



Mediterranean practitioners' network & capacity building for effective response to emerging security challenges

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D1.6 MEDEA collaboration platform

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Abstract

The current document is the deliverable for task 1.6 which requires the development and deployment of a collaboration platform to be used by the MEDEA network of professionals. A suitable collaboration platform has been identified to support all the requirements set forth by the project and has been deployed at the KEMEA premises.

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Statement of originality

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Executive summary

The MEDEA project aims to establish a multi-disciplinary network of security practitioners in the Mediterranean and Black Sea region. This network will be able to exchange ideas on emerging security challenges and promote the development of security-related innovations. To enable the network to realise a high level of collaboration in order to achieve its goals a collaboration platform is needed.

The collaboration platform should allow the professionals to easily exchange information between themselves and also to be a repository of information that will be added. The project deliverable D1.6 is developed to ensure that all the necessary requirements are identified and implemented in the platform.

The requirements provided in the project include the ability of the professionals to create and manipulate articles, blogs and wikis, as well as engage in discussions inside forums. Security professionals can also comment on various articles and blog entries and can also search for information using tags placed on the content.

The collaboration platform was built using the TikiWiki Content Management System software and was deployed on the KEMEA premises. The platform supports all the requirements set forth by the project and has been configured to ensure the efficient exchange of information from the security professionals that will use the platform during the project life and after the project has completed.

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Acronyms

Acronyms used in this document and needing a definition are included in the following table.

Acronym	Definition
CoP	Community of Practitioners
LEA	Low Enforcement Agencies
NGO	Non Government Organisations
POPD	Protection of Personal Data
SSL	Secure Socket Layer
CMS	Content Management System
LTS	Long Term Support

Definitions

Concepts and terms used in this document and needing a definition are included in the following table (Table 2).

Concept / Term	Definition
CMS	A content management system (CMS) manages the creation and modification of digital content. It typically supports multiple users in a collaborative environment. Most CMSs include Web-based publishing, format management, history editing and version control, indexing, search, and retrieval.

1 Introduction

One of the four main actions of the MEDEA project is the establishment and operation of a multi-disciplinary network of security practitioners across the Mediterranean and Black Sea region. These practitioners will have to communicate ideas and document their findings throughout the project life and after the project has completed. To accomplish this, a collaboration platform will need to be developed with a specific set of capabilities that can help the practitioners communicate more effectively. The collaboration platform will be installed in KEMEA's owned equipment and EUC will reconfigure and optimise it as required to address the network member's requirements through a support team.

The first part of this document will present the requirements that were identified in the MEDEA grant agreement and were specified under work package 1. After the requirements analysis, the document will then present the proposed solution and implementation of the collaboration platform. The document then describes how the chosen collaboration platform fulfils all the requirements and how end-users may use the collaboration platform to perform all of the tasks needed by the project.

2 Requirements Analysis

The main features of the collaboration platform are defined in the official agreement document as part of Work Package 1. The development of the collaboration platform is defined as Deliverable 1.6.

Based on the information provided by the grant agreement, the requirements set for the collaboration platform are as follows:

- a. End-users need to be able to write articles in the platform where important information can be documented for other users to read.
- b. Each user may build a weblog (blog) where frequent additions to the blog may fuel discussions between participants.
- c. A document library should also be provided so that end-users may upload new files and at the same time they can download files that are on the platform.
- d. Wiki capabilities will allow participants in the collaboration platform to build scenarios or generate knowledge by shared participation in the wiki page.
- e. The collaboration platform should allow any participant to comment or react to the various content found on the platform.
- f. Content should be searchable with the ability to split content into categories and the use of tags to search for specific information.
- g. Users can also specify content as featured content so that it can be more prominent for other participants to view.
- h. The platform should provide an area where events can be added, and finally,
- i. The platform should provide the end-users with private messaging services.

2.1 User definitions

The users of the collaboration platform should be formally specified to ensure that each type of user has specific permissions on the platform and its content. The following table (Table 3) provides a list of all the actors that would be using the collaboration platform.

