



Deliverable 2.7 – Implementation of the Service Platform and Delivery (Prototype v.1)

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Short Description	This document provides an in-depth overview of the characteristics of the Admin and Visitor Applications and the Content Management System of CULTURATI.
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History of Changes			
Date	Version	Author	Remarks
08/05/2024	0.1	Santiago Rondón Galvis	First version
16/05/2024	0.2	Santiago Rondón Galvis	Revised after review
08/06/2024	1.0	Santiago Rondón Galvis	Revised after review

Executive Summary

This document provides a comprehensive analysis of the service platform's implementation, focusing on the Content Management System (CMS) and the Core Main Application System.

The CMS is integral to the project, facilitating content creation, organization, and management through a structured and role-based approach. It includes roles such as Administrators, Data Entry Operators, Content Creators, and Editors, each contributing to enhanced productivity and content quality.

The core of the platform consists of the CULTURATI Admin Application and the CULTURATI Visitor Application. The Admin Application equips administrative users with robust functionalities to manage navigation points, exhibition items, exhibits, facilities, sensors, and geospatial data. The Visitor Application aims to provide an immersive and personalized experience for visitors by allowing them to play games and create routes tailored to their interests and knowledge levels. This approach ensures that users receive relevant information while enjoying a dynamic and customized visit.

The document details how various components of CULTURATI work together to deliver a seamless and enriched user experience, highlighting the significant step towards enhancing user interaction, content management, and overall site engagement.

Table of Contents

Executive Summary.....	3
Table of Contents.....	4
1. Introduction	5
2. Content Management System	5
2.1 Administrator Role.....	5
2.2 Data Entry Operator Role.....	6
2.3 Content Creator Role	7
2.4 Editor Role.....	10
3. Core Main Application System	12
3.1 CULTURATI Admin Application	12
3.1.1. Functionalities.....	14
3.2 CULTURATI Visitor Application.....	17
3.2.1 Functionalities.....	18
Conclusion.....	23

1. Introduction

This document provides an in-depth overview of the characteristics of the Content Management System (CMS) when implementing the Wiki in the project and the Core Main Application System: Admin application and Visitor Application. It elaborates on the primary functionalities, detailing how the system facilitates entity creation on a map, entity and user management, route planning and navigation, games and routes for the users. It also includes how the system facilitates content creation, organization, and management. The CMS is designed with distinct roles to ensure a seamless workflow and to delegate responsibilities efficiently.

The roles within the system include Administrators, Data Entry Operators, Content Creators, and Editors, each with specific capabilities to enhance productivity and maintain content quality.

2. Content Management System

The enhanced XWiki application now features a robust and versatile content management system designed to streamline the creation and organization of information with distinct roles and functionalities.

2.1 Administrator Role

Administrators have the crucial role of creating and managing categories, setting up hierarchical levels, and organizing prompts to ensure a well-structured knowledge base.

List of created Categories

[Create Category](#)

Results 1 - 2 out of 2 per page of 15

Page 1

name	language	doc.author	_actions
Arts	English	CULTURATI E.U	Edit Delete select
History	English	CULTURATI E.U	Edit Delete select

Results 1 - 2 out of 2

Page 1

List of created Levels

[Create Level](#)

Results 1 - 2 out of 2 per page of 15

Page 1

name	language	doc.author	description	_actions
Beginner	English	CULTURATI E.U	Easiest level	Edit Delete select
Professional	English	CULTURATI E.U	AArnoldo 2	Edit Delete select

The following figure shows the prompts display in the Wiki, for the administrator role:

Visitor preference Prompt

Results 1 - 2 out of 2 per page of 10			
question	language	doc.author	_actions
¿Qué tan extrema será tu aventura?	Español	CULTURATI E.U.	Edit Delete select
Are you ready for your adventure?	English	CULTURATI E.U.	Edit Delete select

Results 1 - 2 out of 2

Page 1

Tags: [-]

Created by CULTURATI E.U. on 2023/12/03 13:04

2.2 Data Entry Operator Role

Data Entry Operators are empowered to generate and input items, laying the groundwork for comprehensive content. This user only has the function of creating Items; however, it is a very important role within the Wiki, since the questions and the Information Pieces are directly related to these, so it is mandatory to have Items within the Wiki in order for the rest of the interfaces to work correctly and the content to be structured correctly.

CULTURATI WIKI / DATA ENTRY OPERATOR MENU / DATA ENTRY OPERATOR

Data Entry Operator

Last modified by CULTURATI E.U on 2024/04/17 11:14

Name

Type the name of the Item.

Content Language

English ▼

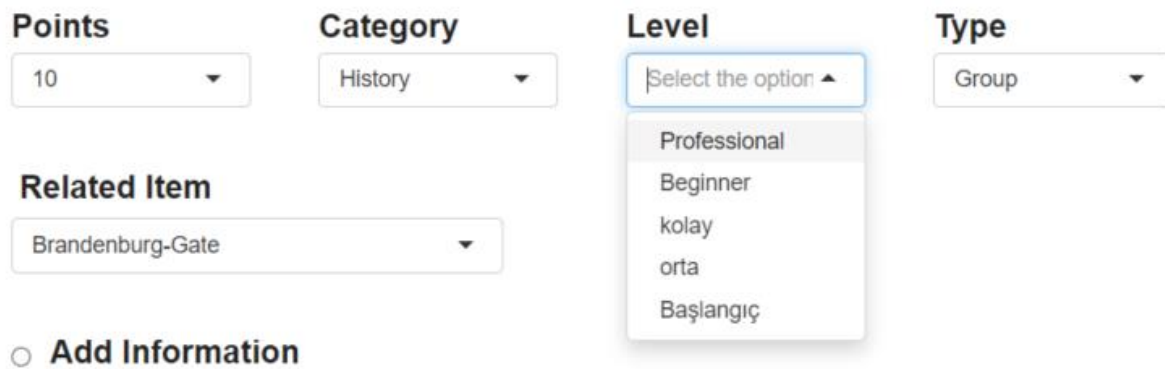
Description

X Copy Paste Undo Redo ABC Link Unlink Flag Image Grid List Omega Rotate Source

B I S I_x ¶ ≡ ☰ ☲ ☳ ⌘ ” Styles Format ?

