usBIM.resolver

User Manual

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1 usBIM.resolver

usBIM.resolver is a cloud service used to plan, schedule and monitor resolution activities on models or technical documents.

Designed for Topic Management, it allows you to create and manage disparate tasks and issues that arise at every stage of the construction project and helps you always meet deadlines whether it's a team project or a task list.

The entire design team is involved in identifying problems, finding solutions and making changes, with the possibility of leaving notes on projects and activities.

usBIM.resolver allows you to monitor the status of an activity ensuring the correct management of the participants and compliance with the pre-established deadlines by constantly monitoring all the information useful to optimize the process.

The first benefit is the reduction of overproduction and redundancy of activities and data, as only the required process is produced at the time and in the necessary quantity.

The integration of a project management methodology with the Kanban method provides a powerful but intuitive tool to govern the development of a project through the improvement of work processes, through the creation and management of Topic and Task.

2 Definitions of Topic, Task and Collection

2.1 Topics

A Topic is simply the subject of a discussion.

With a Topic, you can easily represent and visualize the lifecycle of a task from start to finish in order to identify areas for improvement, assign specific tasks to specific operators, managing their roles and tasks within the project team, thus increasing productivity.

Topics created are displayed in a simple and intuitive way based on how they have been indexed in order to quickly identify and apply the right information.

2.2 Tasks

Within a Topic, it is possible to create new Tasks, intended as tasks already planned to be performed and which allow you to monitor all currently running processes.

For each Task, as well as for Topic, you have the possibility to assign Step/Status/Priority/Expiration.

You can associate a template, document, or other file that will be the subject of that discussion with each Topic/Task, and you can also add contributors.

This way inefficiencies emerge, such as missing or to be eliminated steps.

2.3 Collections

Collections are used as a container where homogeneous Topics can be stored in order to quickly find them and share them with other colleagues, accessing them at any time.

For example, you can use a library to store all Topic related to a specific project or client.

3 Login

To access the usBIM.resolver application, it is necessary to log on to usBIM, the integrated system of Applications and Functions to manage the digitization of buildings and infrastructures in an easy and collaborative way and exclusively online with any device.

You can access usBIM using this link: https://cloud.usbim.com

To access the platform, you need to enter your Username and Password associated with your ACCA account. If you do not have this information, you can register by clicking on the "Register" button and follow the procedure for creating your myACCA account.

You can also log in with: Google, Twitter, Apple, Facebook and Linkedin (Figure 1)

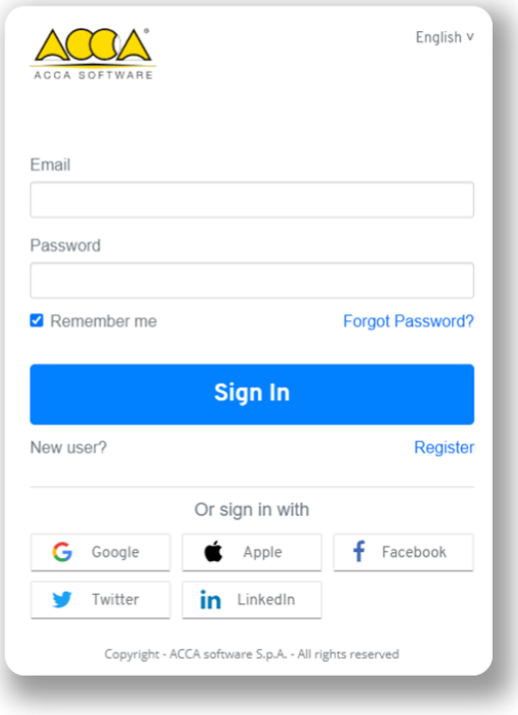

Figure 1. The Login Window

usBIM.resolver is based on Cloud technology that is part of the usBIM ecosystem and therefore accessible from all connected devices. The service is provided in SaaS (Software as a Service) mode, guaranteeing the security of information through the "https" protocol, reachability through any device connected to the internet and the restoration of data in case of partial or total loss of the data due to exceptional events.

Once you have logged in to usBIM, in the applications panel (Figure 2), among the various applications that are part of the usBIM ecosystem, there will be the usBIM.resolver icon. By clicking on it you can access the construction management of Casa ACCA that allows you to manage all the problems that arise in each phase of the construction project, to always respect the deadlines and to communicate with all members of the team.

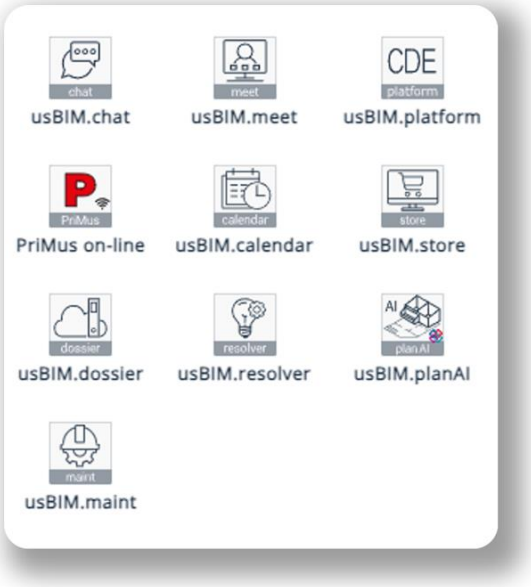

Figure 2. UsBIM Applications Menu

4 HOME PAGE

The **Home Page** (Figure 3) offers a Dashboard that presents an overview of the Topic created or shared with us, sorted by how they were indexed at the time of their creation, reports the number of Topic loaded and different possibilities to filter them.

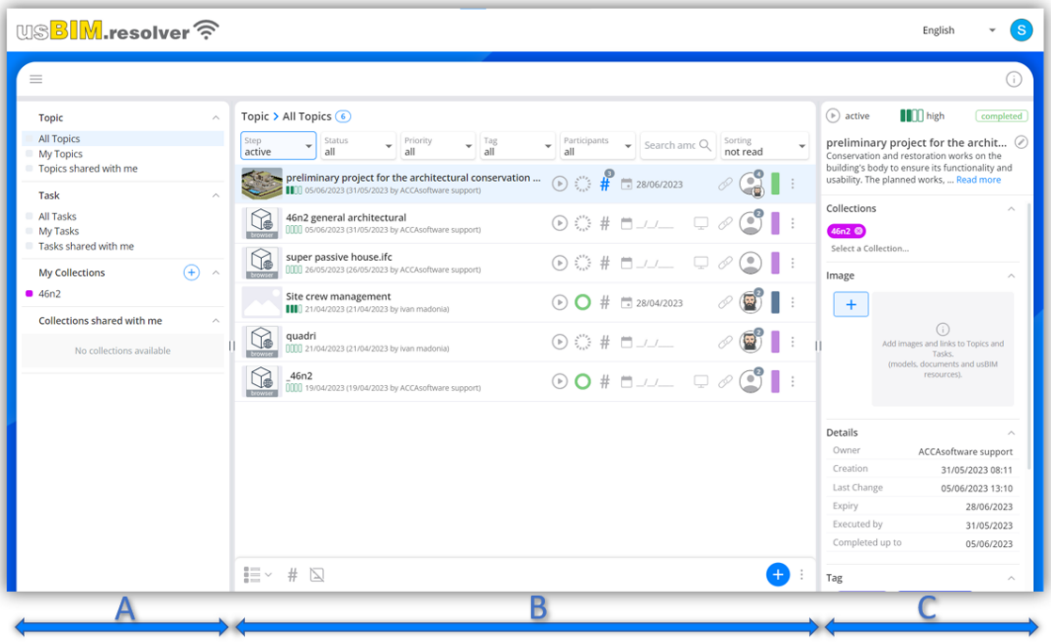

Figure 3. Home page

4.1 Structure

in the left part of the window. A Figure 3) there are access points to Topics, Tasks and Collections according to some types of filtering (Figure 4):

[1] **Topics**

- All Topics
- My Topics
- Topic shared with me

[2] **Tasks**

- All tasks
- My Tasks
- Tasks shared with me

[3] **My Collections**

- Add a Collection

[4] **Collections shared with me**

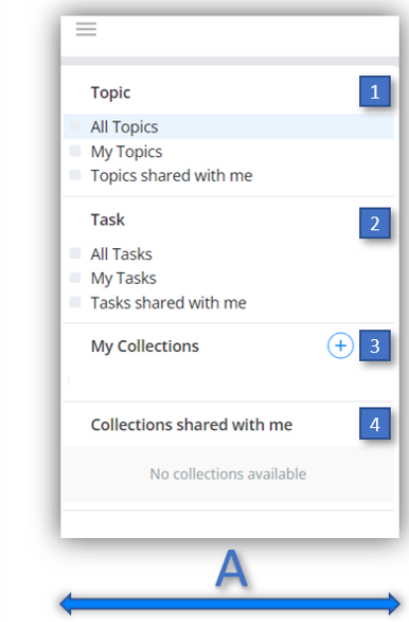

Figure 4. Structure Menu

The right side of the screen (sec. C Figure 3) is instead dedicated to info and details (Figure 5).

By selecting a Topic/Task/Collection, in this section we will have all the details of the same, such as:

[1] Title, Step, Status, Priority;

[2] Preview image;

[3] Description;

[4] Detail: who created it (Owner), date of creation, last modification, expiration and executed from/to;

[5] Associated tags.