Actor	Description
System Administrator	A person who manages and maintains the operation of the collaboration platform and maintains the content in the platform
Collaborator	A person who can provide content in the platform in the form of files, articles, blogs entries, wiki contributions, event definitions, comments, or reactions
MEDEA-IT	The IT command & control information system administrator who maintains the correct and secure operation of the collaboration platform

3 Implementation

After reviewing the requirements set forth by the project description it was decided that a well-established collaboration platform should be used that could facilitate all the needs of the project. The platform chosen as the best solution is the TikiWiki™ CMS groupware platform [RD.2].

3.1.1 Platform security

The platform was installed on the KEMEA premises and has been secured using SSL encryption from the LetsEncrypt™ open certification authority [RD.3]. The TikiWiki™ version selected was the 18.3 LTS version to ensure the operational stability of the platform for the life of the project.

User registration will be done manually and only after determining the identity of the user. This is done in order the information available on the platform will be secure and protected from outside access. Strong passwords will be required, and users will need to frequently change their passwords to ensure that no brute force attacks can allow outsiders access to the data.

3.2 TikiWiki CMS

The TikiWiki™ platform was first established in 2002 and has been actively been developed ever since for the past sixteen years. The last LTS stable release of the platform was released in January 2018. TikiWiki™ is developed as an all-in-one solution with all options available for the end-user at the time of release rather than the common extension model that is being used by most other CMS platforms. This all-in-one solution improves the upgradability of the platform since each upgrade will automatically upgrade all the parts of the platform rather than just the core. Extension-based solutions would upgrade the core and then each extension would need to be updated separately leading to core-extension incompatibilities and loss of functionality.

3.3 TikiWiki Features

TikiWiki™ is built on four major components, namely content creation and management, content organization and navigation, communication and administration. A TikiWiki™ installation allows an administrator to configure various plugins that can enable all of the required features that the project has identified in the project description. TikiWiki™ can provide an end-user with article management, blog creation and manipulation, wiki capabilities, and file management. The CMS can also provide categorization facilities, tagging of content, and provide ways to display or search for content within the system. Finally, the system can provide users with communication capabilities through the use of personal messaging

3.3.1 Articles

Articles in the collaboration platform are found on the main menu to the left of the screen. As shown in Figure 1, the menu presents the Articles Home, the List Articles and the New Article options.

