

ANNEX No1

**Conceptual, functional and technical requirements for web page
www.biomasa.md**

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1. GENERAL INFORMATION

This document describes the general concept and technical requirements of the new version of the Moldova Energy and Biomass Project web page www.biomasa.md.

The web page will contain relevant information for different audiences that will cover a wide range of population categories and specialists from various fields of activity. It is necessary that the web page to represent an efficient communication tool which will meet the technical, navigation, content, and maintenance requirements. For this purpose, it needs to be developed a new web page design and content management system providing dynamic and accessible solutions that would allow the overall management of the website, from structure to content in an exclusively visual and dynamic manner ensuring integration tools through web services allowing for a partial automated updates.

2. WEB PAGE REQUIREMENTS

The web page must be developed taking into consideration the present technical task description and other documents provided in the contest requirements. In order to offer an adequate level of accessibility to information, the web page have to function non stop (24 hours of 24, 7 days of a week) with a minimum intervention of human factor.

Increase of information security degree exposed against exterior (outside) attacks as well as against intentional or non-intentional introduction of erroneous information and deleting of content by users with privileged rights in administration system.

Taking into consideration the complex informative content of the web page, it is important to develop a navigation mechanism based on intuitive logic that will allow visitors to orientate easily on the page depending on the interests of each target group actioning with minimum effort to obtain the needed information.

Web page design should have a simple structure and easy to understand that would ensure the reflection of the most operative information and a convenient navigation, to allow quick download of content on user's device and upload on web page (for pages where is permitted this possibility).

Provide the possibility to make the necessary modifications in the structure of web page as well as in its design elements by web page administrators.

The potential visitors of online web page:

- Public servants and other representatives of public institutions in Moldova;
- Individuals – owners of households;
- Representatives of companies that activate in the field of bioenergy;
- Pupils and students who study subjects regarding bioenergy sphere;
- Journalists and other mass-media representatives in Moldova;
- Thematic bloggers;
- General public.

Potential visitors of web page may be speakers of different languages. In order to optimize the process of web page development and maintenance, there will be implemented separate interfaces in Romanian, Russian and English languages. Taking into consideration the fact that there will be uploaded materials in many languages, it is required a correct display of content and a well-functioning of searching system that will allow to find articles and attached materials at least in the following languages:

- Romanian language;
- English language;
- Russian language.

3. TECHNICAL REQUIREMENTS

3.1 Requirements to site structure and navigation

General conditions for site structure

The web page is an informational resource of many levels that will contain 3 interface languages with the possibility to publish materials and in other additional languages (for example, French) that will be identified through various methods (classical navigation, search system, tagging/keywording systems).

The structure of web page is divided in two zones – the public zone and the administration zone with restricted access one (only for persons determined by project owners who are empowered with content and system management rights).

The web page must allow frequent updating with the effort of selected staff by project's beneficiary who don't have special studies in design or web programming fields. For the mentioned reason, all functions of web page management should be simplified and performed through an automated content management system.

Web page structure

Public zone structure – text representation

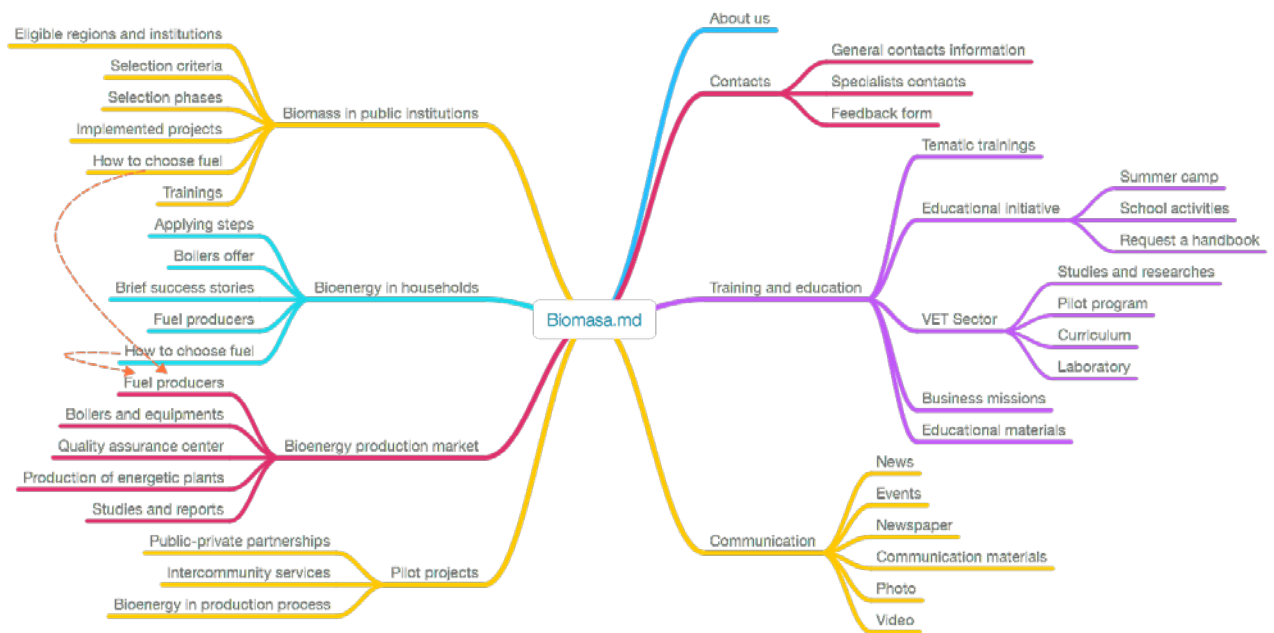
The final structure of web page public zone will be agreed with project beneficiaries while works execution.