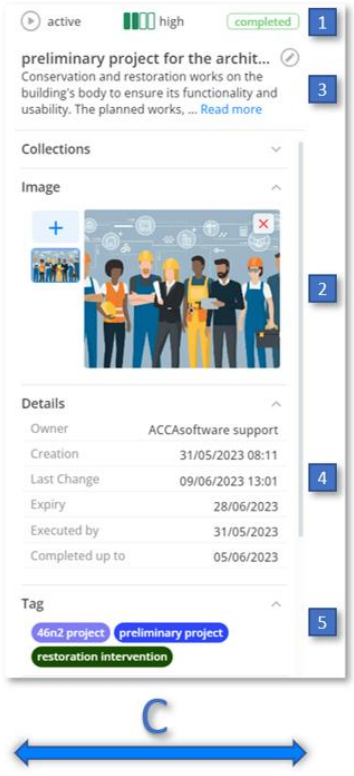

Figure 5. Detail

4.1.1 Filters

In the middle section (sect. B Figure 3), at the top, all the possible filtering modes are displayed, the text search bar, the sorting (Figure 6).

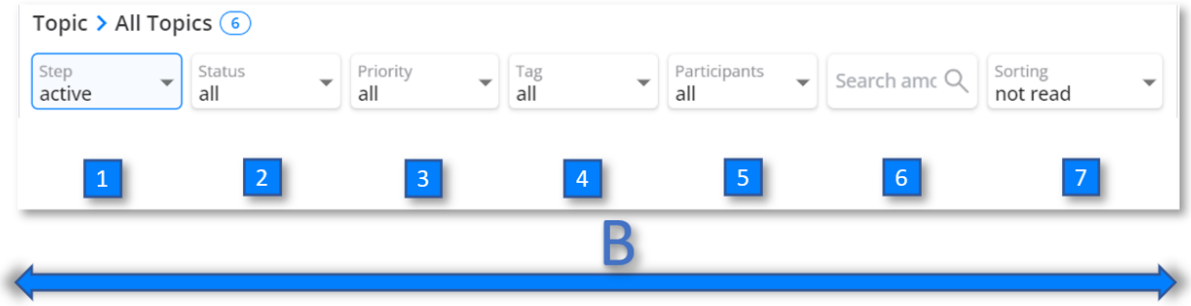

Figure 6. Filter Toolbar

In particular, it is possible to filter the Topics according to Step – Status – Priority – Tags and Participants depending on how they were profiled during the creation phase and it is therefore possible to view:

[1] for filtering according to the steps

- All Topics
- Only active Topics;
- Suspended Topic only;
- Only archived Topics;

[2] Filtering by country:

- All;
- In draft;
- To be done;
- In progress;
- Completed;
- Closed;

[3] filtering according to Priorities

- All;
- Critical;
- Urgent;
- High;
- Average;
- Low;

[4] filtering according to Tags

- All;

[5] filtering according to Participants

- Users who participate in a Topic;
- Responsible only;

[6] Text search

- Search between topics according to a text;

[7] sorting

- User;
- Unread;
- Creation;
- Last modified;
- Expiry.

4.1.2 Tools and visualization

In the same central section (sect. B Figure 3), at the bottom, you have all tools necessary for the creation and viewing of a Topic (Figure 7).

Figure 7. Toolbar

Arrow 1. Select a view: allows you to choose between two types of viewing, Grid or Board;

Arrow 2. Open all Tags: allows you to show or hide all Tags associated with a Topic;

Arrow 3. Hide images: Hides or shows images associated with Topic;

Arrow 4. Add Topic: allows the creation of new Topic;

Arrow 5. Import/Export BCF: Allows you to import or export Topic according to BCF format.

In particular, by clicking on the "Select a view" icon (arrow 1Figure 7), you can change the display mode from a simple grid system or the classic kanban board to assign, start, track, manage and control the different activities of the project.

4.1.2.1 Grid View

Here Topics are displayed as a list of listed items (Figure 8);

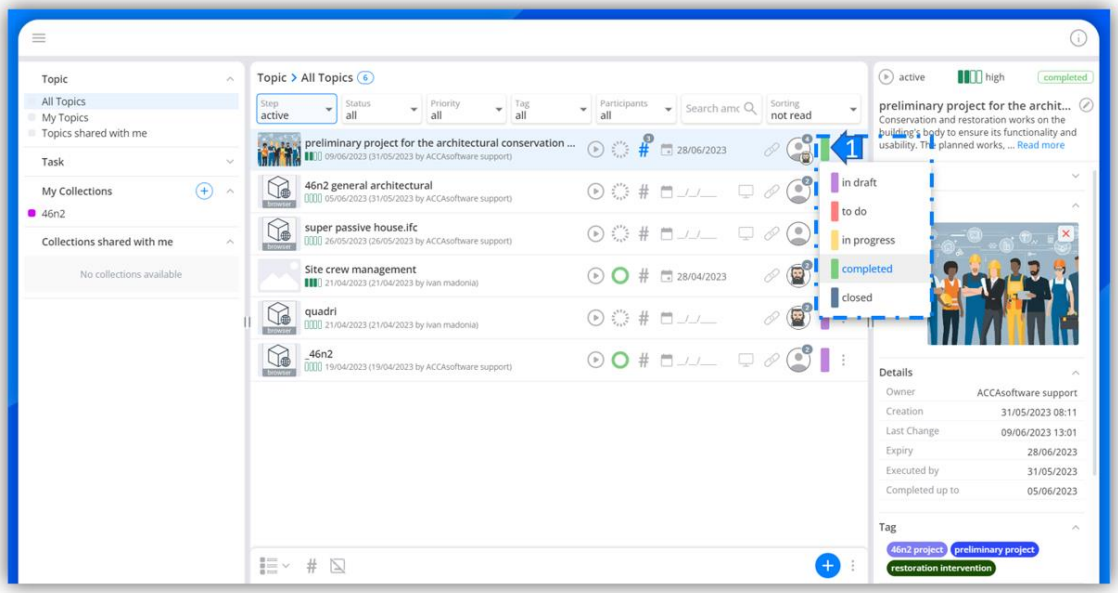

Figure 8. Grid view

In this display mode, you can update the Topic Status by clicking on its icon (arrow 1 Figure 8) and choosing from the options available depending on the progress of the Topic resolution.

4.1.2.2 Board View

According to this mode, instead, the Topic will be displayed on a whiteboard in a grid ordered in five slots, ordered according to the State (Figure 9).
In the kanban board each column represents a different phase of the workflow (“draft” - “to do” - “in progress” - “completed” - “closed”). Tasks or Topics are moved from one stage to another until they are completed.

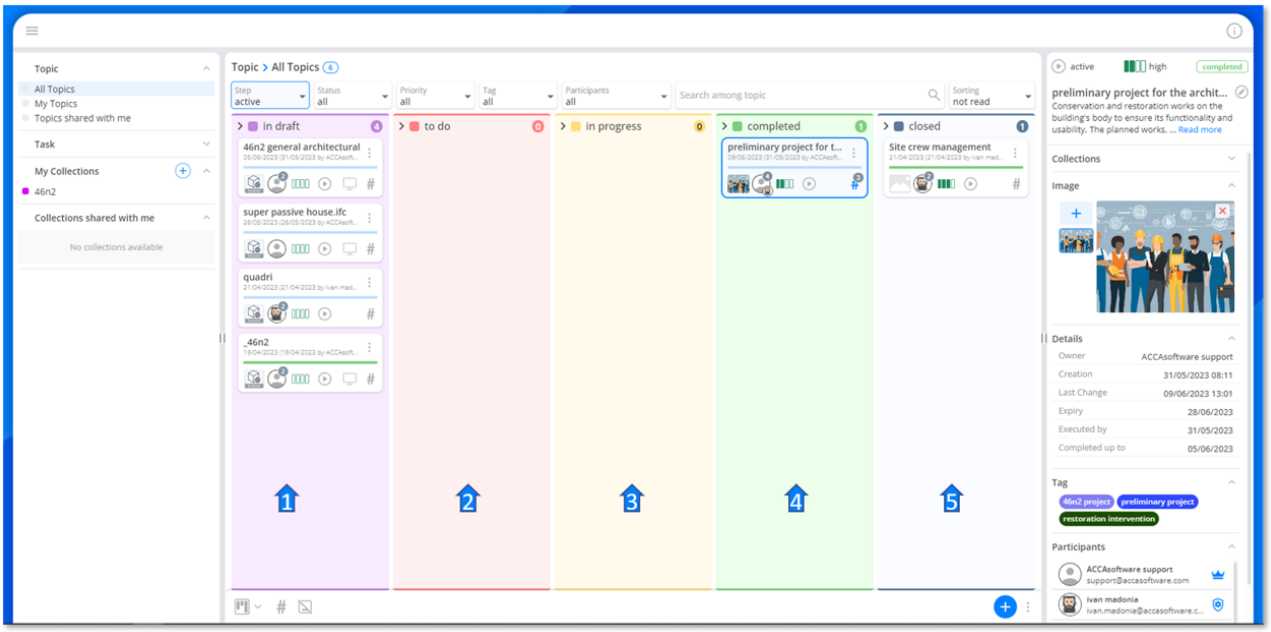

Figure 9. Board View

In fact, a Topic/Task can be associated with several different States through colors: purple for the "Draft" state (arrow 1 Figure 9), the orange color for the "To Do" state (arrow 2Figure 9) the yellow color for the "In Progress" state (arrow 3 Figure 9) the green color for the "Completed" state (arrow 4Figure 9) and the grey-blue for the "Closed" state (arrow 5 Figure 9). Remember that:

- **DRAFT:** the Topic/Task is being processed;
- **TO DO:** the Topic/Task is to be considered to be resolved;
- **IN PROGRESS:** Topic/Task is being processed;
- **COMPLETED:** Topic/Task completed and awaiting verification;
- **CLOSED:** Topic/Task completed and verified.