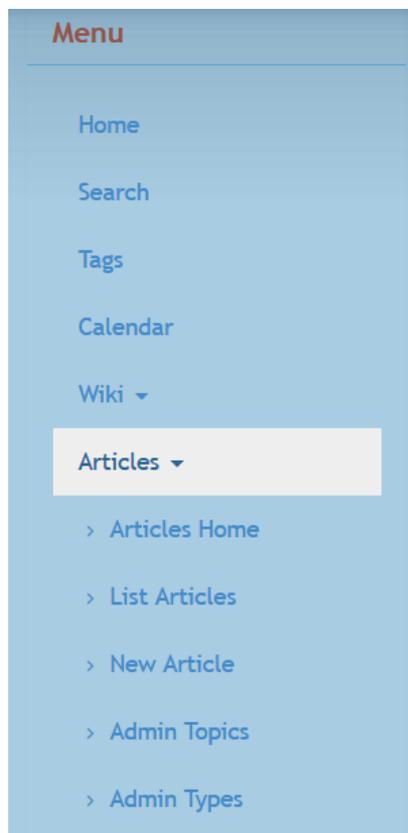
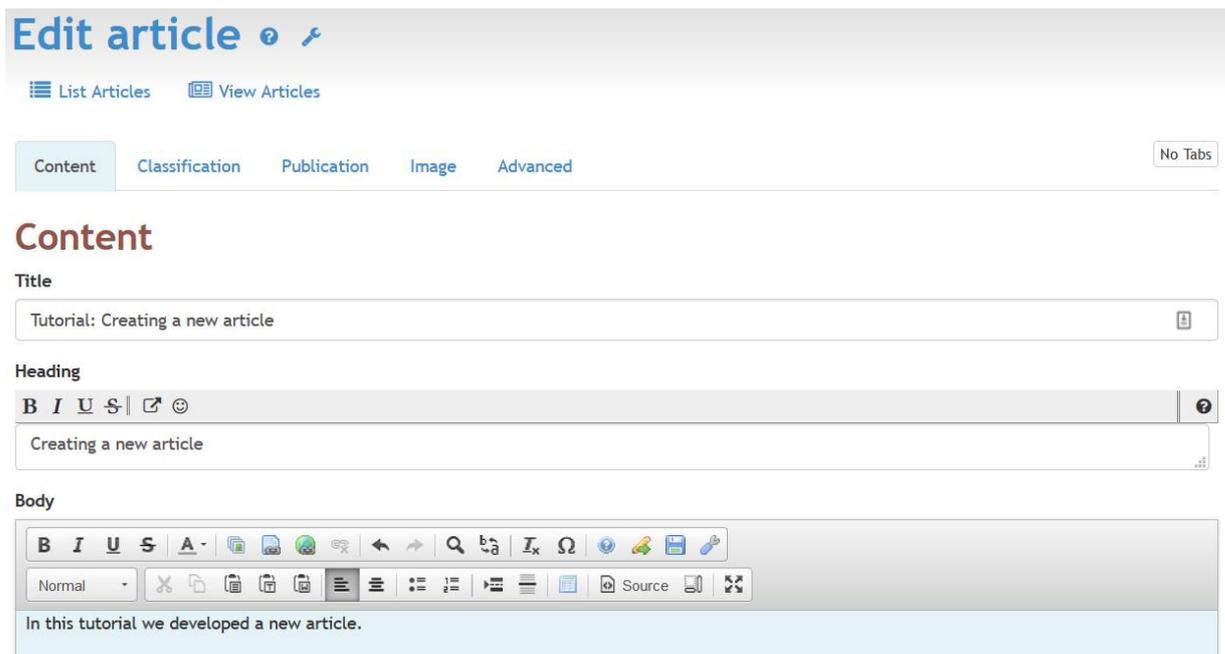


Figure 1. Articles Menu

When a user wants to create a new article, the New Article menu item is selected, and the Edit Article form appears. The user can then fill in the Title of the article, the Heading and the body of the article as shown in Figure 2.