The prior structure contains the following sections:

- Main page
- About us
- Biomass in public institutions
 - Eligible regions and institutions
 - Selection criteria
 - Selection phases
 - Implemented projects
 - How to choose fuel
 - Trainings
- Bioenergy in households
 - Applying steps
 - Boilers offer
 - Brief success stories
 - Fuel producers
 - How to choose fuel
- Bioenergy production market
 - Fuel producers
 - Boilers and equipment
 - Quality assurance center
 - Production of energetic plants
 - Studies and reports
- Pilot projects
 - Public-private partnerships
 - Intercommunity services
 - Bioenergy in the production process
- Training and education
 - Thematic trainings
 - Educational initiative
 - Summer camp
 - School activities

- Request a handbook
 - VET sector
 - Studies and Researches
 - Pilot program
 - Curriculum
 - Laboratory
 - Business missions
 - Educational materials (publications)
- Communication
 - News
 - Events
 - Newspaper
 - Communication materials
 - Photo
 - Video
 - Feedback
- Contacts
 - General contacts information
 - Specialists contacts
 - Feedback form

Public zone structure – scheme representation



3.2 Navigation requirements

The site navigation system should include:

Generic navigation bar

- Main page
- About us
- News
- Events calendar
- Contacts
- Search field

Categories and content menu

- Biomass in public institutions
- Bioenergy in households
- Bioenergy production market
- Pilot projects
- Training and education
- Communication

The elements indicating bar, which informs user about his location on page hierarchy and ensures references at superior levels automatically generated with corresponding link from hierarchy passed by user. This bar represents numbers of elements separated by the symbols „/“ or „>“, for example Main page '>' Pilot Projects '>' Wind energy in Floresti.

All elements of the string must contain references to the respective web pages beside the last element. The bar of indicating elements has to be placed in the center upper part of the page, directly after menu bar.

Categories and content menu will be organized as dynamic menu containing categories of navigation of level 1 but subcategories of level 2 will be displayed as „drop down“, it is recommended that content menu to be placed horizontally in the upper side of the page.

Generic navigation will be placed separately from categories and content menu. At the same time, the style of generic navigation block should be visually distinguished in order not to look like categories and content menu.

Other navigation requirements

- Navigation to the first page will be ensured by clicking on the official symbols of web page.
- URL addresses must be simple, informative, and logically structured, for example http://www.biomasa.md/households/application_steps. It is evident that on the respective address is placed an article from the rubric „Biomass in households“ whose subject is „Applying steps“.
- Navigation elements should be accessible from each web page.

3.3 Requirements to searching and sorting system

Besides classic navigating system, there will be 2 instruments of materials identification that present interest for users on web page.

Simple search

It will represent a searching field that will be present on all pages of the site allowing user to insert key words and start searching. The content management system will search throughout all materials and display the results on a page.

Advanced searching

It will be present on the page with searching results as an additional option. In this section, visitors will have many elements for performing a more exact search, such as:

- Searching field with the help of key word
- Elements of rubrics/categories selection where is made searching process
- Activation of searching after parameters that are in different types of categories/ articles, these being different depending on the searching rubric/category selected by the visitor.

3.4 Requirements to web page content

Types of content pages

The site pages may be divided in dependence of their predestination in the following categories:

Main page – represents the entry for the users whilst site accessing;

Categories pages – represents rubrics where are shortly merged articles from each rubric that contains subcategories or internal pages.

Internal dynamic page – represents all site’s pages which belong to categories where are published with constant periodicity new materials (for example, news, publications)

Static internal page – represents site’s pages that are placed once with its launch, but with the time it is supposed to have content modification or remains intact all the time (for example, contacts, about us, rules, etc.).

3.5 Homepage requirements

The upper part will contain:

- a) Symbols of the project (upper left part)/Logo;
- b) Generic navigation bar (upper right or center side)
- c) Categories and content menu (along page width)

The central part will contain (order of specified elements doesn’t represent the arranging mode on page, this mode being determined during design process)

- a) Short introduction about project with link to the complete description page
- b) Events calendar block
- c) References/Links to main content categories – there will be underlined the most important content rubrics from web page in correspondence with target audience groups of the project.
 - a) Biomass in public institutions
 - b) Bioenergy in households
 - c) Bioenergy production market
 - d) Pilot projects
 - e) Trainings and Education
 - f) Communication

For these categories will be suggested 2-3 graphic representations of integrating on the base of them being chosen together with the beneficiary the optimum display (for example, Category titles in text form, Titles + images, Categories titles + titles of subcategories).

It is permitted and even recommended grouping of elements in distinct blocks depending on their thematic.

