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## Revision Control

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## Executive summary

The present document is a deliverable of the CATALYST project, funded by the European Commission's Directorate-General for Communications Networks, Content & Technology (DG CONNECT), under its 7th EU Framework Programme for Research and Technological Development (FP7).

It describes the two components of semantic map edition and visualisations, **DebateHub** and **Assembl**.

**DebateHub** is one of the software components of the CATALYST ecosystem of Collective Intelligence Technologies aimed at supporting innovative online deliberation processes. This online deliberation is based on: 1) an intuitive interface for large-scale argumentation, 2) advanced visualisations to support sense-making, attention mediation and community moderation. The document presents first the requirements from which the tool is driven in the context of the CATALYST challenge and it describes the main goals and expected end-users of this software component. Then the prototype system is presented in terms of both higher-level architecture and main functionalities. Additionally, in order to provide a more effective demonstration of these functionalities, the document provides short Demonstration Videos to exemplify the system in use.

**Assembl** is another software components of the CATALYST ecosystem aimed at supporting progressive structuring of online deliberation based on participants' exchanges of normal chronological messages in natural languages. The deliberation is based on a progressive structure refinement process as the conversation and the collective understanding of the subject grows. This document describes the key concept mapping functionalities and their purpose in the context of the CATALYST ecosystem of tools. Participants first exchange free-form messages. The harvesting and concept mapping tools are used to progressively attach these messages to a more formal structure (this association is automatically maintained as the discussion evolves), and finally, summarisation features allow for regular sending of an intelligible picture of the state of the deliberation back to the participant so the process can begin again. The document also provides a video demonstration to further demonstrate the tool in use.

Running versions of the tools are available here:

For **DebateHub** a link to the running and functioning alpha version of the tool is made available at: <http://hubtesting.kmi.open.ac.uk/>. This is a link to the testing website and it shows the testing data gathered in the last 4 months in collaboration with use-case partners (Euclid, Purpose). Use case partners have been actively involved in a process of agile development of the tool, they have had the chance to propose ideas for new features, require User Interface changes and report bugs.

For **Assembl** a link to a running and functioning environment is made available at: <http://assembl.coeus.ca/sandbox/>. This is a link to a sandbox that is occasionally reset. Anybody can open an account and gain full permission to play with the different features.

## Table of Contents

<b>Revision Control</b>	<b>3</b>
<b>Executive summary</b>	<b>4</b>
<b>Table of Contents</b>	<b>5</b>
<b>1. Introduction</b>	<b>6</b>
<b>2. DebateHub</b>	<b>7</b>
2.1 What it does	7
2.2 Who is it for	7
2.2.1 Communities	7
2.2.2 Community Managers	8
2.3 DebateHub Software Description	9
2.3.1 High Level Architecture	9
2.3.2 Code Specification & Description	9
2.4 Main Functionalities	10
2.4.1 Discussion Groups	10
2.4.2 Argumentation-based Discussion	12
2.4.3 Voting	14
2.4.4 Moderation	15
2.4.4.1 Merging contributions	15
2.4.4.2 Splitting Contributions	16
2.5 Demonstrations	18
2.5.1 DebateHub intro and argumentation-based discussion Interface	18
2.5.2 DebateHub: Community moderation features to merge and split contributions	18
<b>3. Assembl</b>	<b>19</b>
3.1 Concept mapping in Assembl	19
3.2 The Table of Ideas	19
3.2.1 Reorganising within the Table of Ideas - Drag and drop	19
3.2.2 Create new idea from harvested content	21
3.3 The Synthesis	21
3.3.1 Adding and removing ideas from the synthesis	21
3.3.2 Reformulating and formatting the synthesis	22
3.3.3 Publishing the Synthesis	22
3.3.4 Commenting via the Synthesis	23
3.3.5 Organising the conversation to reduce Harvester workload	25
3.4 Demonstration and source code	25
<b>4. Conclusions and Future Directions</b>	<b>27</b>
<b>List of Tables and Figures</b>	<b>28</b>

## 1. Introduction

The main goal of Task 3.6 is to study, design and develop environments and alternative interfaces for the editing and visualisation of large-scale argumentation processes. Specifically, this includes: new interfaces for contributing and editing arguments and alternative visualisations to explore argumentation content.