Edit article

List Articles View Articles

Content Classification Publication Image Advanced No Tabs

Content

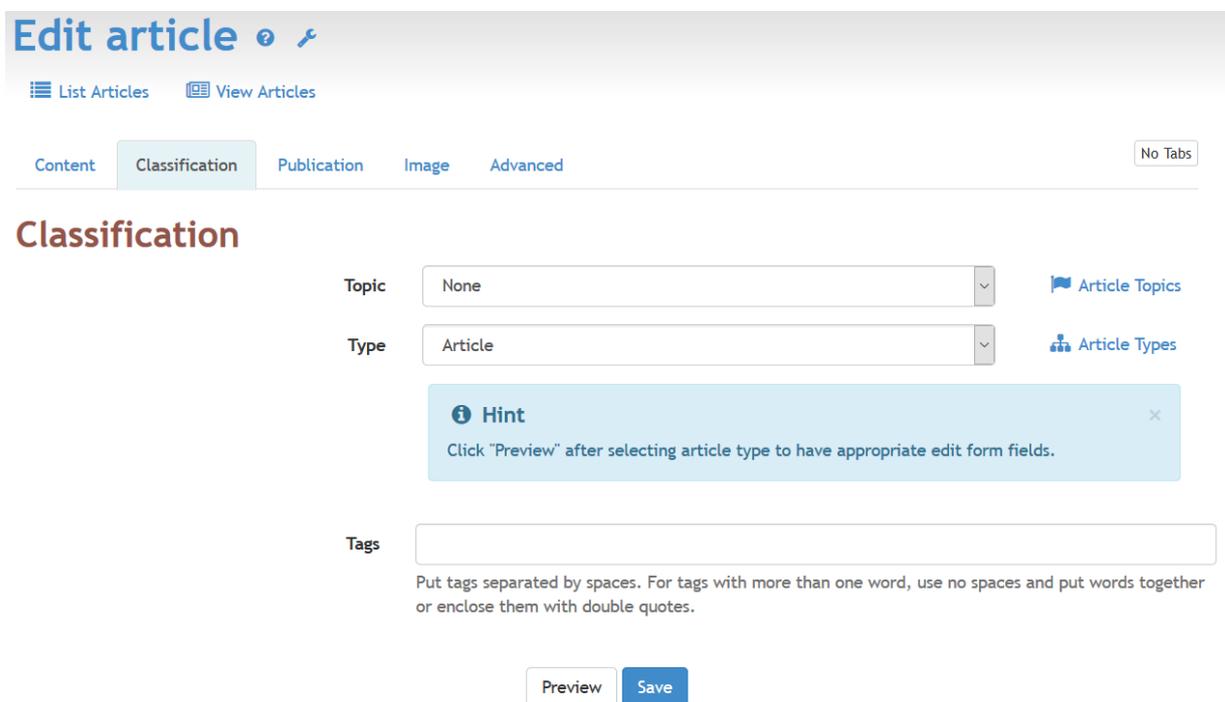
Title
Tutorial: Creating a new article

Heading
Creating a new article

Body
In this tutorial we developed a new article.

Figure 2. Creating a new article

The user can then select the classification of the article as well as entering a number of tags that can be used to filter the articles when someone is browsing through the articles (Figure 3).



Edit article

List Articles View Articles

Content Classification Publication Image Advanced No Tabs

Classification

Topic: None [Article Topics](#)

Type: Article [Article Types](#)

Hint
Click "Preview" after selecting article type to have appropriate edit form fields.

Tags:

Put tags separated by spaces. For tags with more than one word, use no spaces and put words together or enclose them with double quotes.

Preview Save

Figure 3. Article Classification and Tags

The user can also choose when the article should be published and if it would expire (Figure 4).

Edit article

[List Articles](#) [View Articles](#)

Content Classification **Publication** Image Advanced No Tabs

Publication

Published
If checked, the article is published.

Author name (as displayed)

User (article owner)

Publish Date Europe/Bucharest

Expiration Date Europe/Bucharest

Figure 4. Article Publish and Expiry Dates

Users can select the Articles Home or the List Articles menu items to view a list of all the articles that are published in the collaboration platform. Users can search for specific articles, or filter them by Type, or using a date range (Figure 5).

Articles

[+ New Article](#) [View Articles](#) [Article Topics](#) [Article Types](#)

Article Type

Date From

Date To

Displayed rows

<input type="checkbox"/>	Title	Id	Type	Topic	Publish Date	User	Reads	Size	Published	
<input type="checkbox"/>	Tutorial: Creating a new article	1	Article		2019-01-20	MEDEA-IT	0	49 b	y	