To update the project progress, simply drag and drop each card from one phase to the next.

4.2 Settings

You can access the application settings by clicking on the “account” icon (arrow 1Figure 10) and clicking on the “Settings” item. This operation triggers a dialog where all editor options (Figure 10) are listed:

- Ask for the topic data before creating it
- Ask for task data before creating it
- Ask for collection data before creating it
- Open the topic immediately after creating it
- Ask for confirmation before deleting

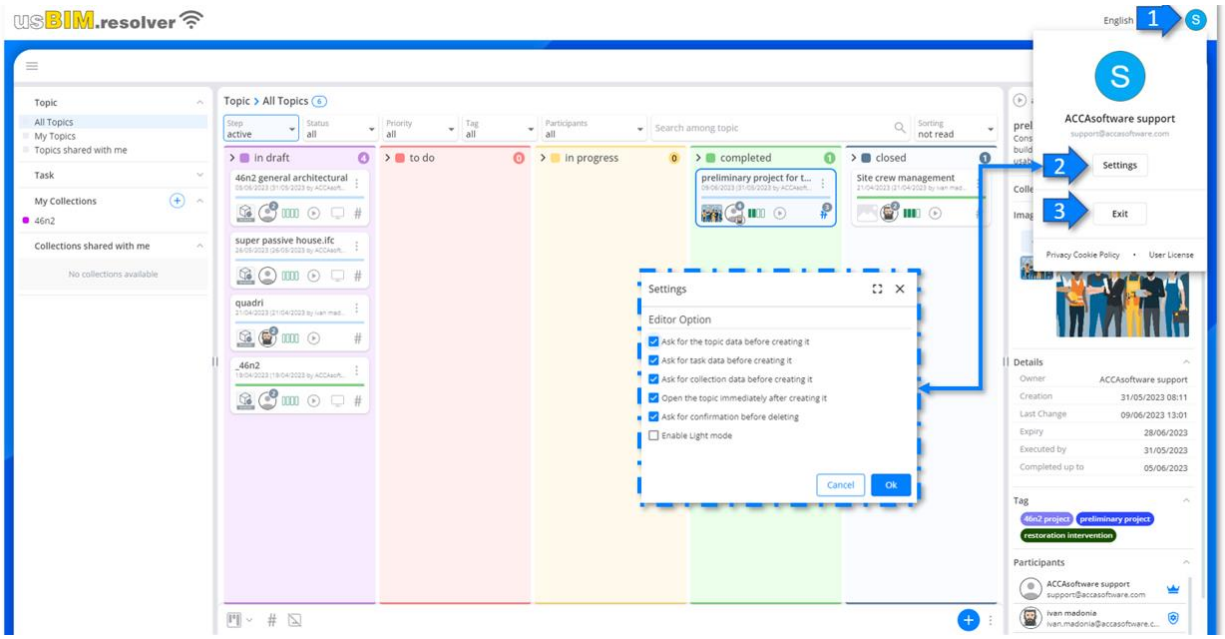

Figure 10. Settings

It is therefore possible to customize the working methods by checking the options to be kept active.
Figure 11

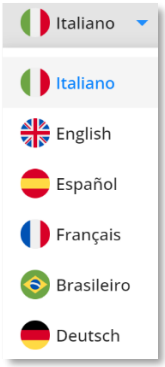

Figure 11. Language

To exit the application, at any time, click on “Exit” (arrow 3 *Figure 10*).

5 Add New Topic: Create Topic

Figure 7

Clicking on it will open a window (Figure 12) where you can assign a Title to the Topic **required field* (arrow 1 Figure 12), an optional Description * (arrow 2 Figure 12), a possible expiry date (arrow 3 Figure 12) and index it according to Step, Status and Priority based on the feared impact on the progress of the project.

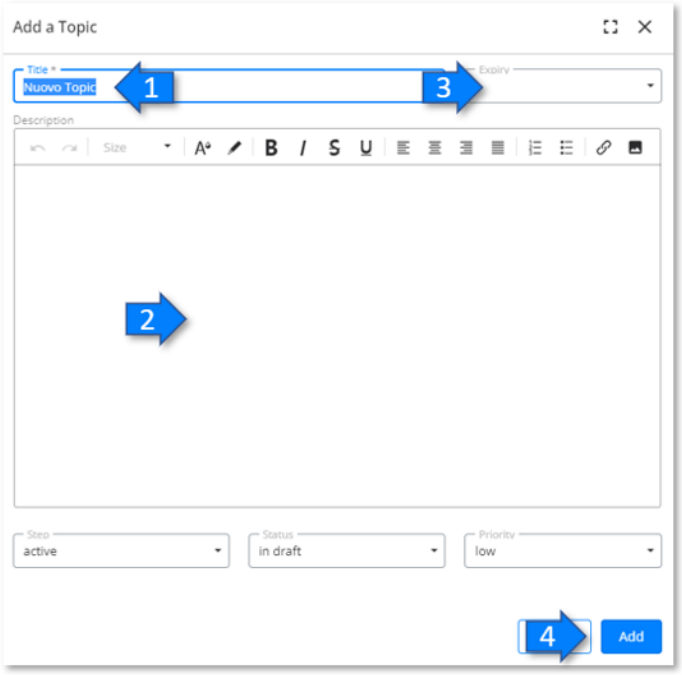

Figure 12. Add Topic

When the operation is confirmed, by clicking on the "Add" button, you are redirected to the Topic itself (Figure 13). Within the Topic, I can also create new Tasks that allows us to break down complex activities into simple parts.

5.1 Internal structure of the Topic

Once the initial operations of entering the Topic identification data have been completed, the screen useful for generating the structure of Tasks that make up the Topic is accessed, from here it is also possible to manage it in terms of sharing and implementation of information (Figure 13).

In particular, the page is divided into three macro-areas.

The central column [2] is dedicated to all the information and details, in this section you can view the title and description of the Task, its status and the priority assigned to it as well as attach an image or a link to the Topic or Task (as detailed in the paragraph). Figure 13

Figure 13 In this regard, please note that each Task has its own dedicated chat where you can create chats and discussion groups on specific projects and/or activities.

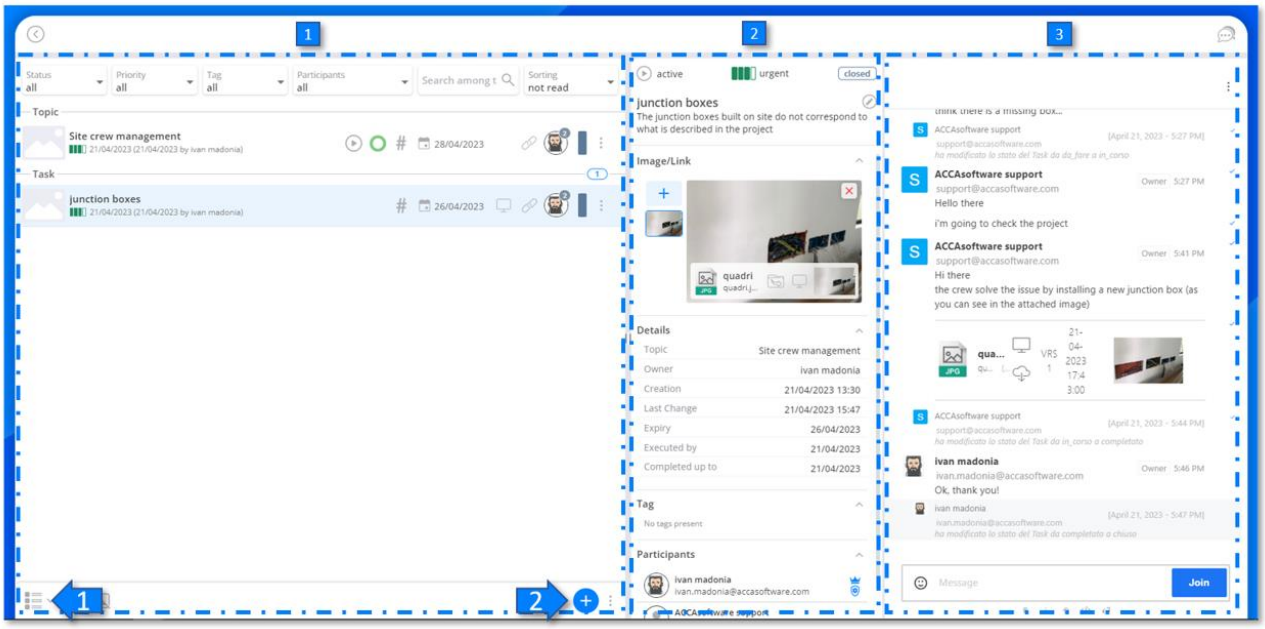

Figure 13. Internal structure of the Topic

6 Adding New Tasks to Topic: Create Task

Once the Topic has been structured, it is possible to add new Tasks to it, understood as a task that must be performed and that allows complex activities to be broken down into simple parts.