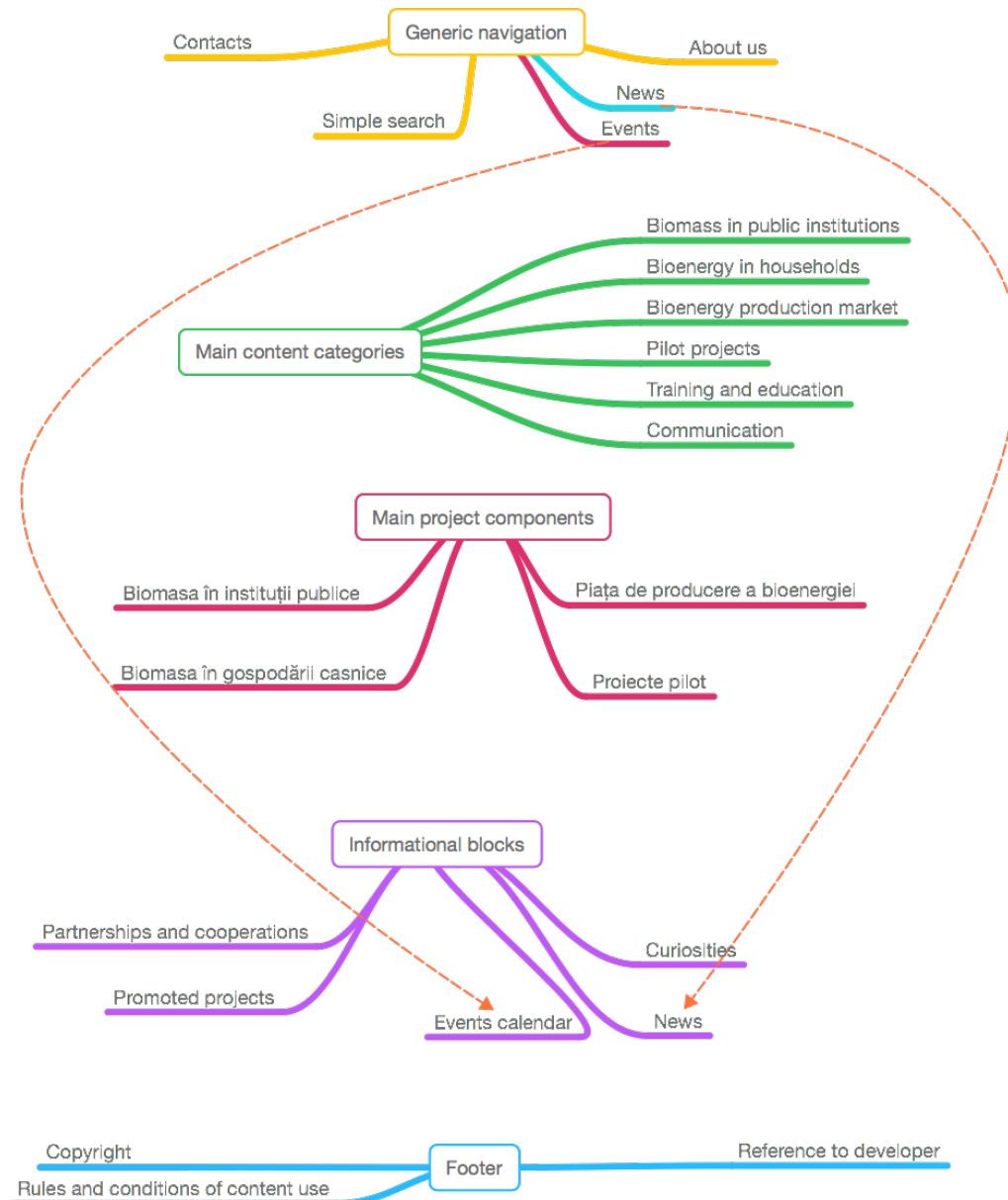
- d) Block of promoted projects, which will be images with links to article pages or external websites.
- e) Informative blocks with extracts of the last materials from dynamic categories – the system will automatically generate content blocks with the last published materials (3-5 articles) from different categories where materials are published often (for example, news, publications).
- f) “Curiosities” block where will be included images with links to external projects (for example, CO2 emission calculators, or fuel calculation calculator) or links internal pages with useful information (for example, infographics).
- g) As elements of each extracted article can be considered: title, date, relevant image, 1-2 paragraphs with the content of the article, final elements’ list will be determined whilst development process in dependence of chosen categories and type of included content.
- h) Partnerships and cooperation block where are included logos of the partners with links to official web pages.
- i) Block with references to financiers – consists in integration of other organizations’ logos that have a relationship with the project, these being arranged visually balanced so that all of them to have a similar priority, not to contain proportion and quality distortions in order not to damage their images. Eventually, there will be taken into consideration the recommendations and requests of displaying/integrating of these logos provided by brands owners. The displayed images will have links to official pages of the organizations that represents them which will be opened in new windows by a click.

The content management system will automatically generate and optimize all the elements without the necessity of additional content preparing by administrators.

Bottom part of the page will contain:

- a) Copyright on the left part of the page – reference to web page owners.
- b) Rules and conditions of content use (responsibility restriction).

The schematic distribution of elements from the main page:



3.6 Requirements to internal site sections

About us

It represents a static internal page, which will specially contain general information about the project in text format with moderate use of images, as volume it is planned not to overpass 3 pages with A4 format.

Main elements of pages necessary to include in design and programming phase:

- a) Page title
- b) Main image
- c) Content text
- d) Stylization of elements, such as: section, numbered list, bullet list, links

- e) Stylization of text elements: bold, italic, underline
- f) Social sharing module
- g) Comment module is not necessary

Biomass in public institutions

Represents a mix of article and categories pages with subordinated article pages.

- **Regions and eligible institutions** – represents the article page with specified elements
 - Article title
 - Content text
 - Images integrated in the content (for example, maps, illustrations, schemes)
 - Stylization of elements, such as: section, numbered list, bullet list, links
 - Stylization of text elements: bold, italic, underline
 - Module of annexed attachments with indication of downloadings' number per file
 - Print version of the page
 - Social sharing module
- Selection criteria – article page with specific elements
 - Article title
 - Content text
 - Images integrated in content (for example, illustrations and scheme of selection criteria view, pictograms)
 - Stylization of elements, such as: section, numbered list, bullet list, links
 - Stylization of text elements: bold, italic, underline
 - Module of annexed attachments with indication of downloading number per file (for example, standard forms, standard requests, models and examples of documents)
 - Print version of the page
 - Social sharing module
- **Selection phases** – article page with specific elements
 - Article title
 - Content text
 - Images integrated in content (for example, illustrations and scheme of selection criteria view, pictograms)
 - Stylization of elements, such as: section, numbered list, bullet list, links
 - Stylization of text elements: bold, italic, underline
 - Module of annexed attachments with indication of downloading number per file (for example, standard forms, standard requests, models and examples of documents)
 - Print version of the page
 - Social sharing module
- Implemented projects – will include two modes of display
 - Category page – List view – will represent the category page where will be extracted the projects list including the following elements
 - Pathway
 - Category title
 - Map view display button
 - Grouping of projects on districts displayed in alphabetical order
 - Representative resized image for each project
 - Project name formed from: institution name + locality name (for example, Kindergarten N 3 Hirbovat)
 - Type of beneficiary institution (for example, high school, gymnasium, kindergarten, hospital, etc.)
 - Fuel type (for example, straw bales, briquettes, pellets, etc.)
 - Link or project complete details visualization button
 - Display filters of certain projects in dependence of their parameters (for example, filter by fuel type, project type, etc.)

