

# **Deliverable**

D2.3: Online tool architecture developed

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Author	Ana Smola, CGBC Anamari Majdandžić, DOOR Martina Nemčić, KLIK
	Name; Suname; Organization
Review	Kristina Ljubica Paša, DOOR Ivan Duilo, DOOR Aleksandar Jelovac, DOOR
	Data

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# 1. Introduction

The general objective of this project is to establish and organise a comprehensive marketplace and one-stop-shops for homeowners and experts, serving as the central point for all key information within the **crOss renoHome** project. Through these efforts, the project will provide holistic renovation packages for homeowners – guiding them throughout the entire customer journey – with the aim of unifying renovation processes across the project's territorial scope. This approach will ultimately lead to an increased number of renovation projects for family houses and multi-apartment buildings in Croatia, making them more energy-efficient and less dependent on fossil fuels, while maintaining or even improving indoor quality and comfort. Furthermore, the project will contribute to reducing energy demand and CO<sub>2</sub> emissions in the private housing sector, setting a clear pathway towards nearly zero-energy buildings.

# 1.1 Purpose & Scope

Scope of Report *D2.3 Online tool architecture developed* includes activities listed in Work Package 2 (WP2). The result of this report is part of Task T*2.3.1 Building the architecture of the online tool.* Within T*2.3.1*, with the support of an external IT expert, the architecture of an online tool was developed, which will serve as an online OSS for energy renovation. The tool is designed to be user-friendly, with separate sections for single-family and multi-family housing. It enables an overview of open calls and financial instruments, renovation advice, and contact information for all relevant experts. A special section is intended for service providers (designers, contractors, heating/cooling system manufacturers, supervisory companies, and banks offering green loans) to present their services and establish cooperation with investors. The website will primarily be in the Croatian language.

# 1.2 Structure of the document

This document covers the introductory definition of the website concept through the project's goals and vision, followed by the process of contracting a web designer, with an emphasis on selection criteria and the roles of the contractor. It includes technical information such as the platform, hosting, and security requirements, as well as the definition of the user journey and content structure. A section of the document is dedicated to the stakeholder map, identifying key participants and their roles. Finally, it describes the final website development phase, testing, collaboration with contractors, and the maintenance and delivery plan.







# 2. Introductory definition of the concept

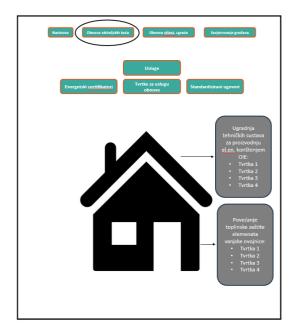
Introductory definition of the concept began in early 2024, when CGBC developed a draft structure of the crOss renoHome website. The aim was to outline the initial idea of the information required for the online OSS, as well as the basic concept of how the website would function. The illustrations below present a working and conceptual version of the digital tool (Marketplace) in its initial phase:

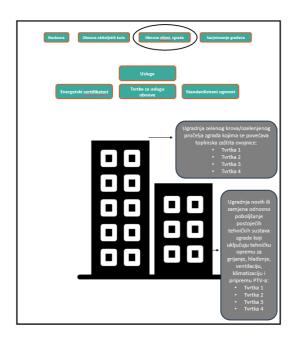




# Marketplace - draft structure











# 3. Procedure for contracting a web designer

To ensure the best value for the available budget, CGBC requested three offers from web design and development service providers. For the purpose of collecting offers in line with specific requirements, the content of the request for proposal is provided and translated below:

### Development of a Platform / Marketplace for Integrated Home Renovation

Address for submitting the offer: marina.gombar@gbccroatia.org

Deadline for submitting the offer: 22 November 2024

**Expected date of contractor selection:** 3 weeks after the submission deadline

**Expected website launch date:** 1 March 2025

**Budget:** EUR 11,000 (crOss renoHome)

Dear Sir/Madam,

We are reaching out with a request for a proposal for the development of a website, namely an online Marketplace, to be created within the framework of the crOSS renoHome project.

As part of this project, we are building an online platform/marketplace that will connect citizens with contractors for energy renovation works and provide them with all the key information about comprehensive energy renovation of family houses and multi-apartment buildings in one place. The platform will offer a list of contractors grouped by counties and cities, with an emphasis on location-based search.

Our current focus is on a simple, responsive website that will later be upgraded, so at this stage we need a solid foundation. Please provide your offer in Croatian. For any additional questions, feel free to contact marina.gombar@gbccroatia.org.