2.3 Content Creator Role

Content Creators leverage these predefined categories, levels, and items to craft detailed questions and informative pieces, fostering a collaborative environment.



The screenshot shows a form for creating content. It includes four dropdown menus: 'Points' (set to 10), 'Category' (set to History), 'Level' (with a dropdown menu open showing options: Professional, Beginner, kolay, orta, Başlangıç), and 'Type' (set to Group). Below these is a 'Related Item' dropdown menu (set to Brandenburg-Gate). At the bottom, there is a radio button labeled 'Add Information'.

In the prototype of the first version of the Wiki, the role of content creator is the most relevant, since the questions created by this role will be the ones that will be displayed in the end user interface in the mobile application and in turn this content will be used by the AI module to create an ontology of all the Wiki content, which will be used to create a personalized path for each user when using the CULTURATI platform.

The content creator has the option to create two types of content:

Create your CULTURATI

Create content for a game ☐ Create content for a route ☒

Questions and answers: To do this, the content creator must fill out a form, selecting the categories, levels and related items according to the information that appears in the interface, since this information in the center will depend on what is entered by other users. In the system, for this first version of the Wiki, there are two types of questions: Multiple choice with single answer and true/false.

Question

Where is located Madrid?

Answer Type

Single answer

Add Choice

Please select the correct answer by clicking on the corresponding option.

- ☐ Turkey
- ☐ France
- ☒ Spain

To add more answer options, the user will only have to click on the 'Add Choice' button and the option that the user selects in the interface will be the answer that the Wiki will save as the correct option for the end user.

On the other hand, when the content creator wants a question that only has false/true as answer options, they can select it in the 'Answer Type' section and choose the relevant option. This will be displayed as follows:

Question

Does Argentina won the last World Cup?

Answer Type

True or False

Add Choice

Please select the correct answer by clicking on the corresponding option.

- ☒ True
- ☐ False

It is important that the 'Add choice' button is disabled when using this type of question, since in this option you only have two options.

Information Pieces: This section is the same as the questions section, where the user must fill out a form just like the previous one, although in this part, they will not have to enter questions or answers, here the biggest difference is that this content will only be shown to users who use the CULTURATI system, have selected the option of taking a specific route and not making a visit through questions and answers on the site. For instance, see the figure below.

Name

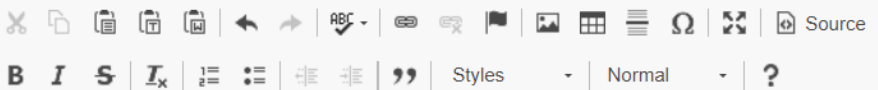
Category

Level


Type

Related Item

Add Information



It was a gate of the former Walls of Philip IV. It stands near the city center and several meters away from the main entrance to the Parque del Buen Retiro. The square is bisected by Alcalá Street, although the street does not cross through the monument, and it is the origin of the Alfonso XII, Serrano and Olózaga streets. Its name originates from the old path from Madrid to the nearby town of Alcalá de Henares.



body p

Finally, all the content created by this user can be viewed in the "Home Content Creator" menu:

List of created Questions

Results 1 - 1 out of 1 per page of 15

question	language	category	level	gameType	relatedItem	doc.author	_actions
Is the Brandenburg Gate located in Berlin, Germany?	English	World-War-II	Beginner	Individual	Brandenburg-Gate	CULTURATI E.U	<div> <div>Edit</div> <div>Delete</div> <div>select</div> </div>

Results 1 - 1 out of 1

Page 1

List of created Information Pieces

Results 1 - 2 out of 2 per page of 15

name	language	level	category	item	gameType	doc.author	_actions
Old Berlin	English	Beginner	World-War-II	ArcdeTriumph	Group	CULTURATI E.U	Edit Delete
Alcalá Gate	English	Professional	History	ArcdeTriumph	Individual	CULTURATI E.U	Edit Delete

Results 1 - 2 out of 2

Page 1

The content created within the Wiki will look like the following:

/ CONTENT / INFOPIECE / C6-ARCDTRIUMPH-HISTORY-PROFESSIONAL

C6-ArcdeTriumph-History-Professional

Last modified by CULTURATI E.U on 2024/05/20 17:06

NAME

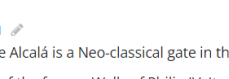
Alcalá Gate

INFORMATION

The Puerta de Alcalá is a Neo-classical gate in the Plaza de la Independencia in Madrid, Spain.

It was a gate of the former Walls of Philip IV. It stands near the city center and several meters away from the main entrance to the Parque del Buen Retiro. The square is bisected by Alcalá Street, although the street does not cross through the monument, and it is the origin of the Alfonso XII, Serrano and Olózaga streets. Its name originates from the old path from Madrid to the nearby town of Alcalá de Henares.

MULTIMEDIA



www.madrid.es


CREAT

2024-05-20T19:06


2.4 Editor Role

The last role is that of the Editor, this role plays a pivotal role in maintaining the quality of the Wiki by meticulously reviewing the content produced by Content Creators, offering constructive feedback, and either approving or rejecting the content based on set standards. This structured approach not only enhances efficiency and clarity within the Wiki but also ensures that the information remains accurate, well-organized, and easily accessible to all users.


It is important to note that whenever content is created on the Wiki, especially in the Questions and Information Pieces sections, all this content is created by default with the status of 'Not approved'.