- All categories will be included on a page
 - Category page – Map view – will represent the page where will be positioned on the interactive map of the implemented projects. It will contain the following elements:
 - Pathway
 - Category title
 - List view button
 - Interactive map module
 - Exact display of projects on map, with specific pictograms depending on their type.
 - By placing the mouse on certain project there will be displayed information about it. (for example, project name, public institution type, heated area, the capacity of the central, beneficiaries number, Link or project complete details visualization button)
 - **Article page**
 - Article title – institution name + town name
 - Article image – main image of the project
 - Project general data – institution type, surface, capacity of the central, efficiency, origin country, fuel type (final parameters will be offered in the process of web page elaboration)
 - Financial contribution – the support offered by grants, community financial support
 - Project’s beneficiaries – direct, indirect, children.
 - Project photo gallery
 - Print version of the page
 - Social sharing module
- **How to choose fuel** – article page that will include the following elements:
 - Page title
 - Introduction text
 - Video spot explaining how to choose correctly fuel, included on YouTube
 - Infographic images adjusted to web format explaining the correct fuel selection mode
 - Print version of the page
 - Social sharing module

Bioenergy in households

- **Application steps** – represents the article page with specific elements
 - Article’s title
 - Content text
 - Images integrated in content (for example, illustrations and schemes of application steps view, pictograms)
 - Stylization of elements, such as: section, numbered list, bullet list, links
 - Stylization of text elements: bold, italic, underline
 - Table stylization
 - Module of annexed attachments with indication of downloading number per file (for example, standard forms, standard requests, models and examples of documents)
 - Print version of the page
 - Social Sharing module
- **Boilers offer** – will include the producers’ list with two display modes
 - **Article page – List view** – will represent the category page where will be extracted the projects list including the following elements
 - Page title
 - Map view button
 - Introduction text
 - Grouping of projects on districts displayed in alphabetical order
 - Producers’ list which will include:

- Producer's name
 - Fuel type (for example, straw bales, briquettes, pellets, etc.)
 - Origin country
 - Contact details (for example, telephones, website, email, address)
 - All project producers will be included on a page
 - Print version of the page
 - Print version of the page
 - Social sharing module
- **Article page – Map view** – will represent the page where will be positioned on the interactive map boilers producers. It will contain the following elements
 - Page title
 - List view button
 - Interactive map module
 - Exact location of producers on map by the help of pictograms
 - Exact location of producers on map
 - By placing the mouse on certain producer there will be displayed information about it. (for example, company name, types of produced boilers in dependence of fuel type, origin country, contact details)
- **Brief success stories** –Short successful histories – article page in „testimonials” format that will include the following elements:
 - Page title
 - Article image
 - Introduction text
 - Beneficiaries' list and with specific elements:
 - Portrait photos of beneficiaries
 - Short description of the project and beneficiary's opinion (not more than a paragraph)
 - Type of implemented project
 - Other 2-3 project indicators
 - Print version of the page
 - Social sharing module
- **Fuel** – link to bioenergy production market rubric/ Biofuel producers
- **How to choose fuel** – article page that will include the following elements
 - Page title
 - Introduction text
 - Video spot explaining how to choose correctly fuel, included on YouTube
 - Infographic images adjusted to web format explaining the correct biofuel selection mode
 - Print version of the page
 - Social sharing module

Bioenergy production market

- **Biofuel producers** – will include producers list with two displaying modes
 - Article page – List view – will represent the category page where will be extracted the projects list including the following elements:
 - Page title
 - Map view button
 - „Register” button
 - Introduction text
 - Grouping of producers on districts displayed in alphabetical order
 - Producers list that will include:
 - Producers name

- Fuel type (for example, straw bales, briquettes, pellets, etc.)
 - Contact details (for example, telephones, website, email, address)
 - All project producers will be included on a page
 - Print version of the page
 - Social sharing module
- **Map view** – will represent the page where will be positioned on the interactive map boilers producers. It will contain the following elements:
 - Page title
 - List view button
 - Interactive map module
 - Exact display of producers on map by the help of pictograms.
 - Exact location of producers on map
 - By placing the mouse on certain producer there will be displayed information about it. (for example, company name, types of produced fuel, contact details)
- **Article page – Register yourself** – will allow producers who are not in producers' list to send information for adding himself in the list, the page will include
 - Page title
 - Intro text explaining registration possibility
 - Forms with information providing fields:
 - Company's name
 - Locality
 - Type of produced biofuel (options of choosing from list with multiple choice possibility, for example straw bales, briquettes, pellets, etc.)
 - Contact details
 - By completing the data all the information will be sent to web page administrators through email, further information being placed on site by responsible person by the help of content management system.
- **Boilers and equipment – article page** – will include the list of boilers producers or companies specialized in projection and biofuel production equipment assembly, with the following elements
 - Page title
 - „Register” button
 - Introduction text
 - Grouping of producers in alphabetical order
 - Producers list which will include:
 - Producer's name
 - Fuel type (for example, straw bales, briquettes, pellets, etc.)
 - Origin country
 - Specialization (for example, boilers producer or equipment producer)
 - Contact details (for example, telephones, website, email, address)
 - All project's producers will be included on a page
 - Print version of the page
 - Social sharing module
- **Quality assurance center** – article page that will include the following elements:
 - Page title
 - Article image
 - Article sections
 - About us – short introduction
 - Creation phases – informational (informative) text and eventually graphic scheme of phases view

- Actual phase – informational (informative) text explaining at which phase is center creation
 - Information about quality assurance laboratory – at site launch this information will not be completed, but once with laboratory launch there will be placed contacts and other specific details
 - Print version of the page
 - Social sharing module
 - **Energy plants production** – article page that will include the following model elements which have to be completed with content by the beneficiary
 - Article’s title
 - Article image
 - Content text
 - Image integrated in the content
 - Stylization of elements, such as: section, numbered list, bullet list, links
 - Stylization of text elements: bold, italic, underline
 - Module of annexed attachments with indication of downloading number per file
 - Print version of the page
 - Social sharing module
- a) **Studies and reports** – represents category and article page with materials in form of attached documents in pdf or word format, with significant page numbers which users are going to download for reading in offline regime or for printing

Category page

- Pathway
- Category’s title
- Publications’ title
- Resized images of each material (for example, cover sheet)
- Downloading buttons
- Number of each material’s downloading

Pilot projects

- **Public – private partnerships**
 - **The mechanism of public private partnership creation** – article page that will include the following elements
 - Article title
 - Content text
 - Images integrated in content (for example, illustrations and scheme of application steps view, pictograms)
 - Stylization of elements, such as: section, numbered list, bullet list, links
 - Stylization of text elements: bold, italic, underline
 - Table stylization
 - Module of annexed attachments with indication of downloading number per file (for example, standard forms, standard requests, models and examples of documents)
 - Print version of the page
 - Social sharing module
 - **Public-private partnerships created with the project’s support** which will include the following elements:
 - Article title
 - Content text
 - Images integrated in content (for example, illustrations and scheme of application steps view, pictograms)
 - Stylization of elements, such as: section, numbered list, bullet list, links