In the same way as seen for the Topic, it is also possible to associate one or more images, attach a link, a model or a document uploaded to the platform or any file through the Chat service and communicate immediately and dynamically with a possible collaborator.

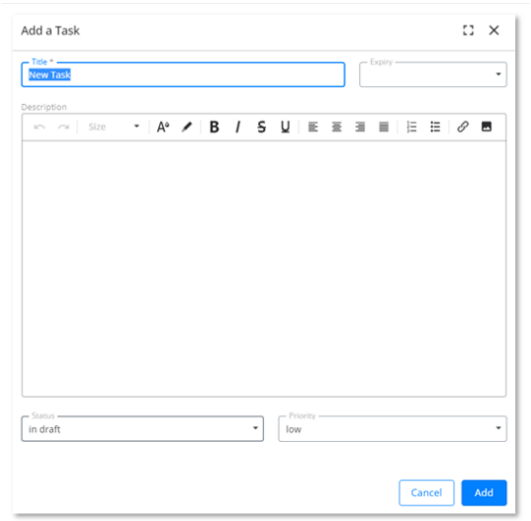

Figure 14. Add Task

At this point we will have an overview of all the Tasks created (Figure 15).

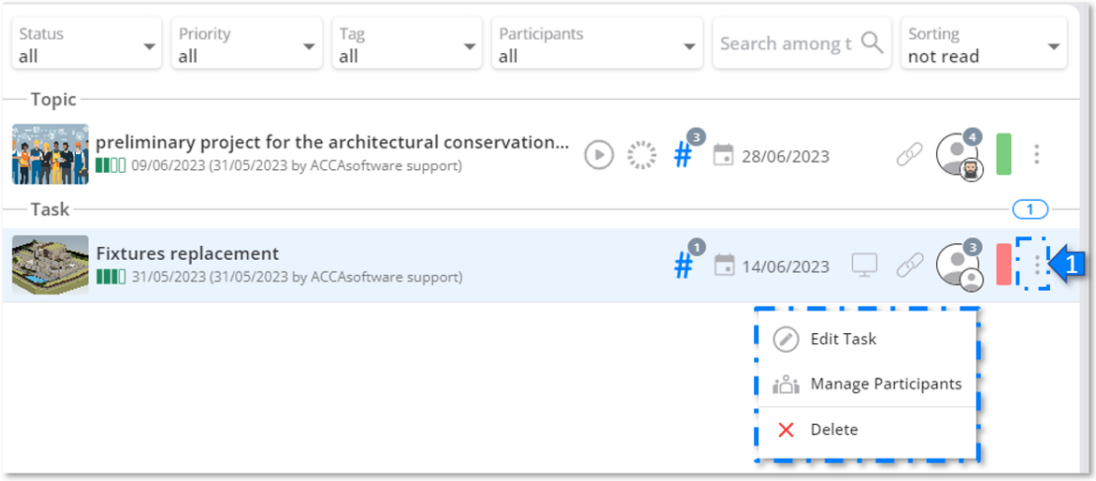

Figure 15. Context Menu

As mentioned, there are two options for viewing:

- according to the grid view;
- according to Board view.

In both cases, by accessing the context menu of the Tasks represented by the symbol of the three dots (arrow 1 Figure 15) you can edit the Task, manage participants or delete it.

7 Participant Management

You can share the entire Topic or individual Tasks. To share, simply add participants to the Task.

To proceed with the addition of new participants, click on the "Participant Management" button accessible from the context menu (Figure 15).

A window will open where you can define new participants simply by entering the email address of the user with whom we intend to share the Task. To define a new participant, simply fill in the data by entering the email of the user you want to involve in the process (arrow 1 Figure 16). From the participant management mode, it is also possible to assign the role of manager to an individual user. To assign the role of manager, click on the button represented by the shield symbol (arrow 2Figure 16).

To delete a participant, refer to the delete button (arrow 3 Figure 13).

You can also add all users of the Topic to the Task by clicking on the button represented by the three dots at the top right (arrow 4 Figure 16), download the list of users in .csv format (arrow 5 Figure 16) or upload a previously defined list (arrow 6 Figure 16) .

To make the changes effective, click on the "Close" button.

The same procedure allows you to add participants to Topics and Collections according to the logic above.

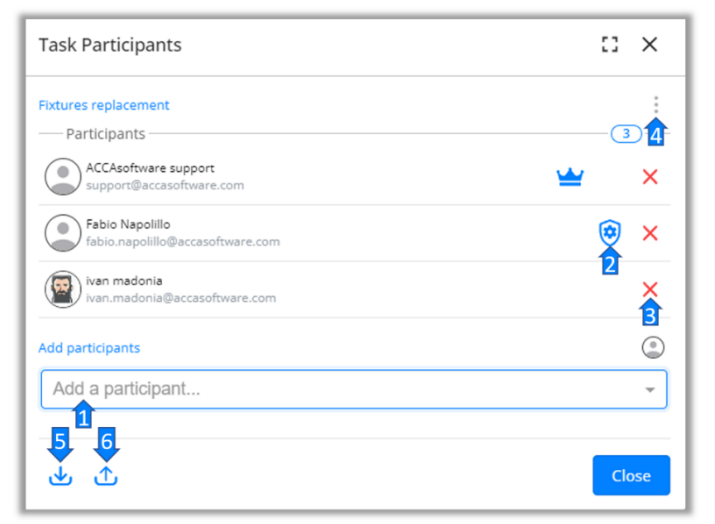

Figure 16. Add participants

7.1 Users

usBIM.resolver is aimed at all the actors involved in the Team working processes, from the conception to the phases of realization, verification and maintenance of the project. Specifically, different types of application roles are available:

Administrator*:* is the creator of the Topic or Task. The features available to the Administrator are indicated in the table. This user cannot be deleted.

Responsible: he is the one who is entrusted with the resolution of the report, he has the same grants as the Director. This user can only be deleted by the Administrator.

Standard user: is who participates in the resolution of the Topic, the functionalities at its disposal are indicated in the table.

OPERATION	*Administrator*	*Manager*	*Standard user*
Add new topic	V	V	V
Add new task	V	V	V
Add Participants	V	V	V
Assign management	V	V	V
Change status	V	V	V
Define priority	V	V	V
Edit task	V	V	V
Edit topic	V	V	V
Assign tagBIM	V	V	V
Delete topic	V	X	X
Delete task	V	X	X

Figure 17. Users

Notifications: users who are involved will receive a double notification, via Chat and via email, the latter containing a hyperlink to the specific Task. These notifications will relate to events that occur within the Topic/Task (add participant, change progress, change or delete Tasks).

8 Creating a collection

All Topics can be grouped into a Collection.

Collections are used as a container where homogeneous Topics can be stored in order to quickly find them and share them with other colleagues, accessing them at any time.

To create a Collection, click “Add a Collection” (arrow 1Figure 18), assign a title, and choose a color to associate with the Collection. Confirm the operations by clicking on “Add” (arrow 2Figure 18).

All collections created are displayed in the "My Collections" section, while in the "Collections shared with me" section there are all the Collections that have been shared with us by other users, who hold a usBIM.resolver license.

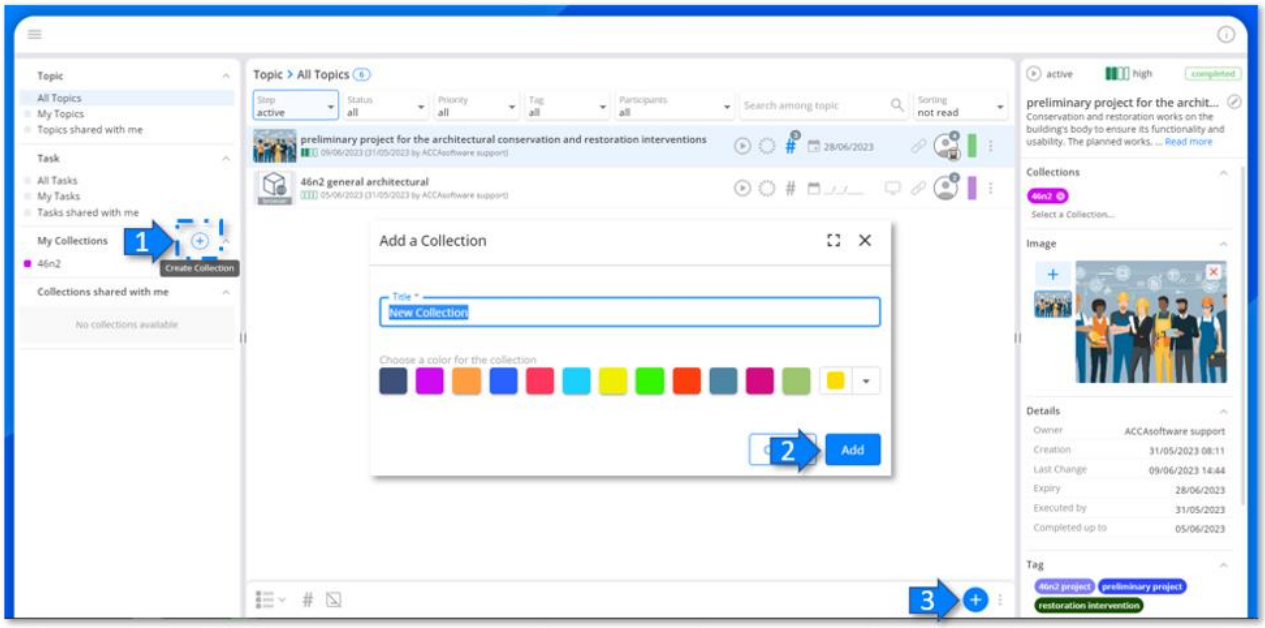

Figure 18. Add a Collection

Once you have created a Collection, you can add new Topic by creating the Topic within the collection itself, then select the Collection and click on the "Add Topic" button (arrow 3Figure 18), proceed, therefore, according to the methods already seen.