GAMETYPE 


Individual

INFOPIECEID 


6

LANGUAGE 

English

APPROVED 

No

 0

Tags: [-]

Comments (0)

Attachments (0)

History





Information

The editor role is the only user who has the permissions to approve the content created by the other roles, especially the content creators and Data Entry Operators.

List of Unapproved Information Pieces

Results 1 - 5 out of 5 per page of 15

Page 1

name	language	level	category	item	gameType	doc.author	approved	_actions
Alcalá Gate	English	Professional	History	ArcdeTriumph	Individual	CULTURATI E.U	No	 Edit  Delete select
Anadolu Medeniyetleri Juliaopolis	Türkiye	orta	sanat	Brandenburg-Gate	Individual	AKR Creator_2	No	 Edit  Delete select

This user also has an interface with which he can see all the questions, Items and Information Pieces that have been approved or that are still in the "Not approved" status.

List of Unapproved Items


Results 1 - 1 out of 1 per page of 15

Page 1

name	language	description	doc.author	approved	_actions
Brand					
Brandenburg-Gate	English	The Brandenburg Gate is a neoclassical monument of the eighteenth century located in Berlin, built by order of the King of Prussia, Frederick William II, after suppressing the Dutch popular revolt and restoring the Orangeman power in the Netherlands.	AKR Operator_2	No	Edit Delete select

Results 1 - 1 out of 1

Page 1



Navigation

- > Content
- > Culturati
- > CULTURATI Wiki
 - > Administrator Menu
 - > Content Creator Menu
 - > Data Entry Operator Menu
 - > Editor Menu
 - Page Administration

CULTURATI CONTENT MANAGEMENT SYSTEM

CULTURATI Content Management System

Last modified by CULTURATI E.U on 2024/05/20 17:24

[Edit](#)
[Create](#)

Welcome

CULTURATI is a Horizon Europe RIA project that provides a global content platform that enables CCIs, creative professionals, and citizens to create content collectively for cultural heritage and arts across Europe. Consequently, CULTURATI curates content in its database and delivers the content in its database to end-user (consumers of cultural heritage and arts) in customized games (Q&A) and routes to attract and engage them with cultural heritage and arts more closely. CULTURATI can be used by venue and site-based CCIs (e.g. museums, art galleries, art fairs, biennial events, palaces, castles, historic town centres, cities), creative professionals (e.g. artists, authors, handcraft designers, freelancers, painters, film and animation producers) and citizens. Thus, CULTURATI will provide a platform for various groups in public (e.g. CCIs, social innovators, local, regional, and national authorities, sectoral partners, local SMEs, young people, minorities, disadvantaged groups and citizens) to include them in content creation for heritage and arts actively.

Explore

Both institutions and individuals involved in Cultural and Creative Industries (CCIs) and citizens can use CULTURATI. It can be used by venue or site-based CCIs such as museums, art galleries, art fairs, biennial events, palaces, castles, historic town centres, cities etc., CCI professionals such as artists, authors, handcraft designers, freelancers, painters, film and animation producers etc. and citizens to share knowledge involving cultural and artistic merit. Thus, CULTURATI will provide a platform for various groups in public to include them in content creation for heritage and arts actively.

0

Tags: [-]

Created by CULTURATI E.U on 2023/12/03 11:19

Up to this point, the Wiki in its first version is already working optimally and stores all the content generated by the content creators, fulfilling its expectations, which is the Content Management System of the CULTURATI project.

3. Core Main Application System

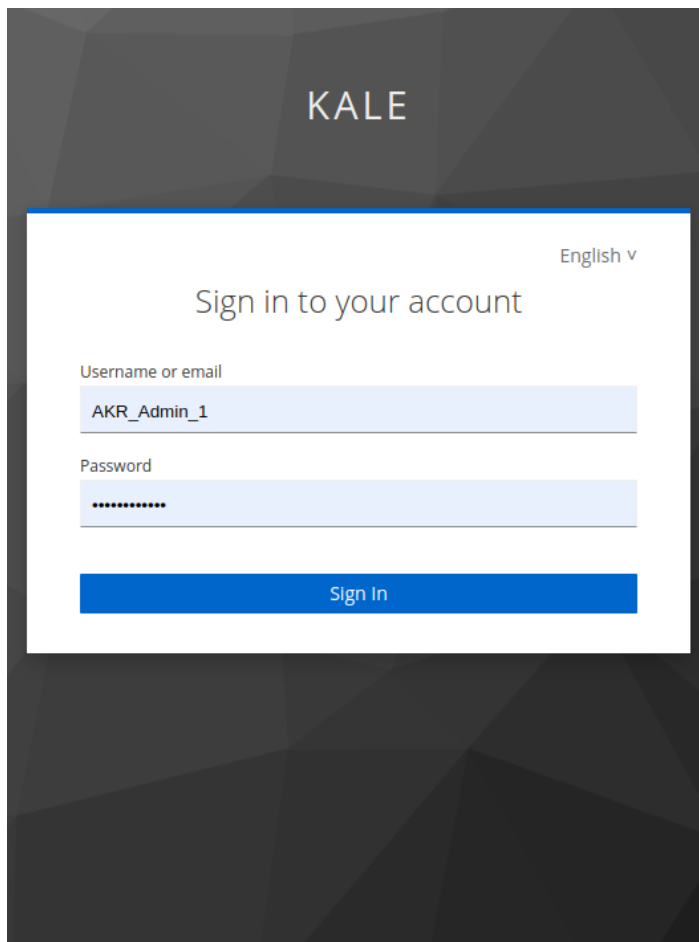
3.1 CULTURATI Admin Application

Admin application is accessed through the desktop web browsers. The typical URL pattern is: <tenantname>.admin.culturati.eu where tenantname is the name of the site which uses CULTURATI. Example tenant names are:

- kale: for Ankara Citadel (kale means citadel in Turkish)
- rmkm: for Rahmi Koc Museum