- Stylization of text elements: bold, italic, underline
- Table stylization
- Module of annexed attachments with indication of downloading number per file (for example, standard forms, standard requests, models and examples of documents)
- Print version of the page
- Social sharing module
- **Public-private partnerships created with the project's support** which will include the following elements:
 - Article's title
 - Content text
 - Images integrated in content (for example, illustrations and scheme of application steps view, pictograms)
 - Stylization of elements, such as: section, numbered list, bullet list, links
 - Stylization of text elements: bold, italic, underline
 - Table stylization
 - Module of annexed attachments with indication of downloading number per file (for example, standard forms, standard requests, models and examples of documents)
 - Print version of the page
 - Social sharing module
- **Intercommunity services** – article page that will include the following elements
 - Article's title
 - Content text
 - Images integrated in content (for example, illustrations and scheme of application steps view, pictograms)
 - Stylization of elements, such as: section, numbered list, bullet list, links
 - Stylization of text elements: bold, italic, underline
 - Table stylization
 - Module of annexed attachments with indication of downloading number per file (for example, standard forms, standard requests, models and examples of documents)
 - Print version of the page
 - Social sharing module
- **Bioenergy in the production process** – article page that will include the following elements
 - Article's title
 - Content text
 - Images integrated in content (for example, illustrations and scheme of application steps view, pictograms)
 - Stylization of elements, such as: section, numbered list, bullet list, links
 - Stylization of text elements: bold, italic, underline
 - Table stylization
 - Module of annexed attachments with indication of downloading number per file (for example, standard forms, standard requests, models and examples of documents)
 - Print version of the page
 - Social sharing module

Trainings and Education

- **Thematic trainings** – will include category page and article pages with specific elements>
Category page will include the following elements:

- Pathway
- Category's title
- The last 10-15 published articles displayed in chronological order
- Resized images of each article
- Pagination elements

Article page, which will include the following elements:

- Article's title
- Content text
- Images integrated in content (for example, illustrations and scheme of application steps view, pictograms)
- Styling of elements, such as: section, numbered list, bullet list, links
- Styling of text elements: bold, italic, underline
- Table styling
- Module of annexed attachments with indication of downloading number per file (for example, standard forms, standard requests, models and examples of documents)
- Print version of the page
- Social sharing module

○ **Educational initiatives**

- **Summer camp** – article page, including the following elements
 - Article's title
 - Content text
 - Images integrated in content (for example, illustrations and scheme of application steps view, pictograms)
 - Styling of elements, such as: section, numbered list, bullet list, links
 - Styling of text elements: bold, italic, underline
 - Table styling
 - Module of annexed attachments with indication of downloading number per file (for example, standard forms, standard requests, models and examples of documents)
 - Print version of the page
 - Social sharing module
- **Activities in school** – article page which will include the following elements
 - Article's title
 - Content text
 - Images integrated in content (for example, illustrations and scheme of application steps view, pictograms)
 - Styling of elements, such as: section, numbered list, bullet list, links
 - Styling of text elements: bold, italic, underline
 - Table styling
 - Module of annexed attachments with indication of downloading number per file (for example, standard forms, standard requests, models and examples of documents)
 - Print version of the page
 - Social sharing module
- **Request a handbook** – article page which will include the following elements
 - Article's title
 - Content text
 - Images integrated in content (for example, illustrations and scheme of application steps view, pictograms)

- Module of annexed attachments with indication of downloading number per file (for example, standard forms, standard requests, models and examples of documents)
 - Form with requesting fields of printed handbook:
 - Name and surname
 - Address
 - Phone
 - Other contact data
 - The data filled in form will be sent by the system to the email of the person responsible for Trainings and education.
 - Social sharing module
- **Business mission** – will include the category page and article pages with specific elements.

Category page that includes the following elements:

- Pathway
- Category's title
- The last 10-15 published articles displayed in chronological order
- Resized images of each article
- Business mission's date
- Pagination elements

Article page that includes the following elements:

- Article's title
- Content text
- Business mission's date
- Business mission's country
- Images integrated in content (for example, illustrations and scheme of application steps view, pictograms)
- Stylization of elements, such as: section, numbered list, bullet list, links
- Stylization of text elements: bold, italic, underline
- Table stylization
- Module of annexed attachments with indication of downloading number per file (for example, standard forms, standard requests, models and examples of documents)
- Print version of the page
- Post-event photo gallery
- Social sharing module

- **Educational materials (publications)** – will include category page and article pages with specific elements:

Category page that includes the following elements:

- Pathway
- Category's title
- The last 10-15 published articles displayed in chronological order
- Resized images of each article
- Pagination elements

Article page that includes the following elements

- Article's title
- Introduction text
- Article image (for example, publication's cover)

- Module of annexed attachments with indication of downloadings' number per file
- Social sharing module

Communication

○ News

Category page that includes the following elements:

- Pathway
- Category's title
- The last 10-15 published articles displayed in chronological order
- News publication date
- Resized images of each news
- Pagination elements

Article page, which includes the following elements:

- News title
- Introduction text
- News main image
- Content text
- Integration of images in content
- Print version of the page
- Social sharing module

○ Events – will offer the possibility to display the events that took place in different forms?

Monthly calendar of events – page or module that displays all the day of month by marking those days when any events will take place, by clicking/selecting an event, there will be displayed additional information

- Date of event
- Location of event
- Name of event
- Short description of the activity

Events list – the page that includes in chronological order the list of events with the elements

- Event's date
- Event's location
- Event's name
- Short description of the activity

Newspaper – will represent category and article page with specific elements

Subscription module – will allow subscription by electronic mail to notifications regarding new materials publishing in this rubric, will contain the elements:

- Name, Surname (mandatory field)
- Company/Organization (optional field)
- Email (mandatory field)

Category page that includes the following elements:

- Pathway
- Category's title
- The last 10-15 published articles displayed in chronological order
- Resized images of each publication's cover
- Download link/button
- Pagination elements