#### **Requirements**

- Website built on WordPress (preferably custom design and development)
- CMS allowing us to edit content independently
- Responsive design (desktop, mobile, tablet)
- Green hosting option
- Website optimized for all major Google metrics (above 90/100 for Performance, SEO, Accessibility, Good Practices). Special focus on Performance to ensure the site is energy efficient
- Integration with social media
- *UX copywriting (titles, subtitles, taglines, buttons)*
- At least one design iteration (both UX and UI) initial delivery and revisions based on consolidated feedback

## **Not Required**

- Multilingual functionality the website will be in Croatian only
- Domain will be requested via Carnet







• Content – will be delivered by us, but we expect guidance on writing that takes into account relevant keywords and basic UX copywriting

# **Expected Website Pages**

#### 1. Homepage

- Introduction
- Component with current public call or subsidy (title, text, button, image)
- Components linking to subpages: Renovation of a family house and Renovation of a multiapartment building
- Presentation of 2 one-stop-shops: OSS ZG, OSS KŽ
- News (subsidies, public calls) blog
- Footer with links to key pages, logos, links to social media, and information on the website's CO₂ footprint

## 2. Renovate a Family House

The user journey should provide all key information in a scrollable format: basic information and steps towards comprehensive renovation of the roof, windows, façade, heating system, etc.

- Financing options (subsidies)
- Types of services available on the Marketplace
- Calculator, depending on budget. We already have a solar calculator developed on klikninaodrzivo.com can it be copied?
- Energy certifiers
- Renovation service providers list leading to the Contractors page
- Standardized contracts (PDF download)

Alternative user journey: "What do you want to renovate?" – roof, windows, façade, heating system, full renovation (buttons). Depending on the choice, the user is redirected to a specific subpage. We are not sure if this provides the optimal user experience or if it is better to keep everything on one page. If such a journey makes sense, a drop-down menu would be required. We would appreciate expert advice on this.

#### 3. Renovate a Multi-Apartment Building

- Basic information and steps towards comprehensive renovation
- Financing options (subsidies)
- Types of services
- Calculator depending on budget
- Energy certifiers
- Renovation service providers list leading to the Contractors page
- Standardized contracts

#### 4. Renovation Service Providers

- Listing page: list with filtering by location
- Detail page for each contractor (Service description, standardized contract, contact form)
- Contact form linked to each contractor

#### **News and Advice**

- News listing
- Individual news page (categories: News, Public Calls, Advice, etc.)







#### **Contact**

- List of OSS with services, working hours, price list, and contact details
- Each with a contact form book an appointment

**Legal pages** (Legal, Cookie Policy, Error pages)

## What the Offer Should Include

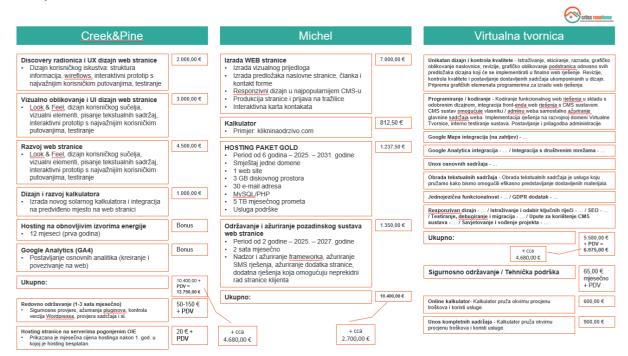
- Financial estimate for the development of the above-listed pages (please break down by phases)
  - The estimate may be +/- 15%. Please state the lower and upper range, or if this is not possible for certain elements, explain the challenge and provide a realistic range.
  - o Plugin costs should be listed separately (if used).
- Financial estimate for the development of the calculator
- Financial estimate for basic maintenance until September 2031 (basic hosting maintenance, plugin updates, etc.). Please provide the number of hours and price on a monthly/annual basis. All major developments or bug fixing will be requested separately. If allocation of hours for bug fixing is still expected, please specify your estimate on a monthly or annual level.
- Payment schedule
- References: at least 2 websites of similar complexity, ideally custom design and development on WordPress or another CMS
- Subcontracting: if you intend to use subcontractors, please specify which
- Process: please briefly describe your design, development, quality assurance, project management, and client communication process. It is important for us to be involved in all phases of the project and to be able to thoroughly test the website on a staging environment before launch.