To add an already created Topic to a Collection, follow these steps:

Select the Topic, in the info and details window [2] (Figure 13), from the "Collections" section click on "Select a Collection"(arrow 1Figure 19), a drop-down menu will open where you can select from a list the Collection from those already created.

Remember that a Topic can also be contained in multiple Collections.

These operations are useful for quickly cataloguing all homogeneous Topic belonging to the same category or project, thus facilitating sharing operations.

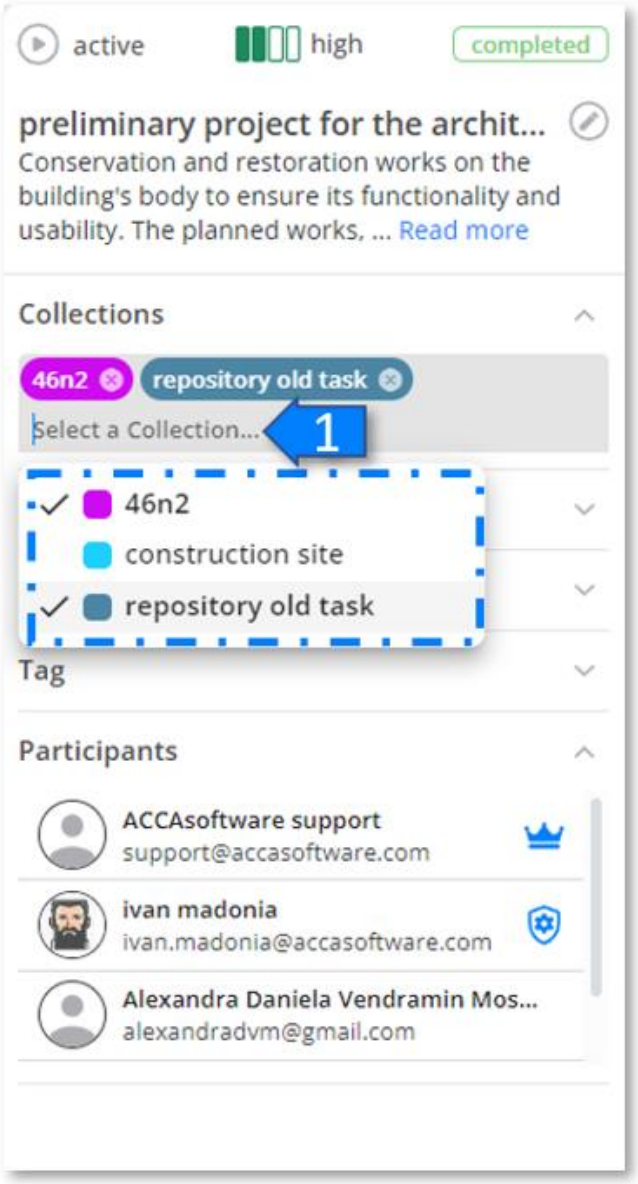

Figure 19. Add a Topic to a Collection

9 #TagBIM

All information can be associated with Topic and Task using metadata that results in usBIM.resolver in **#TagBIM**.

These are labels that allow you to add useful information to easily filter Topics and Tasks. Use this information to organize topics and make them easier to find.

To add a Tag to the Topic/Task just click on the HashTag symbol, add the tag in the appropriate string and confirm with Enter. All hashtags already created will be re-proposed in a special drop-down menu, where you can choose from a list such as #Tag recall.

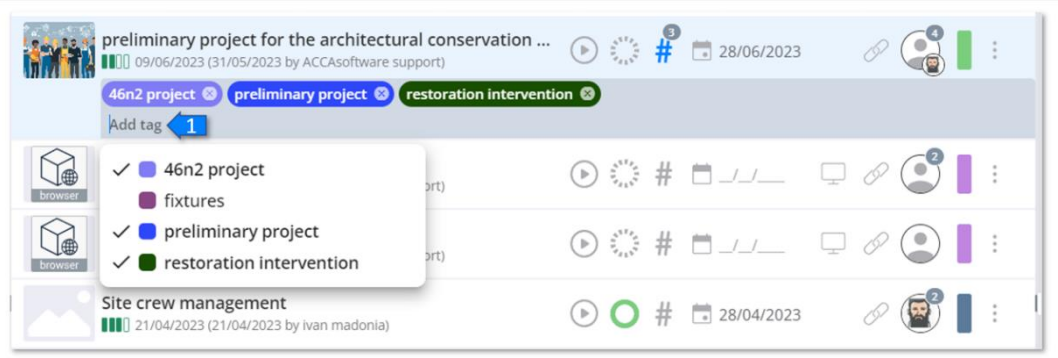

Figure 20. hashtag BIM

10 Info and details section

The central section, of the internal structure of the Topic [2] (Figure 13), is dedicated to the information and details of the Tasks
Specifically, as you can see from Figure 21, it is possible to view:

[1] Step, Priority and Task Status;
[2] Title of the Task with a possible description;

By clicking on the "edit Task" icon represented by a circled pencil, you can make changes to the selected Task.

[3] Add Image/Link *

This section displays all images added to the Task and preview images of attached files (DWG, IFC, PDF, BCF, etc.).

[4] Detail:

- Topic Title
- Owner
- Date of creation
- Date of last change
- Due date
- Performed from/to

[5] Tag;

In this field, you can view all tags associated with a Task, or add new tags.

[6] Participants.

All users participating in the Task can be viewed here.

By clicking on the "Participant Management" icon represented by a circled pencil, you'll also be able to add new participants to the Task directly from this section.

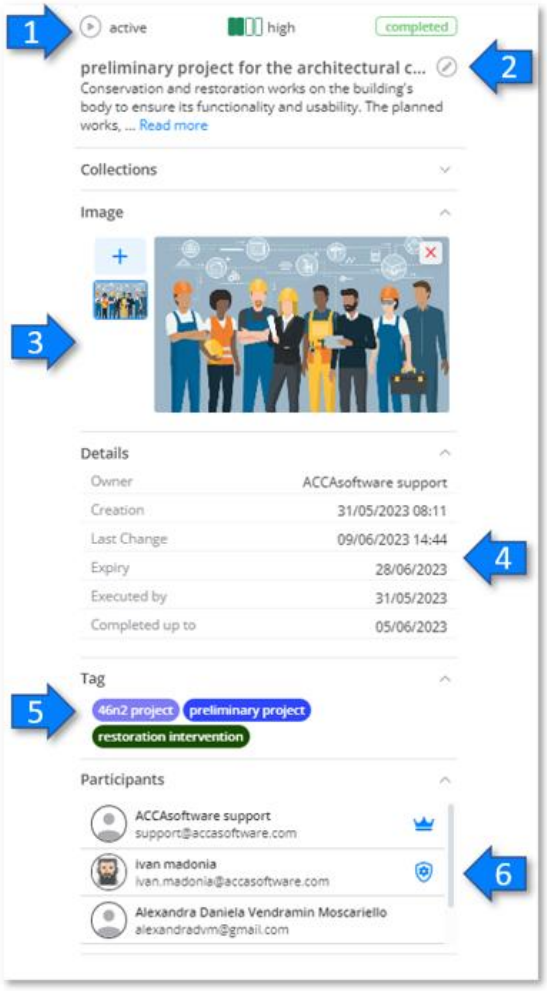

Figure 21. Info and details of the Task

11 Add image

To add an image or link to the Task/Topic, just click on the + icon (arrow 3 Figure 21) and a modal window will open where you can upload a link directly from the platform (arrow 1 Figure 22) or upload an image from your PC (arrow 2Figure 22).

Figure 22. Add image

Once you have attached a link to the Task, to open it simply click on the screen icon (arrow1 Figure 23) while clicking on the icon indicated by arrow 2 (Figure 23) we will be sent to the folder that contains that file on the platform.

To delete an image or link, just click on the X-shaped icon “delete” (arrow 3 Figure 23).