Article page which includes the following elements

- Article's title

- Article's image (for example, publication's cover)
 - Summary text presenting the article
 - Module of annexed attachments with indication of downloading number per file
 - Social sharing module
- **Communication materials** – will represent category page with the following specific elements
 - Pathway
 - Category's title
 - The last 10-15 published articles displayed in chronological order
 - Buttons/links of communication materials downloading
 - Pagination elements
 - **Photo** – will represent the photo gallery from specific events, photos organization will be displayed in maps in a chronological order, by maps accessing there will displayed the photos from the event.
 - **Video** – the registered materials archive will be maintained on dedicated YouTube channel, but on site these materials will be integrated in the following mode:

Category page, which includes the following elements

- Pathway
- Category's title
- The last 10-15 published articles displayed in chronological order
- Resized images of each video
- Pagination elements

Article page, which includes the following elements

- Material's title
- Video player included in article through embed method
- Summary text of material's presentation
- Social sharing module

Contacts – will represent the article page with sections

- General contact information – addresses, telephone numbers, map and other official elements of contacts
- Specialists' contacts – the list of specialists specifying the function, responsibilities and contact details.
- Feedback form – it permits sending of questions/suggestions from the site, the data being sent through email to representatives within the project.

4. Requirements to content publishing

Project realization is performed by ,at key' principle. That's why; the developer will make also the content integration/publishing offered by beneficiary in accordance with the following request:

- a) The main page will have a complete content upload, all the blocks the final content coordinated with the beneficiary.
- b) All the pages with static content (About, Contacts) will contain final information offered by beneficiary
- c) In categories with dynamic content will be published minimum 5 and maximum 10 articles with final content approved by beneficiary.
- d) For different elements types of pages with dynamic content will be elaborated and applied in articles models/standards for further correct stylization by the beneficiary (for example, table styles, image integration mode, sections titles', other elements). At the necessity, the developer will require real content from the beneficiary in order to understand how it's better to suggest its integration on the site. This will be done in order to apply on the site a unique and correct style of materials presentation

at its launch and also after transmitting of the web page to beneficiary's management. It is important for these elements to be developed in advance because the work with the content will be done by many persons with different access levels.

- e) It will not be admitted that at the public site launch on the final site address to be rubrics without content, in case of lack of content from beneficiary's side – the rubrics without information will be hidden from the public, and the site's administrators will be informed about the activation mode after publishing the articles in categories where previously wasn't information.

4.1 Requirements to the system of materials uploading

The moderators' and administrators' system of uploading and publishing of materials in administration panels will allow the publication of materials in the rubrics of the site without any restrictions, this thing being possible from special rubrics of content management system, where it is access on base of user and password, the right being assigned by the main administrator of the site.

4.2 Requirements to the mobile version of the web page

Beside the desktop version, the web page has to be implemented additionally for mobile devices – phones and tablets.

The mobile version has to be designed and developed on the „responsible” principles and the web page has to offer to the visitor the appropriate visualization based on automatic detection of the device type or device resolution.

There is required minimal implementation of the website for the following devices sizes:

- Small mobile phones – 1-3 inch screen size
- Regular mobile phones – 3-6 inch screen size
- Tables and phablets – 6-10 inch screen size
- Desktop – 12 inch and more screen size.

Specific requirements regarding mobile devices web page versions:

- Acceptable readability of the website texts on the device without zoom
- Adaptive menus integration depending on the device size and type
- Optimization for touch based navigation for mobile devices beside the main beside the mouse based navigation on the desktops (replacing hovers with taps and other specific requirements for touch interface navigation)
- Automatic images resizing according to user's device
- Integration of touch favicon for saving the website on the user's mobile phone main screen

Testing environment – the website will be tested on the following mobile devices:

- iOS - Apple iPhone 4/4s
- iOS - Apple iPhone 5/5S
- iOS - Apple iPhone 6/6Plus
- iOS – Apple iPad 4
- iOS – Apple iPad Air/Air2
- Android – HTC One M7/M8
- Android – Samsung Galaxy S4/S5
- Android – Google Nexus 4/5

4.3 Requirements to the site

Requirements to site's stylistics

The site's stylistics must meet project's visual identity style, be unitary, and be easy recognized by the visitors.

Requirements to site's stylistics:

- Recognition by the visitors of site's style regardless of the accessed page (main or internal page)
- Site's design template must be elaborated for a minimum resolution of 1024x768 pixels.

Requirements to pages' template:

Writing style:

- Writing style (fonts type, colors, formatting) should be similar for all the pages
- The text must be readable and at the subject
- Must not be used blink text and scrolling marques
- Must be a sufficient contrast between text color and background color
- The page must be characterized by unitary
- The style should be maintained till the end of the page
- The navigation on page must be easy and intuitive

Requirements to site's graphic design

The graphic design should be projected so that to support visually the site's informational message which will highlight the presented information.

In order to ensure a design orientated to visitors, there should be taken into consideration the possibilities of navigating the site, direct and quick access to information, ensuring the simplicity and design stability.

There will be reflected style elements, forms and colors specific for project's visual identity (logo/brandbook).

The site's design must meet the following conditions

- Web style 2.0;
- Pages must optimized for fast loading and comfortable browsing;
- Graphic decoration must be reduced to minimum.

Requirements to links (hyper-links, links)

The site's pages must correctly interact between them. Achieving this goal mostly depends on the mode how links are organized and on their stability within the site.

General requirements to the links:

- a) To have a well formulated informative content (the links' text should be short and at the subject – to be composed from key words)
- b) To be comfortable for reading
- c) The internal links should be functional and not send the visitor on separate pages (new windows) but on pages that belong to the site (excepting files for viewing by the help of other tools, for example - DOC, XLS, TXT, PDF, PPT)
- d) To avoid the use of special characters (hyphens, percent)
- e) To indicate clearly in pages what a link represents: if the link is a text then it should be underlined and distinguish by color from the usual text (for usual text it is recommended not to use an underlined mode)
- f) If it's possible, not to use Java Script in links
- g) The images used as links should be joined by alternative texts so that by placing the mouse on the link (which represents an image) to appear a more detailed description regarding the information to which the link sends
- h) The links will look different from ordinary text (preferable by underlining the text)

Internal links direct within the same page or to other pages within the site. Textual view of sites' internal links must contain metadata to which it is made the directioning.