From a user scenario perspective this is a strategic goal to ensure large-scale engagement with the online debate. In fact, despite proven advantages in term of supporting critical thinking and decision making, argumentation tools are not widely adopted. This is mostly because these tools allow debate's contribution and exploration with argument networks. However, argument networks have proved to be difficult to use and have a steep learning curve, especially when it gets to debate contribution. This of course lowers down adoption and participation.

Online debate tools for large-scale deliberation need to allow argument structuring while lowering the cost of data contribution for the users.

This is a key requirement that aims at tackling "lack of participation on the discussion" (see the high level system requirements that have been identified in D2.1 page 37-39). Specifically by:

- Lowering barriers to data entry
- Use intuitive visualisations to promote understanding and better communicating results

From a technical perspective this required: 1) the investigation of the state of the art interfaces for data entry and visualisation in use in most common argumentation platforms, and 2) the design of a new interface for large-scale argumentation (arguments editing and mapping) that provides an alternative to the classical "network/threaded" interfaces.

The above higher-level user and technical requirements have been met by designing and implementing two tools:

The first is DebateHub, a Web tool for structured debate and large-scale argumentation.

The second is the table of ideas and synthesis editor of Assembl, a tool for collective curating and summarisation of online deliberations.

Both tools will be described and demonstrated in the following sections.

## 2. DebateHub

### 2.1 What it does

DebateHub is an online deliberation and argumentation tool for online communities to:

- Raise issues;
- Share ideas;
- Debate the pros and cons;
- Vote contributions in order to collectively organise and progress good ideas forward.

DebateHub provides an intuitive linear interface for data entry. People can contribute to building argument maps by filling in different text boxes in the context of the same Webpage. A two-column interface with colored column's titles (For and Against) is used as visual metaphor to associate positive and negative semantics to arguments. Moreover, the argumentation hierarchy Issue>idea>arguments>resources is obtained by using different headers and positioning in the Webpage, rather than by building a contributions' tree. The details and a snapshot of this interface will be detailed in the software functionalities section.

The main DebateHub components are:

- A grouping mechanism: to set up Discussion Groups in which people volunteer to join and contribute to a specific debate
- Argumentation-based discussion interface: to add issues, ideas and discuss the pro and con of those
- A Voting mechanism: to prioritise issues, ideas and arguments
- A Moderator toolbar: to allow re-structuring of the debate and specialised organisation activities, such as merging and splitting of ideas and arguments.
- A visualisation Dashboard: to support community management, sense making on the state and progress of the online debate and monitor and analyse community engagement.

DebateHub, as well as other CATALYST CI technologies, is meant to be distinctive in its use of advanced analytics and visualisations to show the best argued ideas, the state and progress of the debate and the level of engagement of the online community. The DebateHub Visualisation Dashboard is part of the Collective Intelligence Dashboard work (T3.9) and will be therefore separately described in D3.9.

### 2.2 Who is it for

#### 2.2.1 Communities

DebateHub provides communities with a space to share new ideas, but also open them up for debate. This helps communities to set up a collaboration context in which it is not the most popular or strongest idea to win, but the one for which the best arguments are brought forward and the best evidence are provided. This stimulates community members to make the case for their viewpoints, to be better understood by others and to help identifying the most robust ideas in the noise.

DebateHub also supports more informed participation by providing summary analytics and attention mediation feedback. These features support newcomers to get a sense of where is the debate at and where is the best way for them to contribute.

### **2.2.2 Community Managers**

DebateHub provides new tools for community managers to organise the community's contributions, reduce idea duplication, and supports content analysis and summarisation. The analytics dashboard onto discussion groups also help spotting connections between people and ideas, detecting gaps in knowledge, discovering new patterns of (dis)agreement, and producing visual summaries of the community debate. All these features are specifically designed for community managers to facilitate and make more effective community's analysis and moderation.



## 2.3 DebateHub Software Description

### 2.3.1 High Level Architecture

The main purpose of this section is to accompany the technical demonstration of DebateHub and it is therefore not intended to be a full-fledged design document of this component. Some more details can be found in the initial architecture deliverable, and a full-fledged design document is expected at the end of the project.

### 2.3.2 Code Specification & Description

The DebateHub and LiteMap (D3.3) websites follow the same underlying architecture for the significant elements as they are both based on the Evidence Hub codebase (open source code available at: <http://evidence-hub.net/open-source/docs/>).