Three offers have been received from the following companies:

- Virtualna tvornica
- Michel studio
- Creek & Pine



Based on the received offers, CGBC carried out an initial comparison of the bidding companies:



The final detailed comparison was carried out at the consortium level:

Feature	Creek & Pine	Michel Studio	Virtualna tvornica		
Custom dizajn i development na Wordpressu	$\checkmark$	$\checkmark$	$\checkmark$		
CMS	$\checkmark$	$\checkmark$	$\checkmark$		
Responzivan web	$\checkmark$	$\checkmark$	$\checkmark$		
Zeleni hosting	$\checkmark$	$\checkmark$	×		
Optimizacija performansi i praćenje Google ocjena	$\checkmark$	<b>✓</b>	×		
Povezivanje sa društvenim mrežama	$\checkmark$	$\checkmark$	$\checkmark$		
UX copywriting uključen u ponudu	$\checkmark$	$\checkmark$	×		
Dizajn svih važnih stranica i podstranica?	$\checkmark$	$\checkmark$	$\checkmark$		
Interaktivni prototip	$\checkmark$	×	×		
Feedback i iteracije	$\checkmark$	$\checkmark$	$\checkmark$		
Mobilni, desktop i tablet dizajn u ponudi?	$\checkmark$	$\checkmark$	×		
Staging	$\checkmark$	$\checkmark$	$\checkmark$		
Tehnička SEO optimizacija (za tražilice)	$\checkmark$	$\checkmark$	$\checkmark$		
Yoast plugin za SEO	$\checkmark$	$\checkmark$			
Zadovoljavajuće Google ocjene projekata	$\checkmark$	×	×		
Jednostavni branding u sklopu ponude	$\checkmark$	$\checkmark$	×		
Obrada dostavljenog sadržaja u sklopu ponude	$\checkmark$	$\checkmark$	×		
Kreiranje sadržaja u sklopu ponude	$\checkmark$	$\checkmark$	×		
Analytics	$\checkmark$	$\checkmark$	$\checkmark$		
GDPR dodatak	$\checkmark$	$\checkmark$	$\checkmark$		
Upute za korištenje CMS-a	$\checkmark$	$\checkmark$	$\checkmark$		
Project Management i QA	$\checkmark$	$\checkmark$	$\checkmark$		
Okolišne i etičke prakse komunicirane	$\checkmark$	×	×		
Podizvođenje	×	×	$\checkmark$		
Cijena razvoja weba SA PDV-om	€13.12	5 €7.813	€6.975	osnovna	
			€1.125	unos ponavljajuć	
			€750	kalkulator	
			€2.125	Mobilni dizajn	
			€625	Logo	
			€1.125	Isključivo uređen	
			€12.725		
Održavanje do 2031 s hostingom	€6.00	€5.288	€8.250	2000	
Ukupno sa PDV-om	€19.12	5 €13.100	€20.975		





By comparing the offers of the contractors presented above, and in line with the principle of ensuring the best value for the available budget, CGBC decided to establish cooperation with the company **Michel Studio**.

## 4. Technical information

# Main characteristics in the development of the website:

- Custom design
- Development using WordPress technology
- Domain: energetska-obnova-doma.hr
  - Although it was initially planned to obtain a free domain via Carnet, it
    was determined that such a domain can only be free if its name derives
    from the legal entity requesting it. Therefore, it was agreed with the
    company Michel Studio that the domain would subsequently be included
    in their offer.

Detailed explanation of why CGBC was not able to secure a free domain – copied email from Registar.hr and translated to English:

#### "Dear Sir/Madam,

Domain verification is carried out simultaneously with the registration process. Accordingly, the verification documents must be submitted through the registration interface available at the following link:

https://domene.hr/portal/register/info-free-hr

Furthermore, pursuant to Article 15 of the Ordinance, the domain name for legal entities must contain one of the following:

- the name registered in the competent register, or
- the abbreviated name registered in the competent register, or
- an acronym of the initial letters or syllables of a multi-part registered name.

In line with the above, the legal entity CROATIA GREEN BUILDING COUNCIL is not entitled to a free.hr domain under the name obnovadoma.hr.

However, in accordance with the Ordinance, the aforementioned legal entity is entitled to register free .hr domains such as: hszg.hr, hrvatski-savjet-za-zelenu-gradnju.hr, and similar names in line with the provisions.