External links direct to other internet sites (it is necessary to know the URL address of the respective sites). The external links should send the visitor on separate pages (new windows)

Requirements to pictograms

- a) To use a simple and eloquent design
- b) To have a reduced size of the file
- c) The positioning on each page to remain unchanged
- d) To be easily recognized
- e) To be doubled by an alternative menu system, for example – text links
- f) To use pictograms that achieved an universal recognizing

- i) To use, as it's possible pictograms in form of vector fonts which allow their resizing without loss of quality.

Requirements to images

Within the site will be used graphic objects with JPG (JPEG), PNG, GIF, taking into consideration the following requests

- a) The graphic objects will be compulsory joined by alternative texts. The alternative texts must be clear and not overpass 100 characters.
- b) The graphic elements and font pages' colors (and fields' color) must be generated with the use of standard colors (256), exception will make JPEG images.
- c) For content images (for example, the main image of the article, or the images that are extracted in categories at each publication) with sizes larger than 200 KB must be resized automatically by the system in view dimensions (width and displaying size) and in volume/space, it is not allowed just visual saving the original volume of the uploaded photo (for example, an image/photo with size 400x230 pixels with the volume of 2 MB)

Requirements to animations

Within the site it is admitted just animations realized in form of Java Script, these being helpful for displaying of content in turn in dynamic blocks (for example, slides) or for dropdown menu, but it is not allowed the decor animation which don't have functional load, for example-flash.

Requirements to tables

Tables' size should be relative – not to depend on the size of the table text and on the size of user's window.

The tables must have the following characteristics:

- a) The cell border thickness – 1pt
- b) The table's header formatting must differ from formatting of tab's content

Requirements to scheme colors as design's element

- a) The used colors and pages' design should be the same on entire site
- b) The selected text and background colors should offer a sufficient contrast in order not to have the eyes tired/ eyestrain
- c) It is necessary that the active elements (links, navigation buttons) to differ from the site plain text
- d) Colors are defined using hexadecimal code for the combination Red, Green, Blue.

Requirements to other interface elements

Requirements to other interface elements (buttons, lists, dialog boxes, etc.)

- a) Correspondence to site's style
- b) Assurance of correct text display within these elements.

Requirements to templates use

The site will use editing templates (source code) in separate files for the following elements:

- a) Main page
- b) Categories pages
- c) Internal pages
- d) Page of search results display
- j) Page of article display
- k) Static page

Requirements to fonts

The page should be organized so that the visitor will have the possibility to perceive the information displayed on this page.

In order to emphasize certain information on web site will be used characters formatting marks:

- a) Caps lock and italic text will be limited used
- b) Bold – in titles, tables header, in the plain text in order to highlight the key words
- c) Underlined – only in case of links.

Requirements to fonts' color

- a) It should be ensured an optimal contrast between text and font's color
- b) Titles and main text should be of the same color
- c) Titles will differ from main text by used font type and character's thickness
- d) On all pages of the site should be maintained the color line for each text type (title, ordinary text and links)

Requirements to font's family

On the site's pages will be used till two families of fonts being chosen from design's point of view corresponding to project's visual identity and to the best practices of content sites developing field.

Requirements to text size

- a) The font size may be fixed or relative
- b) The text size by default should be large enough (at least 12 points, preferable 14 points)

Requirements applied to formats

The format of numbers and dates should correctly function regardless of the user's computer settings. Requirements applied to formats:

Date's format must be „dd.mm.yyyy”, where dd- day ,mm-month, yyyy –year, as a separator it is used the dot, as an alternative is accepted to use the „dd month yyyy” format – for example, 13 June 2014.

For the information stored on the site will be used the following formats:

- a) For displaying textual objects will be used the formats - HTML, PDF or RTF
- b) For displaying table objects will be used XML, CSV, XLS formats
- c) For displaying graphic objects will be used GIF, JPG (JPEG) or PNG formats
- d) For displaying archives will be used ZIP format
- e) For displaying content materials annexed to articles will be used format typical for office documents DOC, DOX, XLS, XLSX, PPT
- f) For displaying video materials will be used video formats accepted by media content hosting platforms (YouTube, vimeo).

Requirements to browsers

The web pages of the site should be correctly viewed in the following browsers

- c) MS Internet Explorer (9 and higher)
- d) Mozilla Firefox (36 and higher)
- e) Chrome (41 and higher)
- f) Safari (7 and higher).

4.4 Correspondence of standards in the field

- a) In order to ensure the possibility of correct viewing through different browsers and compatibilities with different informatic platforms, the site must meet the World Wide Web Consortium (W3C) recommendations (see www.w3c.org)
- b) In order to ensure the possibility of site interaction with disabled people, the site must correspond with WAI (Web Accessibility Initiative) recommendations (see www.w3.org/WAI/)
- c) The website has to be tested following the W3C recommendations (<http://validator.w3.org/>)
- d) The site must respect the Semantic Web principles.

5. The optimization of searching motors

While elaboration and at the end of web page development there will be implemented a recommended set of measures for site's optimization by indexing of searching motors. There will be implemented at least the following measures:

- a) In the management system and in the sections of pages' editing will be implemented the fields for adding meta data (web description tags, key words, pages' titles, authors, etc.)
- b) For pages that will not have established individual meta data by responsible for content management from beneficiary's side, the system will automatically generate meta data on the base of general settings.
- c) For sites' pages there will be implemented the mechanism of intuitive addresses generation friendly with searching motors and users (SEF URL, for example: http://biomasa.md/category/article_page and not <http://biomasa.md/section10/2291.php>)
- d) After web page launch on the server offered by beneficiary, the developer will register the launched web page on Google, Yahoo, Bing, Yandex searching motors, with the help of Webmaster tools, for this will be created distinct users in each system, the data of which will be offered to beneficiary.
- e) There will be implemented the mechanism of generating structure files of the site in optimized format for searching motors – sitemap.xml, that will be registered in Webmaster tools.
- f) Whilst web page programming there will be applied friendly methods and searching engines:
 - Programming in form of divs and not table based
 - Use of CSS in separate files for style defining and not in content
 - Text programming in form of font and not in form of images
 - Other recommendations specified by searching engines in the documentation issued by them.

6. Optimization for social network

Due to wide use of social networks for mediatization of any online project types, there will be necessary to develop a recommendable set of measures for web page preparing with the aim of a more qualitative perception of the page and contents by social networks.