The DebateHub website uses a Linux server, the code is written in PHP and it currently uses a MySQL database, with the possibility to use other database types in the future. The website pages are written in PHP, HTML, Javascript, CSS. The DebateHub website code is roughly divided into 7 main component (See image below):

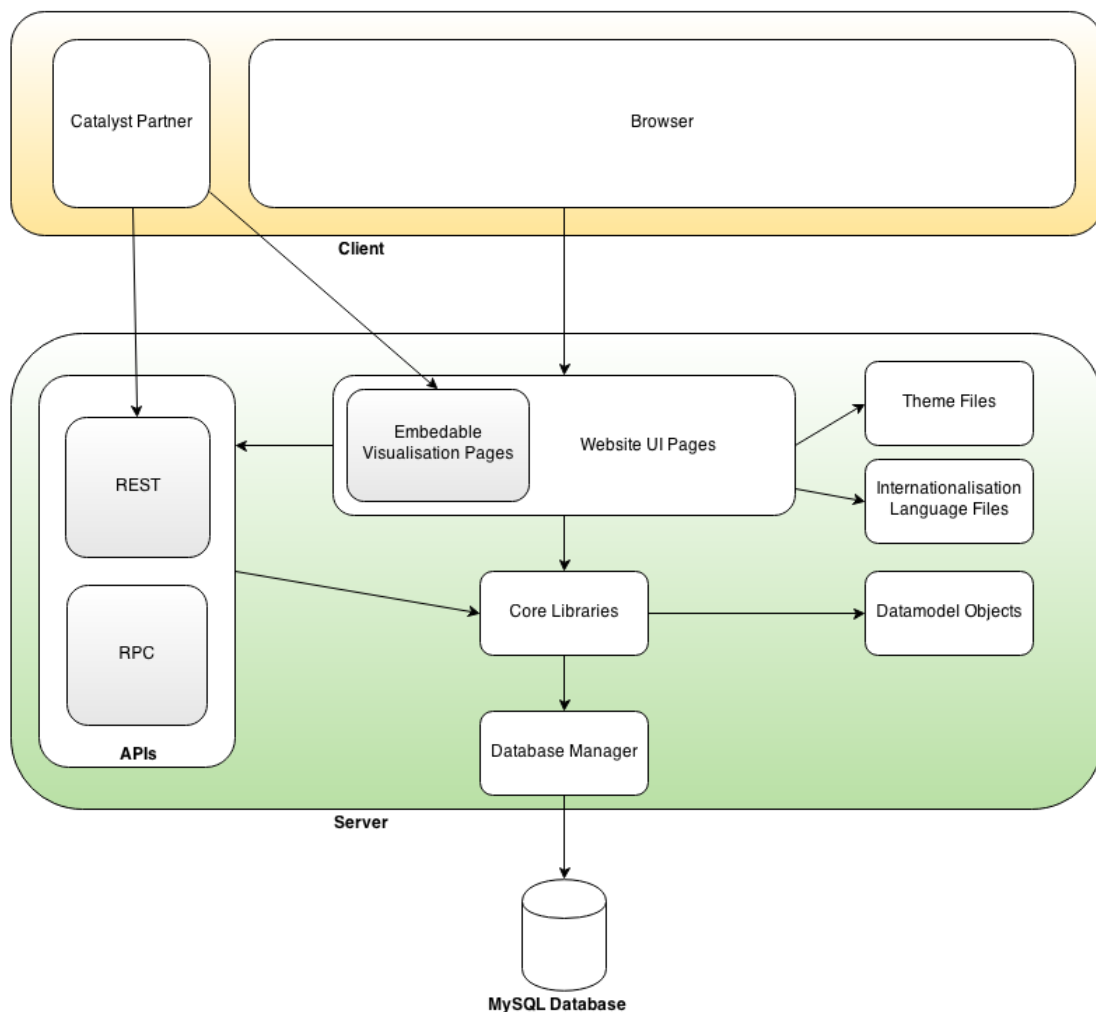


Figure 1: DebateHub high-level Code Architecture

1. The **Website UI Pages**, including the **Embeddable Visualisation Pages**, and all other pages like forms, the dashboard pages etc.;
2. The **Themes Files**, which consist of collections of CSS files and images to be applied to the website pages;
3. The **Internationalisation Language Files** which hold the site text to be translated when required;
4. The **API** code which handles both **RPC** (Remote Procedure Call) ajax requests from the website pages and **RESTful** (Representational state transfer) api requests from CATALYST partners or the website pages. RESTful api calls will return jsonld formatted data to the CIF (CATALYST Interchange Format) specification.
5. The **Database Manager** which handles calls to the MySQL database (or potential others), and works together with a library of basic database utility functions and the files containing the sql statement elements to be used (or replace for different database);
6. The **Datamodel Objects** code classes which hold the records from the database in a collections of object and also manages enforcing the model relationships;
7. The **Core Libraries** of code:
  - a. Servicing the api calls, including formatting the replies, handling site access, handling data history tracking, file path management;
  - b. The IO (input/output) code to processing data, like analytics from CATALYST partners, plus any specific data imports or exports, like importing from Compendium maps etc.;
  - c. The Admin code, which handles hidden system administration interface elements, and server side tasks;
  - d. The multi-site code. DebateHub is built on the Evidence Hub multi-site code architecture. So one installation of DebateHub could potentially run many different instances of that site, each with different theming, language, database, configuration etc. This feature is particularly important for future internationalization purposes.

## 2.4 Main Functionalities

As described in Section 2 of this document DebateHub is expected (at this stage) to provide four main functionalities: **Grouping**, **Argumentation-based Discussion**, **Voting**, and **Moderation**. Analytics and Visualisations functionalities are object of T3.9 and they will be therefore described in D3.9. In the following we describe one by one the main functionalities already developed.

### 2.4.1 Discussion Groups

DebateHub allows grouping people and debates around a specific Discussion topic.

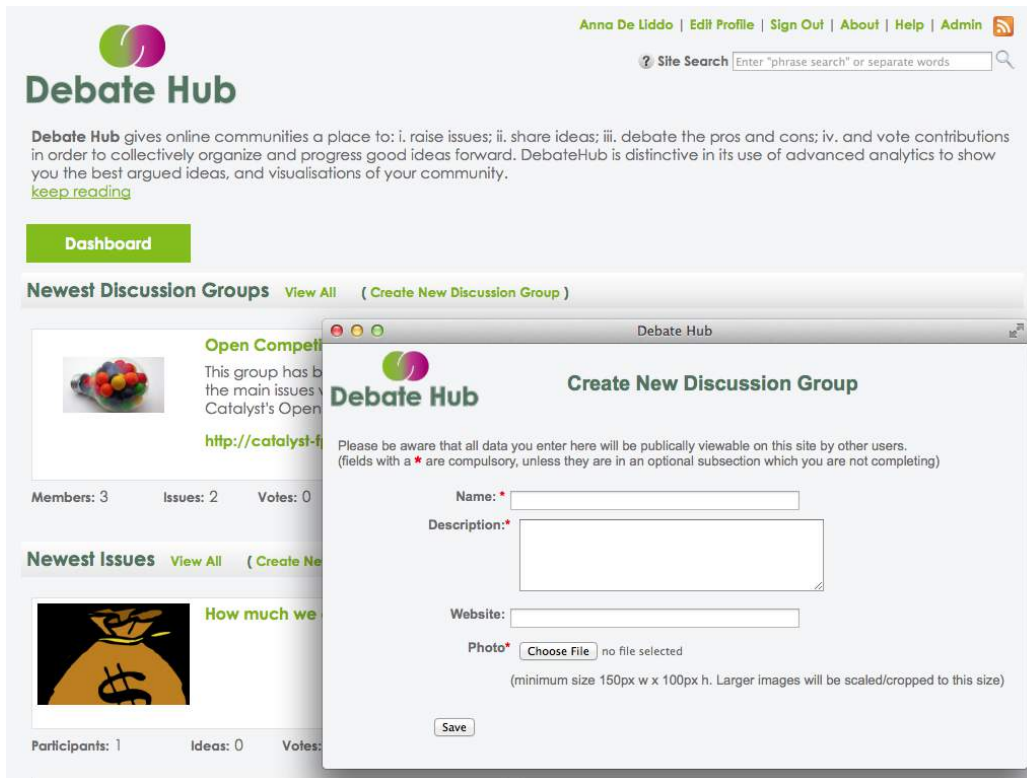
Open Discussion groups can be set up and people can simply join the group to contribute to that discussion. Discussion groups can be created from the DebateHub homepage, after users have signed up and signed in to the Website.