Kind regards,"







# 5. Defining user experience, user journey, and website content

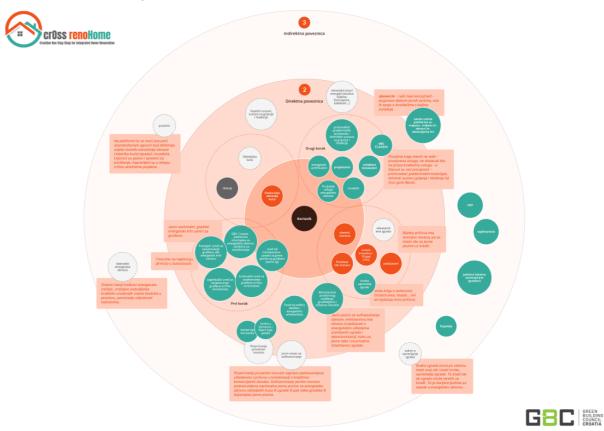
For the purpose of defining an individualized user journey for the target users of the Marketplace online tool (owners of family houses and multi-apartment buildings), CGBC and Michel Studio organized a "discovery" workshop. During the workshop, a stakeholder map was created, and the current energy renovation experience for citizens was further mapped.

In the "discovery" phase, such documents serve to understand needs, pain points, and context, which is why the Stakeholder Map and the User Experience Map will form the basis for designing the user journey on the website – the marketplace platform.

Partners were subsequently actively involved in elaborating the user journey, while the entire consortium has been actively engaged in the development of the website through the design tool **Figma**.

# 5.1 Stakeholder map

The stakeholder map was developed as the basis for the project's user journey. Annex 1 provides a more detailed overview in PDF format.









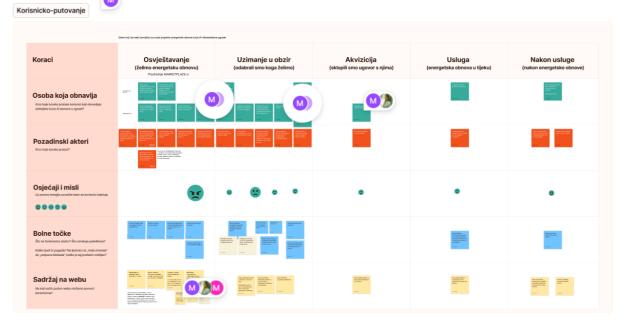


# **5.2 Customer experience map**

The Customer Experience Map is a tool that illustrates what citizens currently go through when seeking energy renovation services. It helps to understand customers' needs, obstacles, and emotions, and to translate them into the structure and content of a website that will make the renovation process easier for them.

The customer journey of the Marketplace platform (Annex 2) consists of the following categories, which were then taken into account when defining the structure of the website:

- Steps (Awareness, Consideration, Acquisition, Service, Post-service)
- Person carrying out the renovation
- Background actors
- Feelings and thoughts
- Pain points
- Website content



Customer experience map available in PDF with this report (Annex 2)

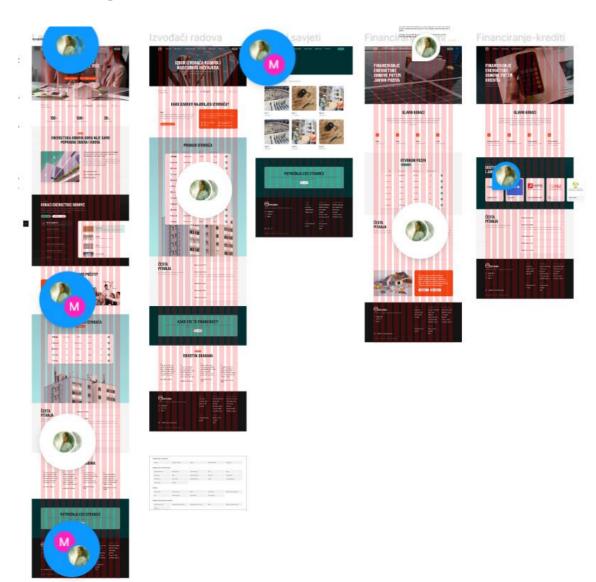




# 5.3 Final design of the customer journey, user interface design, website development, and launch in the test environment

The final development of the website includes the complete design and development of the homepage and all category pages of the Marketplace online tool. The website consists of the following pages:

- Homepage
- Family house
- Multi-apartment building
- Contractors
- News and advice
- Financing



Website development in Figma with final content for input



Additionally, to facilitate content entry for the design and development team, a copy deck (Annex 3) was created as a central repository for the website content, containing the final texts ready for upload to the website.