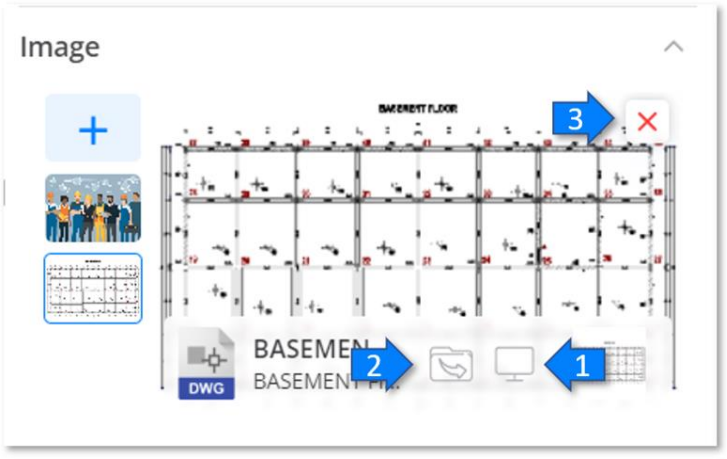

Figure 23. Open Image/Link

12 Chat

With usBIM.resolver the communication and sharing of information becomes easy thanks to the integrated chat. usBIM.resolver, in fact, provides a live chat specific to each task that you can use to communicate in real time with each team member and exchange messages, send direct links to Issues, share files, projects and documents (section3 Figure 13).

To start a discussion, once you have typed the text to be sent, simply click on the symbol of the airplane or send it from the keyboard. You can also mention a user in the discussion by typing their email address preceded by @.

The chat integrated in usBIM.resolver, with traditional features for messaging, joins the most advanced ones for collaboration, such as file sharing, large models, documents and data, without transferring copies of files and with a simple message. To attach a file directly from your PC to the chat, just click on the + button at the bottom right and "add files from Computer" (arrow 1 Figure 24) or, to attach a file already uploaded to the platform, simply drag and drop it into the chat window with a simple drag and drop. The colleague will immediately receive the message in chat and will automatically have the functions of usBIM.browser to view the files, or download them locally.

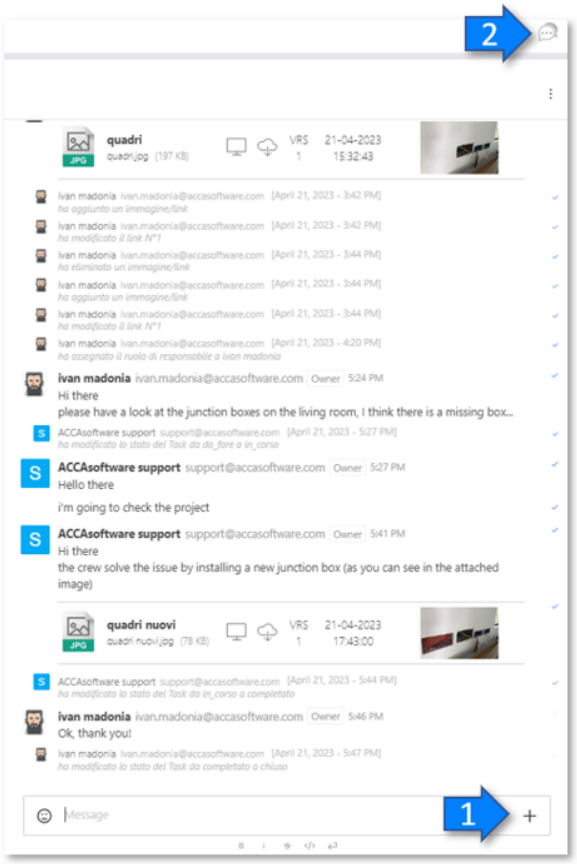

Figure 24. Built-in chat

By clicking on the balloon icon (arrow 2 Figure 24) you can choose whether to hide or display the Chat section.

12.1 Logging and Auditing

The system tracks the operations carried out both at the Topic level and at the level of the individual Tasks (creation of Topics/Tasks and Collections, addition of a participant, deletion) ensuring the historical traceability of the changes made. (Figure 25)

Figure 25. Logging and Auditing

13 Import - Export to BCF FORMAT

Another possibility made available to the application is to import or export files in BCF format.

Please note that BCF is an open format, developed in 2009 and maintained by buildingSMART

International for the exchange of communications related to the IFC model.

To import a document in .bcf format, just click on the icon represented by the three dots (arrow 1 Figure 26) and select Import BCF (arrow 2 Figure 26), in this way a Topic is automatically created containing, in the form of Task, all the Topic of the BCF document.

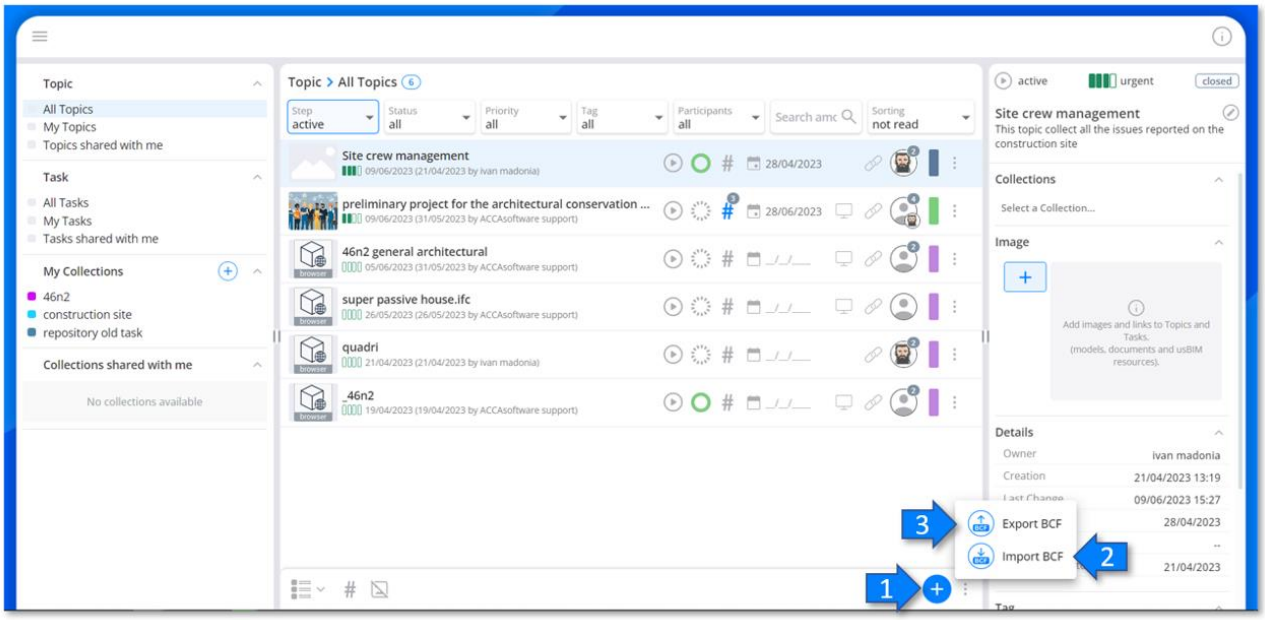

Figure 26. Import/Export

Conversely, by exporting a Topic to a .bcf file (arrow 3Figure 26), all its Tasks will be converted to Topic of the BCF extension of the same. The title of the Topic translates into the name of the exported file, while each Task becomes a topic of the BCF and therefore will keep its structure unchanged as the data related to creator and date of creation, description, status and priority, expiration date and any chat conversations.

Please note that .bcf files can be uploaded and read within the platform, thanks to the integration of usBIM.bcf[1] included for free in usBIM.
The Topic exported in the .bcf format is displayed as below (Figure 27):

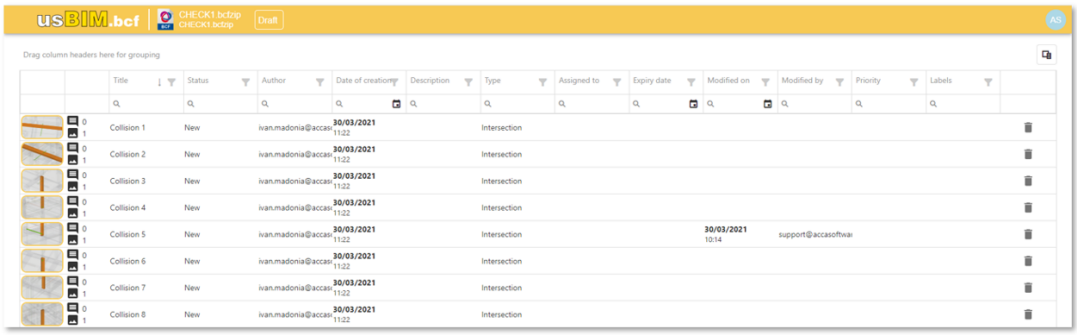

Figure 27. usBIM.bcf

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[1]To learn more about the topics related to the use of usBIM.bcf, please refer to the dedicated user manual.

14 Integration with Other Services

14.1 usBIM.browser

usBIM.resolver integrates with the usBIM.browser online BIM viewer, which allows you to view, browse, add information and manage most file formats.

In particular, the service allows you to:

- browse the 3D model online with any device with a basic Internet connection;
- connect construction drawings, descriptions, technical specifications and other documentation all together
- localize all the IFC model objects information using link associations or attribute additional information by inserting #TagBIM keywords
- use Issues to collaboratively solve potential problems encountered in the model
- add appropriate text-based comments to resolve a problem with the IFC File directly on the model.