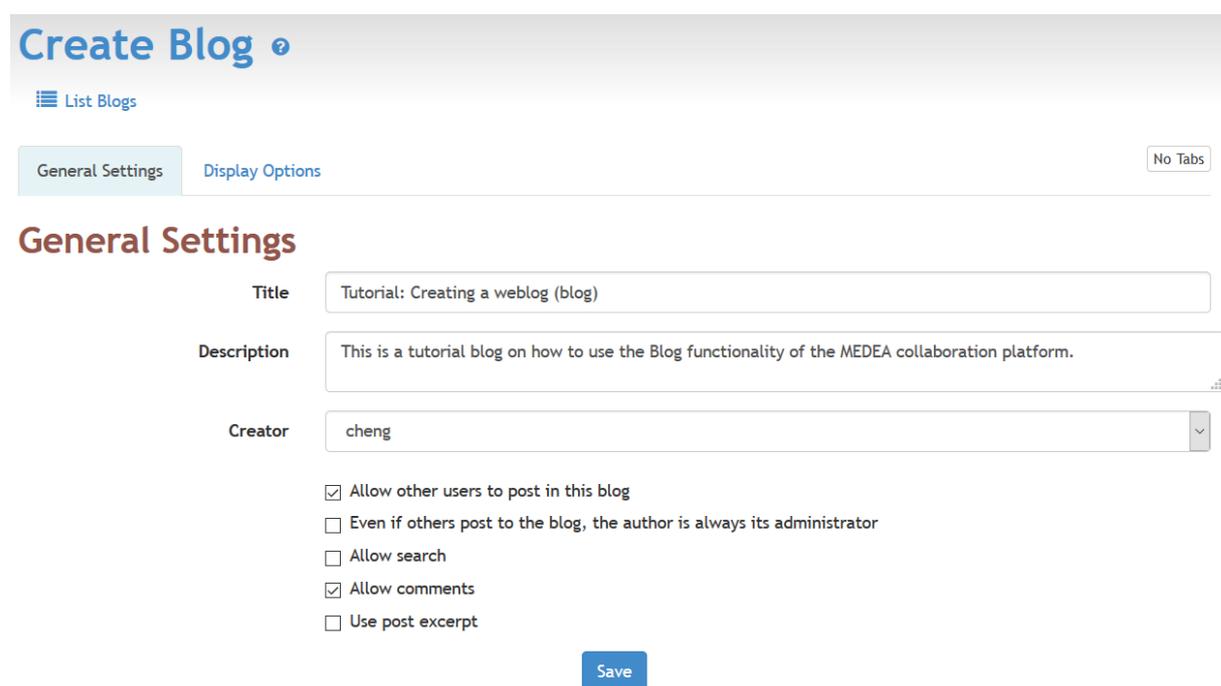
Figure 5. List Articles Menu Item

3.3.2 Weblogs (blogs)

Weblogs, or blogs as most people have come to know them, are websites that are used by a person to convey some sort of knowledge through frequent posts. In the MEDEA collaboration platform, users may create a blog for specific tasks or ideas and then they can post new information on the blog whenever they want to.

To create a blog, the user opens the Blogs menu item and from there the Create Blog option. In the options the user can enter the title of the blog, a small description of the information that will be posted in the blog and if other users can post on the same blog and if they can comment on the blog posts (Figure 6).

After the blog is created users can start posting new information on the site through blog posts (Figure 7). Each blog post will be listed in the blog in descending order of the publication date. A user can click on the List blogs option to see all the blogs available and then after selecting the required blog the user can see that blogs posts.



Create Blog

List Blogs

General Settings Display Options No Tabs

General Settings

Title Tutorial: Creating a weblog (blog)

Description This is a tutorial blog on how to use the Blog functionality of the MEDEA collaboration platform.

Creator cheng

- Allow other users to post in this blog
- Even if others post to the blog, the author is always its administrator
- Allow search
- Allow comments
- Use post excerpt

Save

Figure 6. Create Blog Menu Item

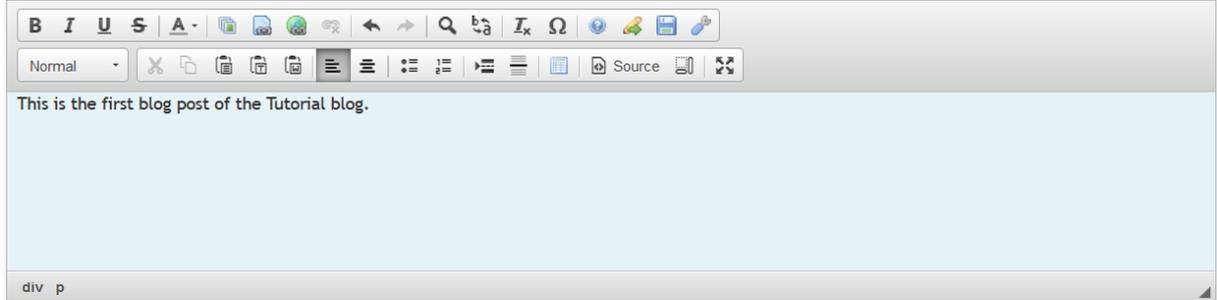
New Post - Tutorial: Creating a weblog (blog)