Komponenta	Сору	Komentari DOOR	Komentari GBC	Komentari KLIK	Odobreno?	
Header - nadnaslov	Cjelovita energetska obnova doma					-
Header - naslov	Vaš dom koji štedi energiju i pruža više					•
Header - opis	Na jednom mjestu okupljamo provjerene stručnjake i jasne smjernice za energetsku obnovu. Stvorite dom u kojem je zimi toplo, tjeti ugodno, računi niži, a zrak koji udišete zdrav i čist.					
Button	Obnovite obiteljsku kuću					•
Button	Obnovite višestambenu zgradu					•
Brojke	XXX obnovljenih višestambenih zgrada					,
_	XXX obnovljenih višestambenih zgrada					,
	do 60% niži troškovi režija					,
Zašto energetski obnoviti dom?	Zašto energetski obnoviti dom?					,
	Energetska obnova nije samo popravak zidova ili krova. Cilj je jasan: uz pametno planirane korake, stvoriti dom koji troši manje energije i koristi više obnovljivih izvora, poput sunčeve energije. To nije samo tehnički projekt — to je ulaganje u kvalitetniji, zdraviji i isplativiji način stanovanja.					•
	Prednosti obnove:  Niži troškovi režija – manje trošite, više štedite  Veća vrijednost nekretnine – vaš dom postaje atraktivniji i dugoročno isplativiji  Bolji životni uvjeti – zdraviji zrak, ugodna temperatura i manje vlage					
Koraci energetske obnove	Što vas čeka					,
	Koraci energetske obnove					•
	Bez obzira obnavljate li kuću ili zgradu, donosimo jasne smjernice.					•
Button	Obiteljska kuća					•
Button	Višestambena zgrada					•
Koraci / lista	1. Što želiš obnoviti			Kako se ponaša ova komponenta?		,
						,
oss	Trebate pomoć?					

Copy deck for the Marketplace (Annex 3)

The website is scheduled to be launched in several phases. In the first phase, it will be published with basic content on energy renovation of family houses and multi-apartment buildings, financing through public calls and banks, as well as news and advice, but without the list of contractors and service filtering options. These functionalities have been developed and are available in the "staging" environment, but they will not be accessible on the live domain until approval has been obtained from a sufficient number of contractors (ongoing).

The website will be accessible via a direct link in a testing environment, but will not be searchable until all functionalities are made available to citizens. The plan is for all planned functionalities to be accessible to citizens on the live website within the next four months.





# 6. Database – designers and contractors from the energy and financial sectors

At the current stage of development of the Marketplace platform, designers and contractors from the energy sector are not yet included in the publicly available part of the tool. Most designers and contractors have expressed the need to first gain insight into the appearance and functionalities of the website, as well as into how their profiles will be displayed. Once the website was completed and the design approved, meetings were planned with contractors, the Ministry of Physical Planning, Construction and State Assets, and representatives of the financial sector, including the Environmental Protection and Energy Efficiency Fund and banks. The purpose of these meetings is to establish a transparent framework of cooperation and to ensure alignment. Designers and contractors from the energy sector were mapped by the consortium partners in an Excel document (an image is shown below this text). Their data will be entered via the administrative interface and stored in the system backend. Upon each approval from the contractor sector or the financial sector, their profiles will be published on the Marketplace. The database initially included basic information required for each energy renovation service provider. An additional sheet was dedicated to provider verification, with defined specific criteria. The database was further developed and expanded in the following months as the project progressed.

The current status of the database for the reporting period is described below:

- Basic overview of GBC Croatia members (companies)
- Manufacturers of construction products
- Financial sector
- Contractors
- Energy certifiers

Each category follows the same data structure:

- Company name
- Type of service
- Experience in energy renovation
- Representative's name
- Contact email
- Website
- Registered office location (city/town)
- County of registered office





• Information on whether the company was contacted by the crOss renoHome team

During this period, the crOss renoHome team collected 549 contacts, of which 392 were contacted directly to verify their readiness to participate in the crOss renoHome online marketplace. Efforts in contacting, collecting data, and establishing cooperation will continue in the next reporting period.



Overview of the database table (the database is in Croatian due to the national target group)

### 7. Next activities

Planned activities in the upcoming period include finalizing the process of contacting contractors and holding meetings with financial institutions and the competent Ministry for the purpose of further alignment and implementation arrangements. In parallel, systematic population of the contractor category on the web platform will be carried out, enabling users to access a comprehensive and up-to-date overview of available services. Following the completion of this phase, a promotional campaign is planned, aimed at increasing public visibility and awareness of the functionalities and benefits of the Marketplace tool.