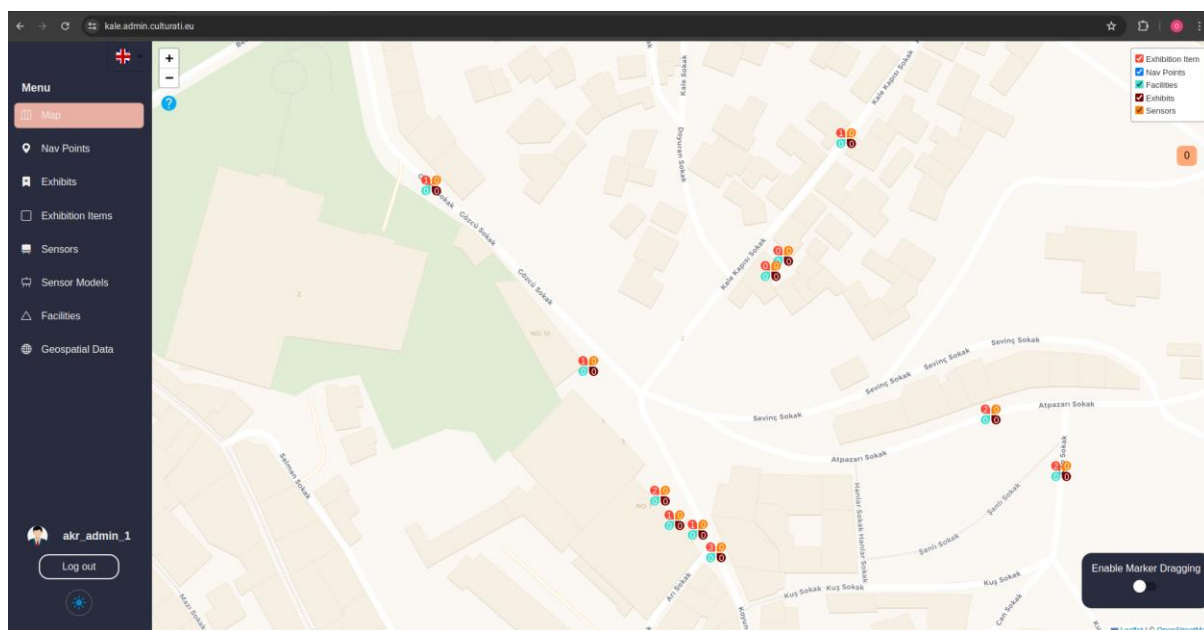
- Blenheim: for Blenheim palace.

To access the Admin application, you must enter your username and password:

A screenshot of the KALE Admin application sign-in form. The form is titled "KALE" at the top. Below the title, there is a language selector "English v". The main heading is "Sign in to your account". There are two input fields: "Username or email" with the value "AKR_Admin_1" and "Password" with masked characters "*****". A blue "Sign In" button is located at the bottom of the form.

These credentials will initially be provided by a system administrator. Once inside the system, the application will automatically detect the role assigned to the logged in account, depending on the role each user has, he/she will have different rights.

Below you can see the main view of the admin application.



3.1.1. Functionalities

Administrative users can do a variety of functions using the admin application:

- Create / Manage navigation points
- Create / Manage exhibition items
- Create / Manage Exhibits
- Create / Manage Facilities
- Create / Manage Sensors
- Upload Geospatial data.

3.1.1.1. Manage Navigation Points

Navigation points, or navpoints, are essential for guiding users effectively. These points are connected to various navigable objects such as exhibition items, exhibits, and facilities. When users need to be directed to any of these objects, the system will guide them to the corresponding navigation point.

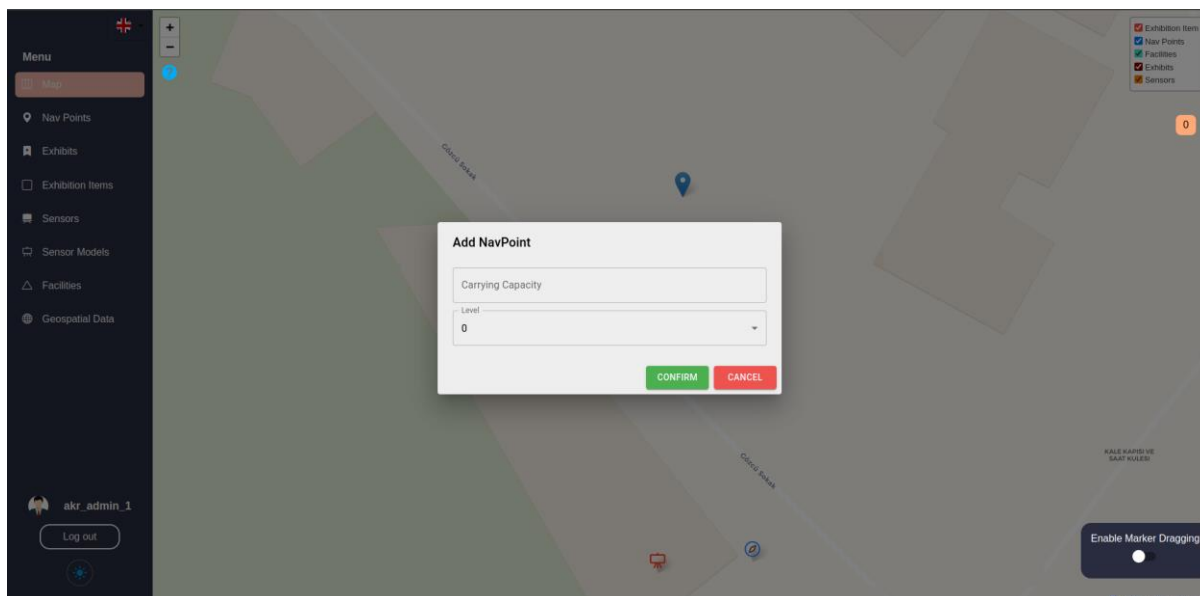
Given their crucial role in navigation, administrators must place these points thoughtfully and ensure that the correct objects are linked to the appropriate navigation points. Proper management of navigation points is vital for a seamless and efficient navigation experience.