Figure 2 shows the “Create New Discussion Group” button in the Homepage and the pop-up window for Discussion Group creation. New Discussion groups can be given a Name, Description, a Website and a Photo.

Once a Discussion group is created, it will have a webpage associated to it (see Figure 3). The Discussion group Page shows 4 main areas. On the top right, the Discussion Groups members’ area shows the people who joined the discussion (they may or may not be actively contributing). A “join the discussion” button allows for new people to join the group. On the top left the Discussion Group name, image, website and description are shown together with statistics bar, showing general contributions statistics on the Discussion groups (number of Participants, contributions and votes).

At the centre of the page an Add button with a + icon shows the place in which new issues can be added for debate. Issues are also given a title, picture and description and when added they show as list of boxes in the bottom left area of the page. In Figure 3, you can see two debates have been added to the Civic Society Discussion Group.

Finally in the bottom left area of the Discussion group page (Figure 3) you can see a link to the Discussion Group Dashboard, that will be described in D3.9, and a link to “Share”, which will eventually allow users to share content off site (to be developed in the next development phase).



**Figure 2: DebateHub Homepage and pop-up window to “Create New Discussion Group”**

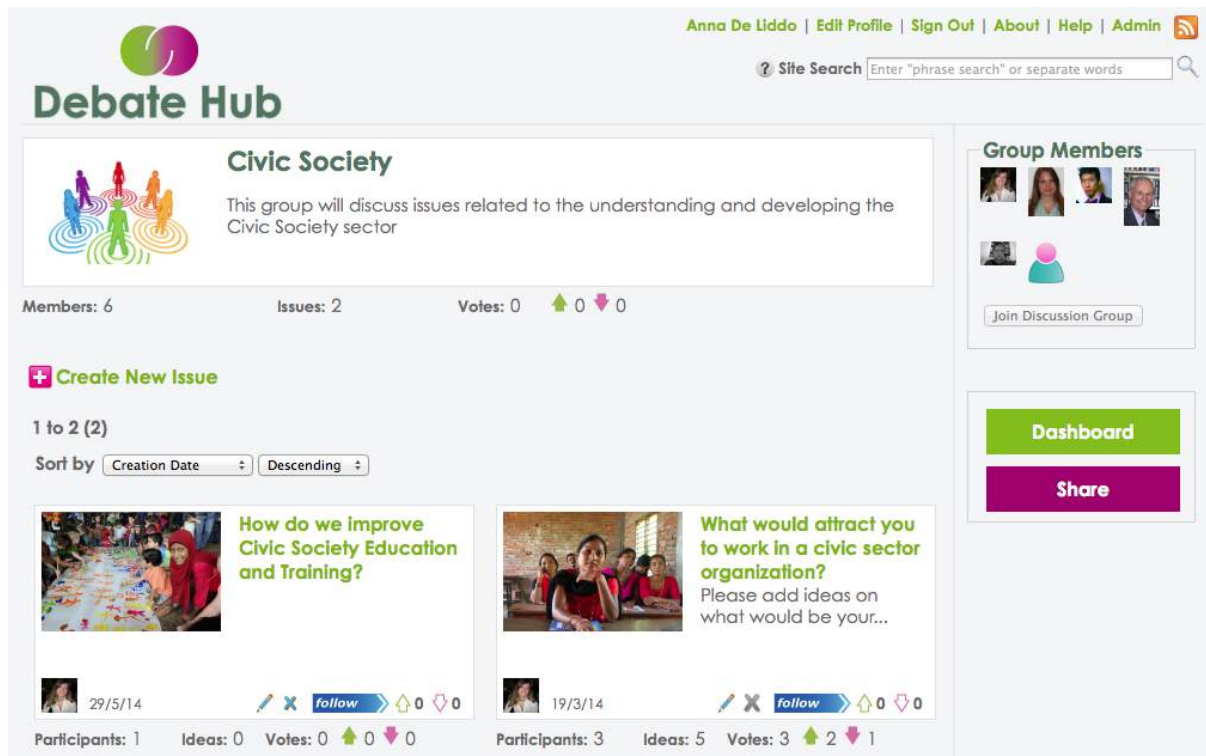



Figure 3: Discussion Group Homepage

### 2.4.2 Argumentation-based Discussion


Once a new issue is created, either in or outside a Discussion group, issues can be debated by adding ideas and by contributing to the pro and con of these ideas. Basically, unlike simple discussion forums DebateHub provides specific argumentation-based features that allow topic-centric rather than time-centric structuring of the conversation. The Issue page is where the argumentation-based discussion takes place. The Issue Homepage is organised in three parts Figure 4.