[View Blog](#)

Title

Tutorial: Creating the first blog post

Body



This is the first blog post of the Tutorial blog.

div p

Private

Publish Date 20 January 2019 at 14 47

Tags

Figure 7. Creating a blog post

3.3.3 Forums

In addition to blogs, users have the option to communicate using forums. In forums users enter a topic and then people discuss that topic through asynchronous communication comments on the forum topic. Figure 8 shows the first forum that is available in the collaboration platform but there will be additional forums that will reflect various parts of the project discussions.



Figure 8. Forums

3.3.4 Wikis

The last main part of the collaboration platform is the creation and manipulation of wikis. Wikis are similar to blogs in that they use collaborative distribution of knowledge in a common space. The main difference between a wiki and a blog is that in a blog the posts remain as they were when they were first entered and new information is in the form of a new blog post. In a wiki though, the information is shown as a small website where collaborators can manipulate the pages to edit them and present the current information regarding the subject.

To create a wiki page the user needs to select the Create a Wiki page option from the menu and then provide a name for the page (Figure 9). After that the user can edit the page and enter any information required as one would do in creating a webpage (Figure 10). Pages can be linked between then and links can move a reader from one page to another.

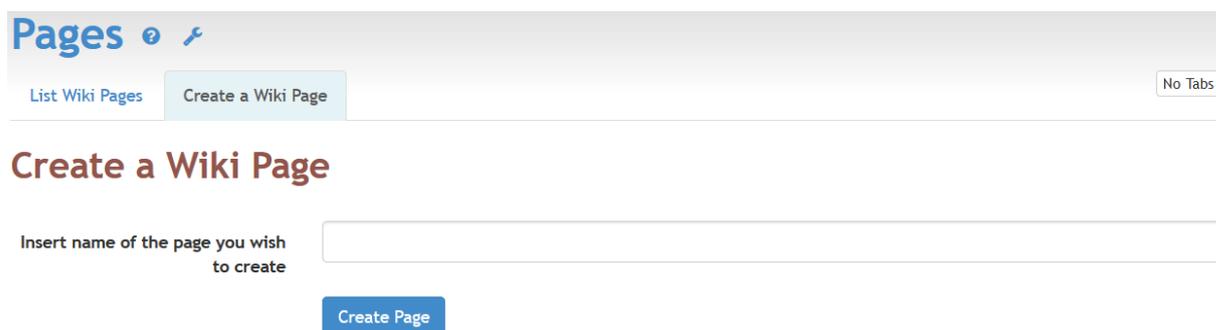
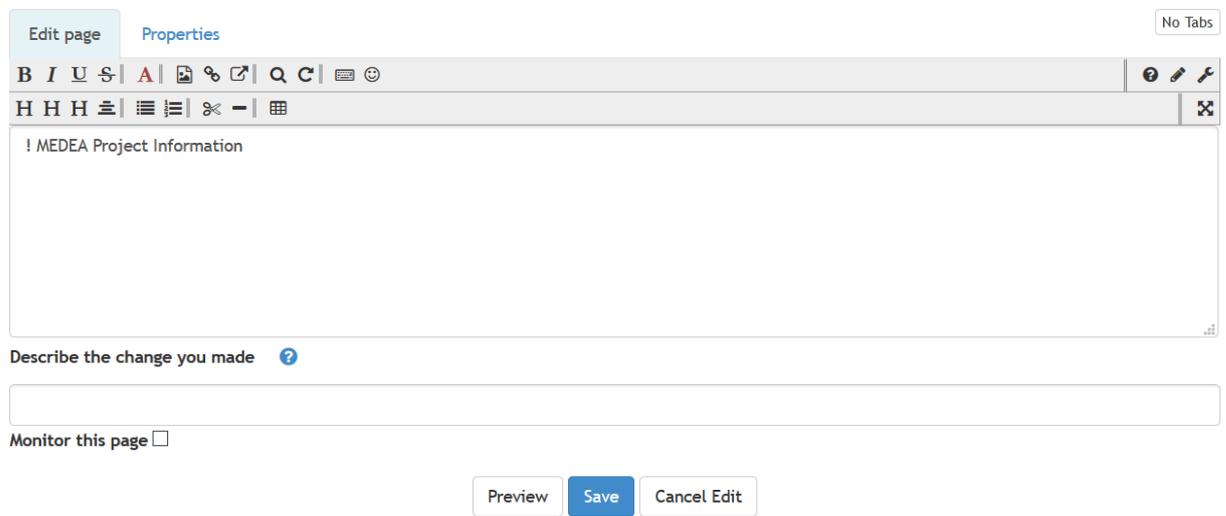