Locating the nav point

Clicking on the map, the system will display a menu, which includes a button to create a nav point.

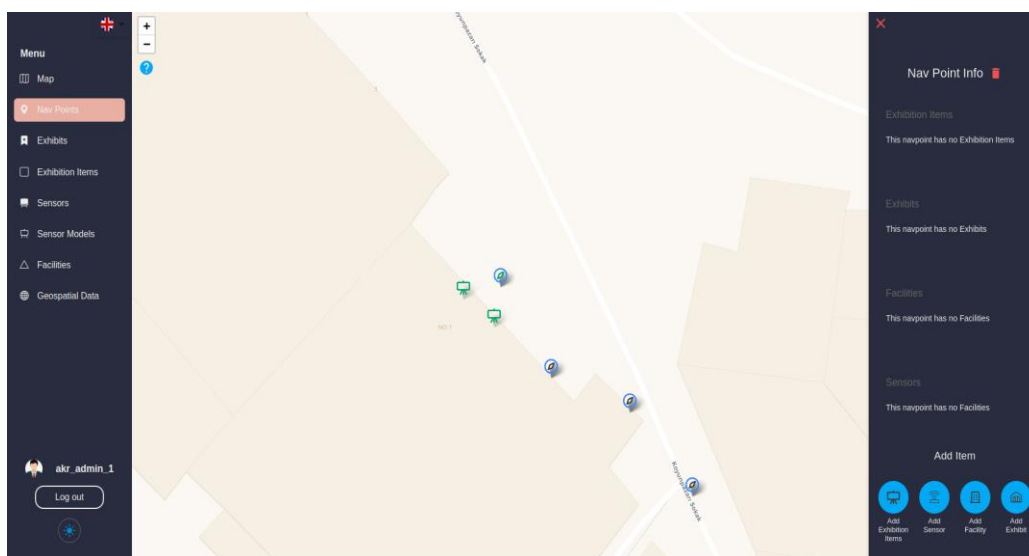
Creating the navpoint

The user can click this button, the system will display a dialog to the user as below. The user will be able to enter the details including carrying capacities and click the confirm button. Cancel button will cancel the action and close the dialog.



Managing a navpoint

Navigation points can be associated with various objects as previously mentioned. These linked objects are managed through the admin application. When a user clicks on a navigation point on the map, a panel opens on the right side of the screen. From this panel and the map, the user can link multiple objects to the selected navigation point effortlessly.

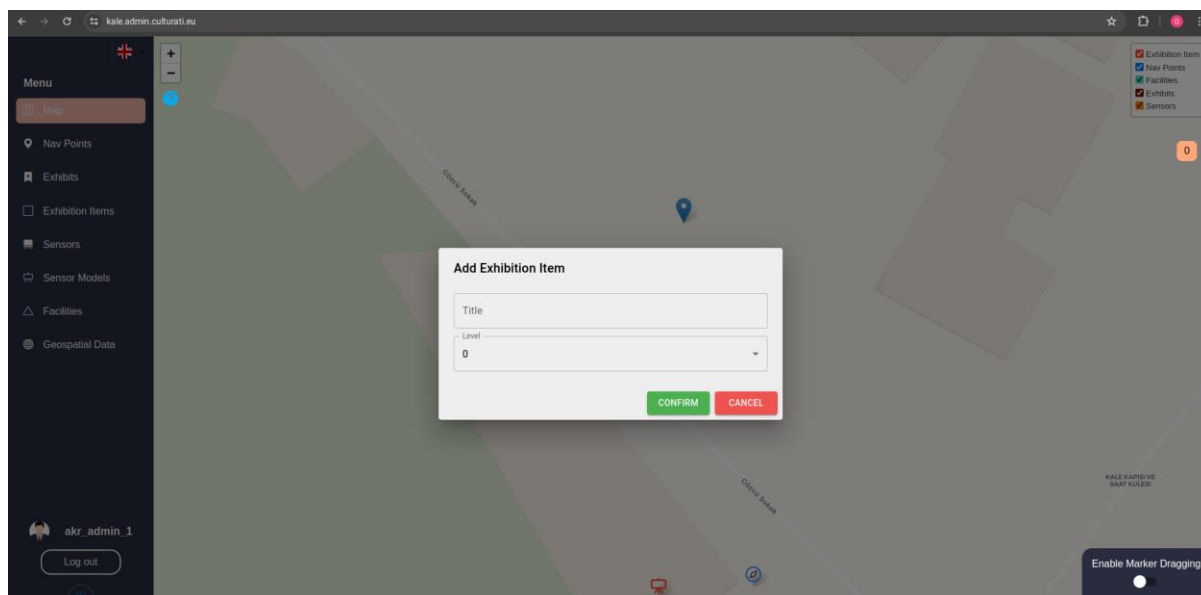


3.1.1.2. Manage Exhibition Items / Exhibits / Facilities / Sensors

Managing Exhibition Items

An exhibition item typically refers to any object, artifact, or location that a user might be interested in exploring while experiencing the site. These items can include artworks, historical artifacts, interactive installations, or specific points of interest within the exhibition space. Linking exhibition items to navigation points helps users easily find and engage with the exhibits they wish to see.