Figure 28. Features for collaborative work of usBIM.browser

Creating new Tasks from templates offers the opportunity to collaboratively solve potential problems encountered within the project documents. Opening the context menu (arrow 1 Figure 28) accesses the section dedicated to usBIM.resolver (arrow 2 Figure 28). From here you can add new Tasks from an interface very similar to the one already seen for usBIM.resolver.

For each issue found, it is possible to open an activity dedicated to its resolution.

Clicking on the "Add Task" button (arrow 1 Figure 29) will open a window where you can add a Title to the Task (arrow 2 Figure 29), a description, a possible expiration date (arrow 3 Figure 29) and index it according to Step, Status and Priority according to the feared impact on the progress of the project (arrows 4-5 Figure 29).

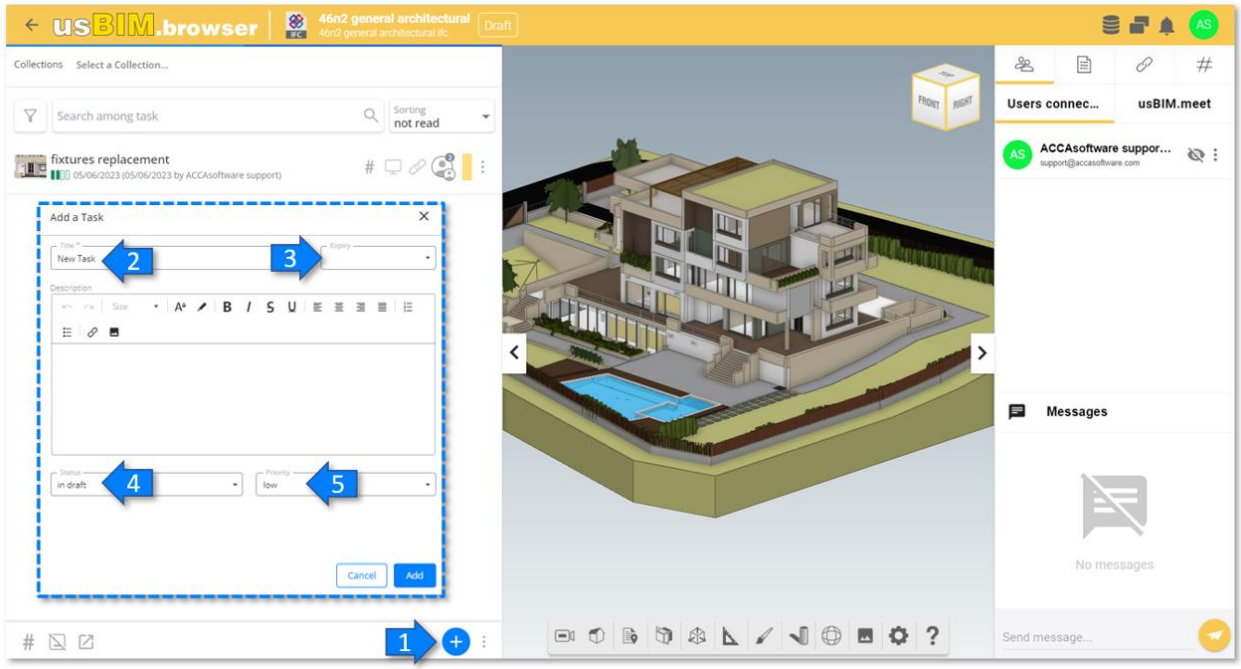

Figure 29.Task Section

usBIM.browser also allows you to enrich the description of the Tasks with graphic annotations. In fact, through dedicated tools (arrow 1 Figure 30), it is possible to insert textual markup or shapes, for example to describe the instructions to be followed on the graphic model or highlight an exact point where to intervene.

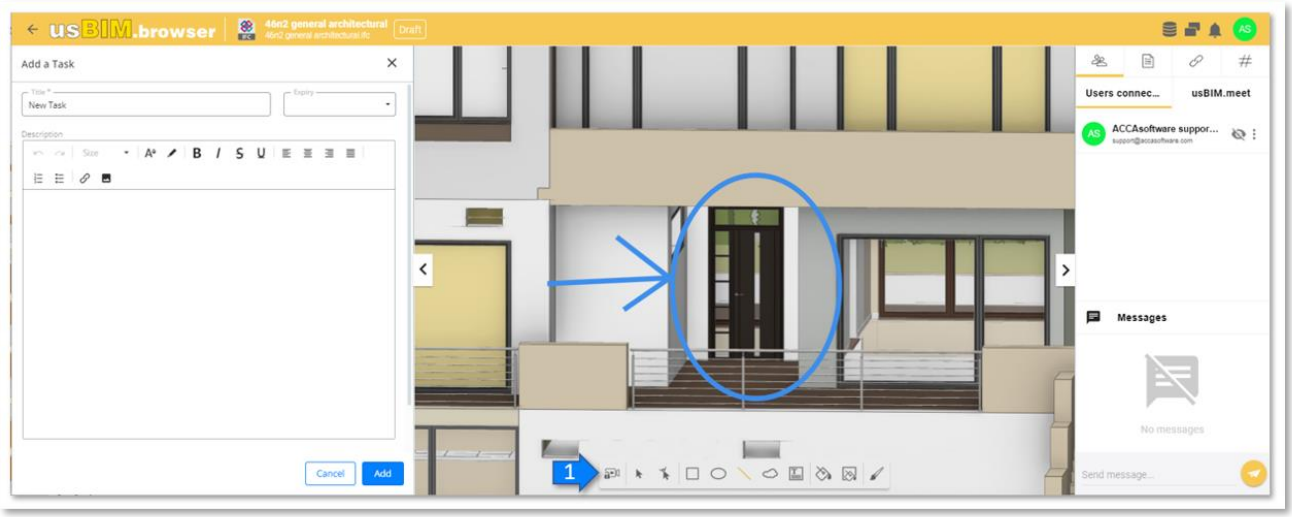

Figure 30. Screen for creating a Task

Once the Task has been created, you can assign its resolution to a collaborator. To proceed with the addition of new participants, click on the "Participant Management" button (arrow 3Figure 31) accessible from the context menu of the Task represented by the three-dot symbol and enter, in the appropriate bar, the email address of the user we intend to profile (Figure 32).

You can also edit the Task at any time, from the same context menu click on "Edit Task" (arrow 2 Figure 31). To delete the Task, click on the “Delete” button (arrow 5 Figure 31). In addition, clicking on the Chat button (key 4 Figure 31) will open a modal window dedicated to the Chat associated with the Reference Task (Figure 33).

The user opens the details of the Task (arrow 1 Figure 31) and finds all the information necessary to execute it with a possible description and comments.