Figure 9. Creating a Wiki page

Edit Project Information



The screenshot shows the 'Edit Project Information' page in the MEDEA collaboration platform. At the top, there are two tabs: 'Edit page' (selected) and 'Properties'. To the right of the tabs is a 'No Tabs' button. Below the tabs is a rich text editor toolbar with icons for bold, italic, underline, strikethrough, text color, background color, link, unlink, search, undo, redo, list, and table. The main editing area contains the text '! MEDEA Project Information'. Below the editor is a text box labeled 'Describe the change you made' with a help icon. At the bottom left, there is a checkbox labeled 'Monitor this page'. At the bottom center, there are three buttons: 'Preview', 'Save' (highlighted in blue), and 'Cancel Edit'.

Figure 10. Editing a Wiki page

4 Conclusions

In this deliverable we had to provide all the necessary information on the selection, implementation and use of the collaboration platform for the MEDEA project. The platform chosen was the TikiWiki™ CMS platform which can support all the requirements set forth by the MEDEA project.

The collaboration platform has been deployed at the KEMEA facilities and it is being supported by the KEMEA information technology officers while the administration of the TikiWiki™ platform is ran by the European University Cyprus partner. The platform has been secured through the use of SSL certificates to encrypt all incoming and outgoing traffic while users will be given passwords that are difficult to decrypt. All users will be added in the system and frequent checks will ensure that the platform is secure.

5 References

5.1 Applicable documents

The following documents, of the exact issue shown, form part of this document to the extent specified herein. Applicable documents are those referenced in the Grant Agreement or approved by the Approval Authority. They are referenced in this document in the form [AD.X]:

Ref		Date
[AD.1]	DoA	12/06/2018

5.2 Referenced documents

The following documents, although not part of this document, amplify or clarify its contents. Reference documents are those not applicable and referenced within this document. They are referenced in this document in the form [RD.X]:

Ref	Title
[RD.1]	MEDEA collaboration platform website (https://tikiwiki.medea-project.eu/)
[RD.2]	TikiWiki website (https://tiki.org/HomePage)
[RD.3]	Let's Encrypt website (https://letsencrypt.org/)
[RD.4]	Leuf, B., & Cunningham, W. (2001). The Wiki way: quick collaboration on the Web.
[RD.5]	Godwin-Jones, R. (2003). Blogs and wikis: Environments for online collaboration.
[RD.6]	Laporte, M. (2008, September). TikiWiki CMS/groupware: when a Wiki is not enough. In Proceedings of the 4th International Symposium on Wikis (p. 6). ACM.
[RD.7]	McGeehon, C. (2014). A Wiki Way of Communication. OLA Quarterly, 16(3), 7-10.