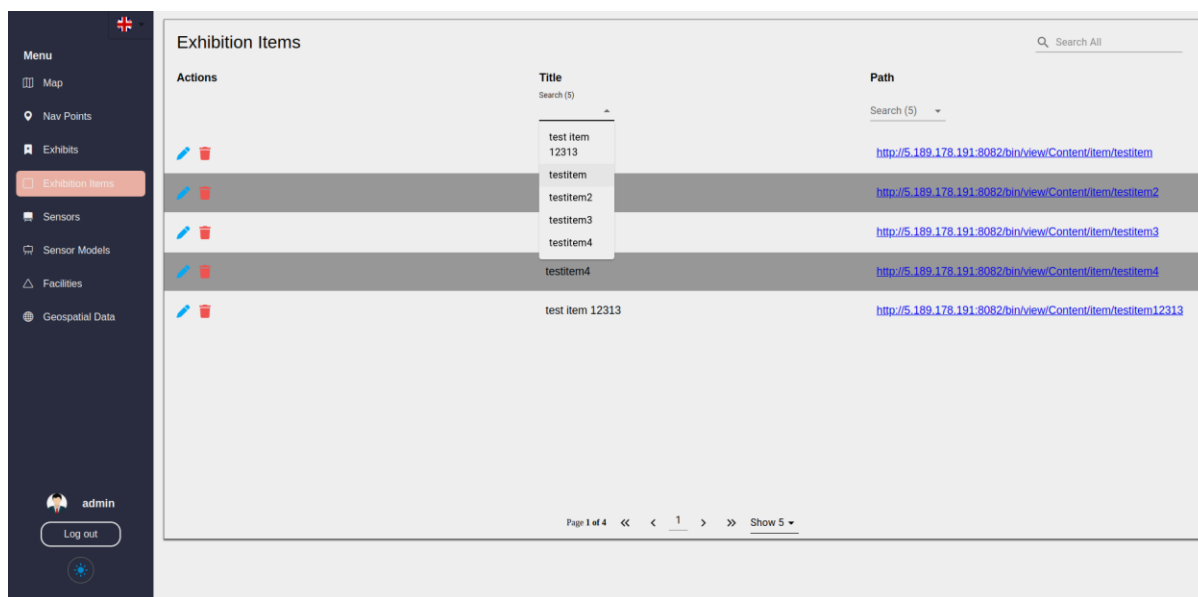
Exhibition items and other objects (exhibits, facilities sensors) can be created directly using the map. By clicking on the map, a dialog box will appear on the screen. This dialog offers options to create various types of objects. Selecting one of these options will open a corresponding creation dialog, where users can enter the details of the object. The object will then be created using the initially selected location and the information provided by the user.



Administrators can manage exhibition items, exhibits, sensors, and facilities through dedicated pages where these objects are listed in a table format. Each table provides functionalities to:

- Search: Quickly find specific objects by entering search terms.
- Delete: Remove selected objects from the system.
- Edit: Modify the details of selected objects.

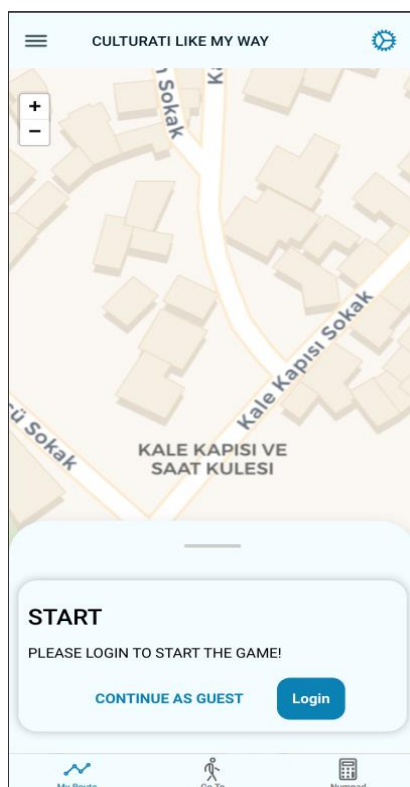
These management tables streamline the process of maintaining and updating the various objects within the system, ensuring accurate and up-to-date information is always available.



3.2 CULTURATI Visitor Application

Visitor application is accessed typically through the mobile web browsers. The typical URL pattern is: <tenantname>.culturati.eu where tenantname is the name of the site which uses culturati. Example tenant names are:

- kale: for Ankara Citadel (kale means citadel in Turkish)
- rmkm: for Rahmi Koc Museum
- blenheim: for Blenheim palace.



3.2.1 Functionalities

The visitor application is designed to provide users with a unique and immersive experience at the sites in the CULTURATI way. CULTURATI offers visitors the opportunity to explore the site and receive information tailored to their interests and knowledge level in various categories.

This personalized approach ensures that each visitor can enjoy a meaningful and engaging experience, discovering and learning about the exhibits in a way that suits their preferences and expertise. Using the CULTURATI visitor application, users can explore sites in an engaging and interactive way. They have the option to:

Play a Game: Navigate the site through a gamified experience with the help of Q&A games, making learning fun and interactive.

Create a Route: Design a personalized route that provides information tailored to their categories of interest.

This approach ensures that users receive relevant information while enjoying a dynamic and customized visit.

3.2.1.1 Playing a Game

The CULTURATI visitor application offers a gamified experience to make site exploration fun and engaging. Here is how the game works:

Starting the Game: Users can choose to start the game mode from the bottom drawer of the application. This mode transforms their visit into an interactive adventure.

Questions and Hints: The game presents users with a series of questions related to different exhibits and areas of the site. These questions are designed to educate and entertain, prompting users to explore specific items and seek out answers.