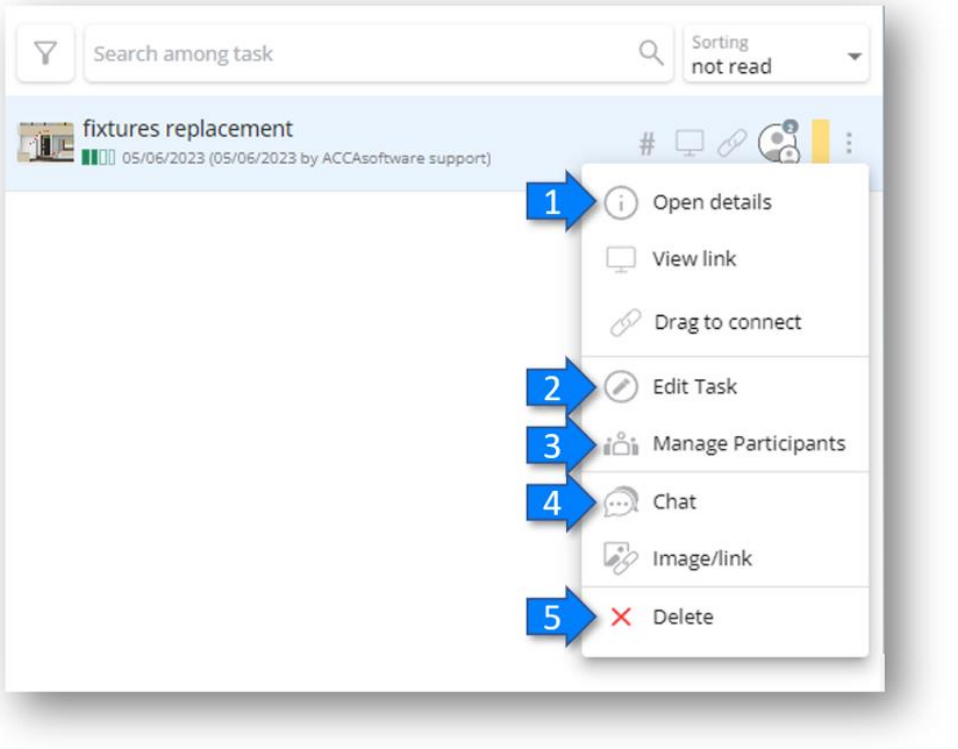

Figure 31. Task Context Menu

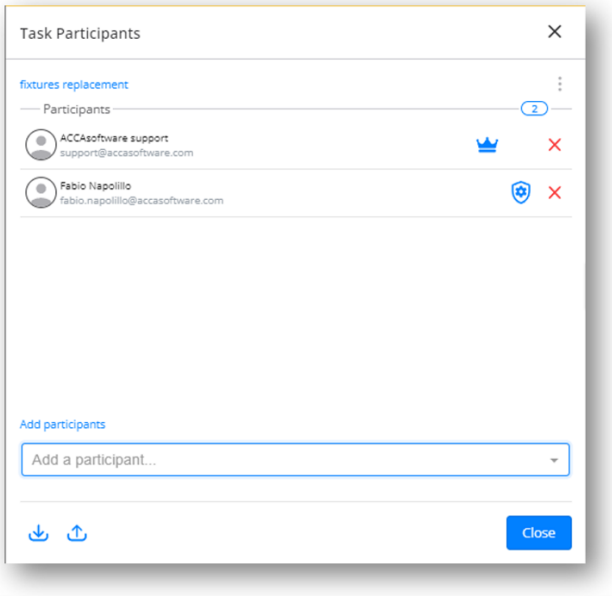

Figure 32. Participant Management

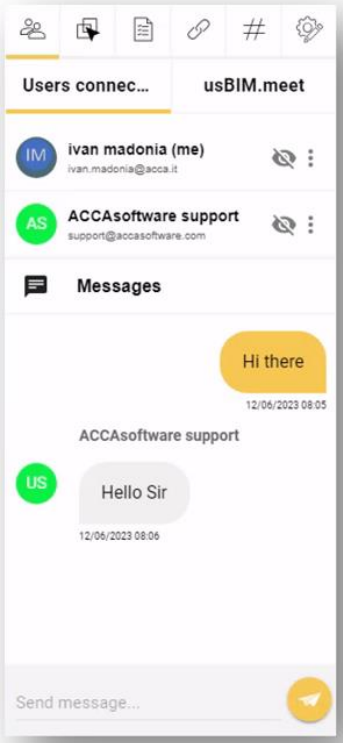

Figure 33. Chat

All new Tasks created by usBIM.browser environment will be processed simultaneously in usBIM.resolver, ensuring interoperability between the two environments.

By clicking on the icon indicated by arrow 1 Figure 34, you can display or hide all the tags associated with the selected Task; by clicking, instead, on the icon indicated by Figure 34 arrow 2 you can display or hide the preview images that define the various Tasks. Finally, by clicking on the icon indicated by arrow 3Figure 34, the selected Task will be opened in a new window through the usBIM.resolver application.

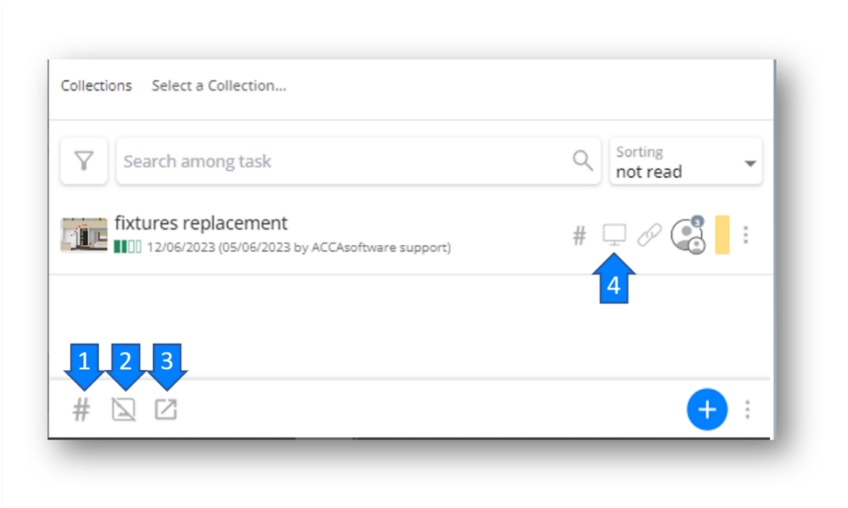

Figure 34. UsBIM.resolver Toolbar

14.2 Mapping Model Objects to Task

Another interesting opportunity is to select, on a model, certain elements associating only the latter to the relative Task (Figure 35).

To associate elements of a template with a Task:

1. Open, from the context menu, the extension of usBIM.resolver integrated in usBIM.browser
2. Select, manually or from the template tree, the items that you want to associate with the Task

   N.B. the selected items will be displayed on the screen coloured yellow.

3. Create a new task by clicking on the “Add Task” icon.

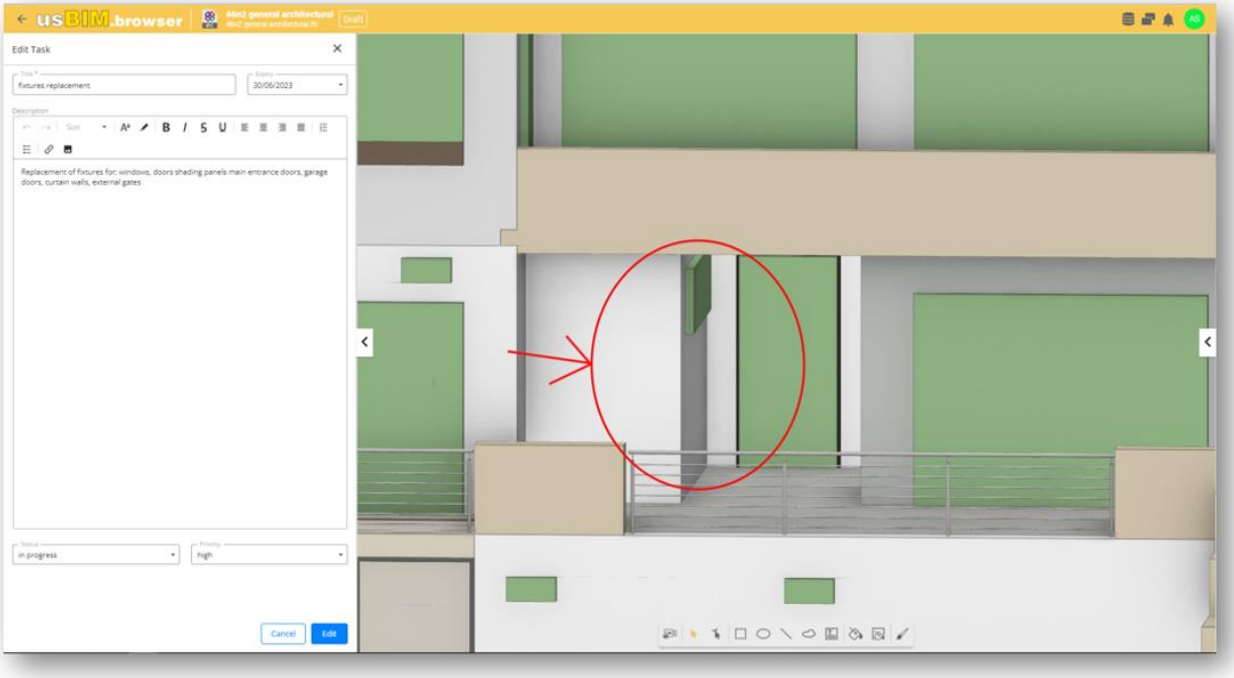

Figure 35. Select Objects

Once the Task has been created, clicking on the screen symbol (indicated by arrow 4 Figure 34) will open the Task and then you will be sent back to the model to those objects resulting from the previous selection.

15 Workflow to follow for correct use of usBIM.resolver

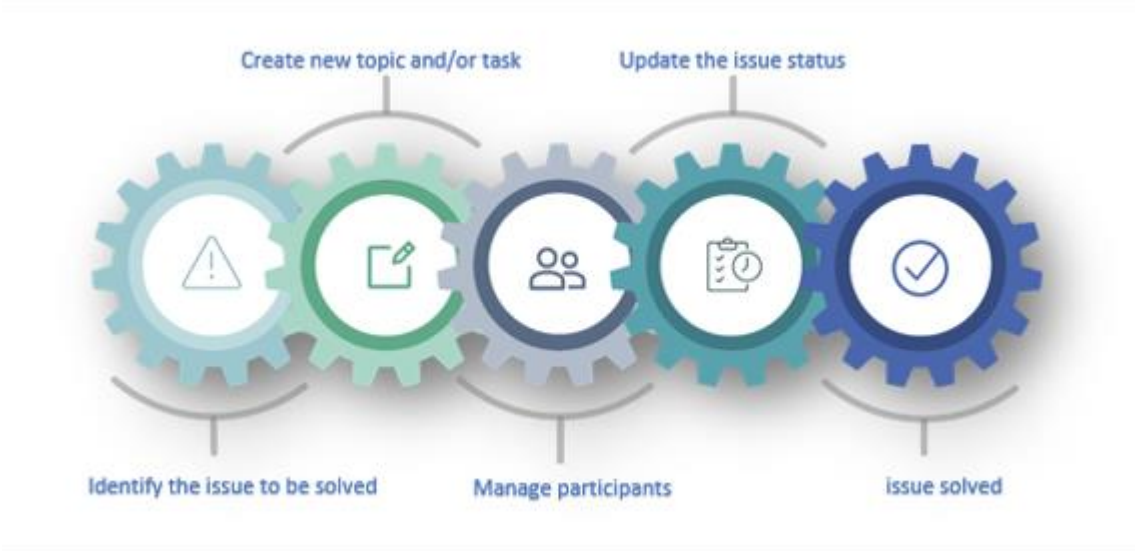

Figure 36. Workflow usBIM.resolver