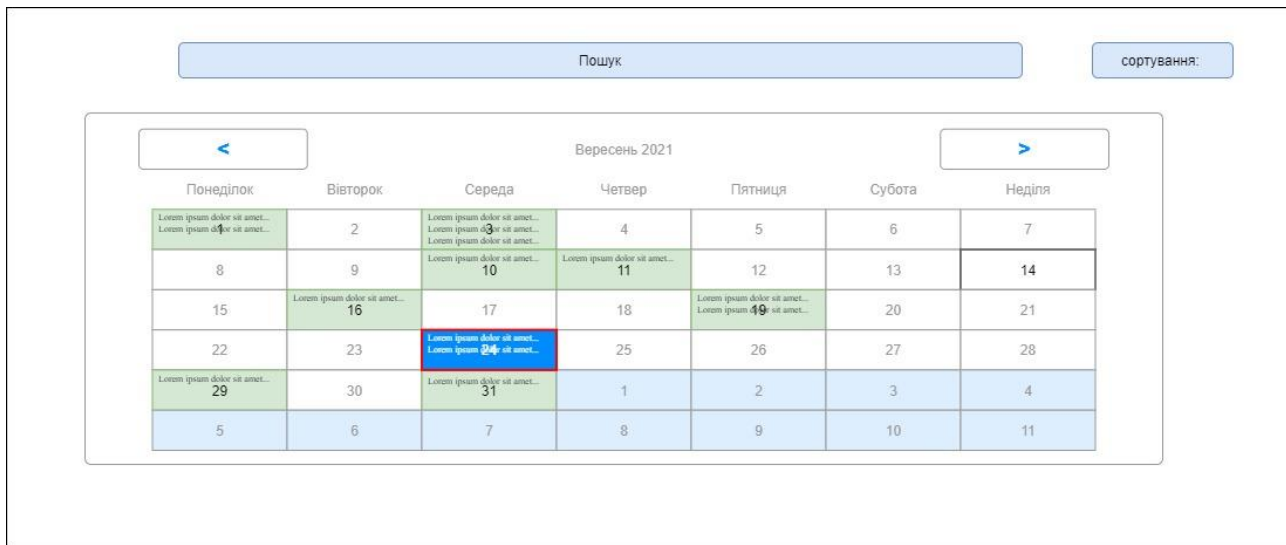
20.2.15 SAMPLE OF "INSTITUTIONS OF HIGHER EDUCATION, INSTITUTIONS OF PROFESSIONAL PRE-HIGHER EDUCATION, INSTITUTIONS OF VOCATIONAL EDUCATION" TAB

Пошук

сортування:
За датою
За областю

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20.2.16 SAMPLE OF “CALENDAR” TAB



20.2.17 SAMPLE OF “NEWS” TAB



20.2.18 SAMPLE OF "MEMORANDUM OF COOPERATION" TAB

Тут буде Меморандум про співпрацю

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Чи бажаєте Ви приєднатись до "Партнерського простору 015"

ТАК НІ