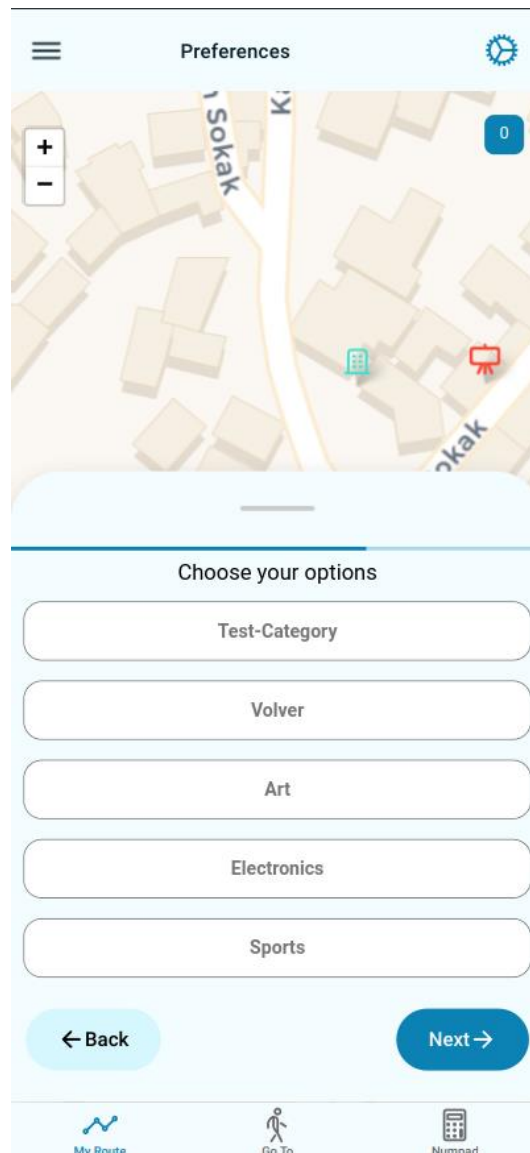
Collecting Points: As users answer the questions correctly, they earn points as rewards. These points can be accumulated to unlock further content, achievements, or other incentives.

Tailored Content: The game adapts to the user's interests and knowledge level, ensuring that the content and challenges are relevant and engaging. This personalization enhances the learning experience and keeps users motivated to continue exploring.

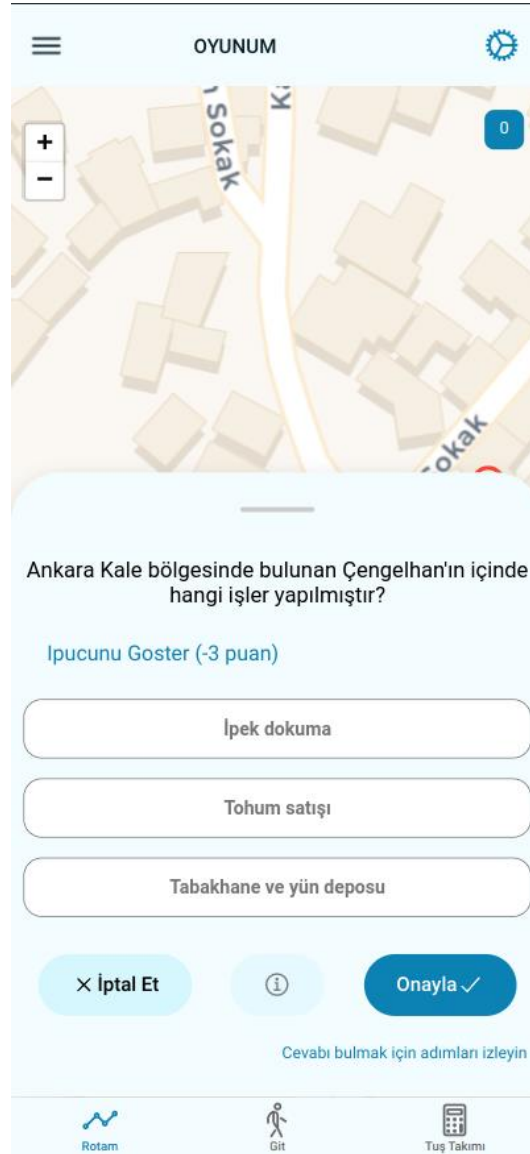
By playing the game, users not only enjoy a more interactive visit but also gain deeper insights into the exhibits and the site, making their visit both educational and enjoyable.

To start playing the game, the application prompts the user to select their category of interest and their knowledge level within that category first. Here's how the game progresses:

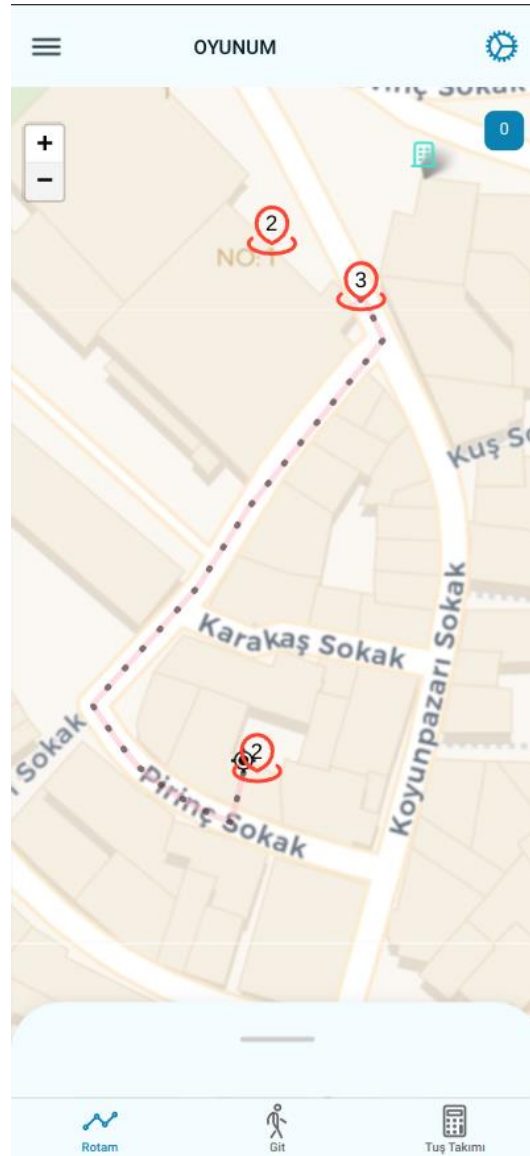
Category and Knowledge Level Selection: The application asks the user to choose the category of interest, such as art, history, science, etc., and their proficiency level in that category.