- a) Integration of the relevant modules offered by social networks which stimulate users' involvement (for example, fanbox, profile stream, etc.), but this thing will be done with a non-aggressive integration and non-invasive for base's functionality and for web page primary content
- b) Manual implementation of open graph general tags on web page's generic pages (for example, main page, categories pages, about website, and other pages where the content does not change frequently).
- c) Automated generation of open graph tags on content pages will be performed without involvement of content managers:
 - Page's title
 - Short description of the page
 - Small preview image (100x100 pixels)
 - Link to the page
- d) Like buttons in content pages.
- e) Share/Recommend to friends buttons in content pages

7. Requirements to web site content management system

Requirements to web site structure management

The module of structure management must fulfill the following functionality:

- a) Management of generic navigation bar
- b) Management of categories and content menu

- c) Creation of limited number of pages
- d) Possibility of pages activation/deactivation
- e) Possibility to define an implicit model of site construction for each compartment.

Requirements to content management

Content management module should possess similar interface with standard texts editors' interfaces and ensure the following possibilities

- a) Introduction/editing/deleting by authorized persons of textual and graphic content information
- b) Management of title and meta page content (key words and description) which allows increase of pages indexing by searching motors. It is permitted the use not only of key words but also of words combinations
- c) Selection of implicit model of page construction
- d) Visual editing of informational elements. There are possible the following operations:
 - Fragment cut to buffer
 - Fragment copy to buffer
 - Fragment paste from buffer
 - Links insertion
 - Links elimination
 - Different operations concerning paragraphing
 - Tables insertion and elimination
 - Images insertion and elimination
 - Operations of font, style, color modification
- e) Editing of informational elements' source code
- f) Placing and management of files/attachments to articles intended for downloading
- g) Uploading of video/audio with the possibility of displaying in player with integration on external services of media hosting, such as YouTube, vimeo, soundcloud, etc.
- h) Content management in visual regime through WYSIWYG editors for people who do not possess knowledge in web technologies field and availability of editing in html code regime for people with more advanced knowledge.
- i) The CMS should retain the visual aspect and formatting of the actual published page.

Requirements regarding informational elements management

The system will support the following informational elements and specific modules for their management.

Content page contains different textual information or graphics which can be presented in dynamic or static format

- a) Elements creation and elimination
- b) Element's visual editing
- c) Source code's editing
- d) Placing of the page on the site.

Annexed files for placing contain the information formatted and prepared by the author for publishing.

The module of this element's management must ensure the following operations:

- a) Placing of the file on site through a module of attachments uploading on site or.
- b) File uploading directly in the article through attachments module integrated in the module of article's editing.
- c) Links insertion from a content page into a file already uploaded on web page's server or as links on third servers.
- d) In case of files uploading in the article through attachments module connected with the content editor, the content management system will automatically place button/buttons of attachments downloading separately from the block with content (for example, at the beginning or final of the article after title sections, date, author and other information, the exact location being determined whilst design process).

Taking into account that the distribution of conex materials will be a relevant function in the web page, it is important that the downloading buttons/links to be taken from standard modules offered by the content management system, respectively it will be necessary to pay a significant attention to the design of these elements and their qualitative integration in the article/content page's design. As an example of this functionality realizing could be analyzed the model applied to the address <http://goo.gl/XggxJ1>

In articles/publications which contain materials is important that:

- a) At the article to be possible to upload one or many files;
- b) For uploaded materials to generate automatically files' titles with link at downloading, the titles being generated on the base of file's name uploaded or as an alternative for moderator/administrator to offer the possibility to establish the name on his account;
- c) For each file to be counted and publicly displayed the number of downloads;
- d) To develop a set of relevant pictograms for different most used (for example, pdf, docx, xls, ppt, zip, rar, etc.) files types, which will be automatically assigned by system to the files, uploaded in articles in accordance with files extension.

External media files – represent video, audio materials, presentations, images and other materials hosted on other third platforms (for example, YouTube, vimeo, soundcloud, dropbox, slideshare, etc.) codes of which are automatically generated by the systems where are hosted and will be used on on-line web page for automated display through specific players. The content management system will include fields/modules for insertion of external files codes' integration.

8. Requirements to linguistic versions' management

It is necessary for the module of site's linguistic versions management to ensure:

- a) Site's public interface in Romanian, Russian and English;
- b) Content adding (including attachments) in other languages;
- c) Interface of content management system in English.

9. Requirements to access rights management

The possibility to define different groups of site's users who possess different rights (arbitrarily set) of site's content creation/modification/deleting/publishing, of its structure and functional elements. The access of users responsible for site's content management is performed in accordance with a mechanism of authorizing based on login/password pair (without the involvement of any additional technical resources). Minimum groups of users:

Administrator. Possesses in system the following rights:

- a) Modification of the site's structure
- b) Modification of templates and styles
- c) Modification of content information
- d) Creation, elimination and management of users' rights and groups
- e) Performing and restoring on backup copies

Editor:

- a) Has the right to publish the prepared information on site as well as to delete/modify the existing site information
- b) Receives, verifies/edits and displays materials on web page rubrics
- c) Renews contents uploaded on the web page
- d) Archives materials with lack of actuality
- e) Moderates/ approves/deletes comments and visitors' discussions, which do not meet the web page using rules
- a) Has access to all the materials published on the web page.

Visitor:

- a) Has the right to read the information from the web page
- b) Has the right to download the materials annexed to articles
- c) Has the right participate in discussions about certain subjects in the context of articles published in rubrics where it is allowed to place comments.

10. Other requirements

It is necessary that the content management system to allow:

- a) To offer the possibility to the web site's content to be managed simultaneously by many users without conflicts of rewriting data
- b) The possibility to create/save reserve copies of informational elements (backup)
- c) The possibility of data recovering from reserve copies.

Hosting

The developer will host the web-page for the period of contract. Hosting should run under LINUX operating system. It must have installed PHP version 5.3 or higher, and a database management system MySQL 5 or later versions.

Requirements to data bases and programming languages

As data bases and programming languages will be suggested solutions that meet opensource standards and fulfill the following requirements:

- a) Server side programming language - php
- b) Client side programming language - html, java script, css
- c) Data bases for information storing - mysql
- d) Other open-source variations are also admitted with the condition of providing argumentation for their use.