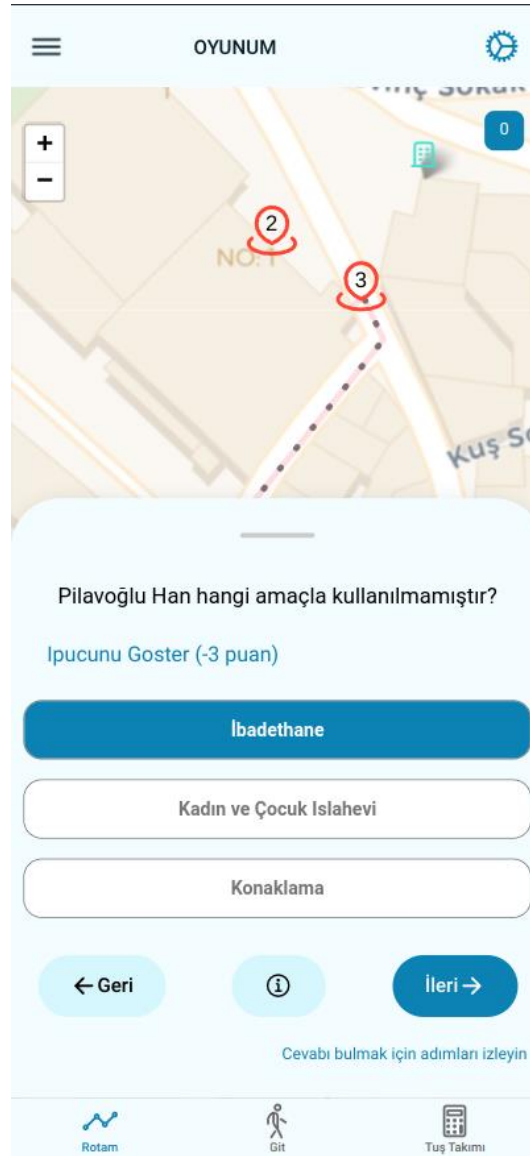
Question Prompt: Once the category and knowledge level are selected, the application presents the user with the first question related to that category. The question could be about a specific exhibit, artifact, or topic within the chosen category.



Navigation Assistance: The application draws a navigation route on the map leading to the location of the related item associated with the question. Users have the option to directly answer the question or navigate to the item on the map to find the correct answer while observing the exhibit.



Answering the Question: Users can choose to answer the question directly or take their time exploring the exhibit before providing their answer. This interactive approach allows users to engage with the content in a more immersive way.



By following this process, users not only test their knowledge but also have the opportunity to learn more about the exhibits and topics that interest them, enhancing their overall experience at the site.

3.2.1.2 Following a Route

The application also offers an option to follow a route based on the preferences (categories and levels) of the visitors. These routes are curated paths that guide users through a sequence of exhibits and areas within the site. The interactive map within the application helps users navigate the routes. It provides real-time updates on their location and directs them to the next point of interest by offering customized information about the places and exhibits on site.

Conclusion

The implementation of the Content Management System (CMS) with the Wiki has introduced a robust and efficient framework for content creation, organization, and management by delineating specific roles: Administrators, Data Entry Operators, Content Creators, and Editors. This system ensures a structured and collaborative approach to managing content.

Administrators establish the foundational structure, Data Entry Operators populate the database with essential items, Content Creators generate detailed and informative content, and Editors uphold quality standards through meticulous review and feedback. Similarly, the CULTURATI ecosystem offers both visitors and administrators a comprehensive and dynamic experience.

During the prototype development, user training sessions were organized to help users (content creators, administrators, etc.) understand how to use the system. These training sessions ensured that users benefited from the project to the fullest extent and had a smooth experience. These training sessions will continue as the prototype evolves. The details for the tasks carried out are reported in Deliverable D3.3 Training Report – Türkiye, Deliverable D3.4 Content Report 1 and Deliverable D3.5 User Testing Report.

Through the CULTURATI Visitor Application, users embark on a gamified journey, selecting their interests and knowledge levels to explore exhibits in an interactive and engaging manner. With personalized questions, navigation assistance, and rewards for correct answers, users enjoy a tailored experience that enhances their understanding and enjoyment of the site. Additionally, the application offers curated routes based on the visitors' preferences, guiding them through a sequence of exhibits and areas as they continue to use the application. The interactive map provides real-time updates on their location and directs them to the next point of interest by offering customized information about the places and exhibits on site.

Meanwhile, the Admin Application empowers administrators to efficiently manage exhibition items, exhibits, sensors, and facilities through intuitive listing and editing functionalities. Together, these applications create a symbiotic relationship, ensuring seamless site exploration and management within the CULTURATI ecosystem.

The CULTURATI's Visitor Application was moved to the live environment and made ready for user access on 22 May 2024 at the Ankara Citadel. The first tests were conducted on site by the project team members. After addressing initial problems and making improvements, the second tests were conducted on 6 June 2024 by the team members. The CULTURATI prototype v1 is available for users starting on 8 June 2024 at the Ankara Citadel to the experts.

As users begin to use the prototype, continuous improvements will be made by monitoring their feedback. In the following days, data collection from experts and users at the site will start. User tests and system tests are a continuous process as part of our project's methodology during the testing and validation phases to ensure the functionality and reliability of the prototype. Feedback obtained during these processes will be evaluated to address issues and aim for a smooth user experience. The survey instrument includes questions from the System Usability Scale and will be utilized to understand users' experiences, with feedback from 1600 users at the pilot sites of CULTURATI in Türkiye.

Maintenance plans were created to ensure the system remains up-to-date and operational. These plans include regular backup processes, security updates, and performance enhancements.