Anna De Liddo | [Edit Profile](#) | [Sign Out](#) | [About](#) | [Help](#) | [Admin](#)

Site Search

## Debate Hub

Civic Society



### What would attract you to work in a civic sector organization?

Please add ideas on what would be your main motivation and reward for working in the civic society sector.

19/3/14

[Dashboard](#) [X](#) [follow](#)

#### + Add Your Idea



[Submit](#)


Organize

---

1 to 4 (4)

0

0



#### Better pay would help.


100%

Civic sector organisations often come from a tradition of NGO and volunteering and this, even if noble has somehow converted into the wrong assumption that civil sector officers can be lower paid. I think on the contrary a new trend should start and better salary should be offered to "reward" people for the choice to work on a sector that mainly aims at the improvement of civic society at large.

[Comments \(0\)](#) [Arguments \(1\)](#)

0

1



#### Org makes it possible to solve complex, urgent problems


50% 50%

My reason for joining a civic sector org would be to participate in collectively finding solutions to complex, urgent problems.

[Comments \(0\)](#) [Arguments \(1\)](#)

0

0



#### I think that the use of role models could help

67%

[Comments \(0\)](#) [Arguments \(3\)](#)

##### For (1)

I think not just students but also adults may be in need nowadays of positive role models. Especially since the one that media and economy propose turn to be often limited. The problem though is how do we propose them?

<http://kml.open.ac.uk>

Supporting Argument Title...

Supporting Argument Description...

Paste Url...

[Add Another Url](#)

[Submit](#)

##### Against (2)

Role models is something you pick it is not something you can choose for someone else. If we propose civic role models to teenagers it is the best way to have them DO NOT FOLLOW.

The problem with role models is that they do not really push people to think creatively to what they could be or do to improve the civic society.

Counter Argument Title...

Counter Argument Description...

Paste Url...

[Add Another Url](#)

[Submit](#)

2

0



#### I think about joining an organization, and not a "sector."

100%

I have spent much of my career working in non-profits or working as an external service provider to non-profits. I have chosen to work for each of these organizations based on the particular mission/purpose of that organization, but I don't really think about it as choosing to work in a "sector." It's an organization by organization kind of assessment for me.

[Comments \(0\)](#) [Arguments \(1\)](#)

Figure 4: Issue Page for argumentation-based discussion

On the top right of Figure 4 you can see a text box constantly available allowing quick entry of Ideas on how to tackle the debated issues. Once a new idea is submitted, it appears at the top of the idea list that occupies the centre bottom of the page (Figure 4).

The listed ideas can be promoted or demoted in the list on the basis of how strong or weak people think that the idea responds to the debated issue.



Then ideas can be debated by adding Arguments for and against each idea. As mentioned in section 2 DebateHub provides a two-column interface with colored column's titles (For and Against in Figure 4) to add arguments in favor and against an idea. The classical argumentation hierarchy Issue>idea>arguments>resources is obtained by using different headers and positioning in the Webpage, with a very "linear" structure. The issue is the Title of the page "What would attract you to work in a civic sector organisation?", the solutions are in the list at the center of the page, the For and Against are in the two columns spaces below each issue; and the resources are shown as "clip" icons at the end of the argument's text (Figure 4).

The level of support and opposition for an idea is fed back to the user with a small stacked bar chart showing the percentage of support (green bar) and opposition (red bar) for that idea. This is being calculated with an algorithm that computes the level of support and opposition on the base of six main metrics: the number of arguments (in favour and against), the number of votes on the idea (in favour and against), the number of votes on arguments (in favour and against).

### 2.4.3 Voting

DebateHub provides so far simple binary voting (voting up and down) on three main contribution types: issues, ideas and arguments.

Issues can be voted both from the homepage or in the DebateGroup page (Figure 5).



Figure 5: Issue Voting

Whereas Ideas and arguments can be both voted in the Issue page.

Ideas can be voted from the idea list of an issue with thumb up-down icons at the left of each idea label (Figure 6).

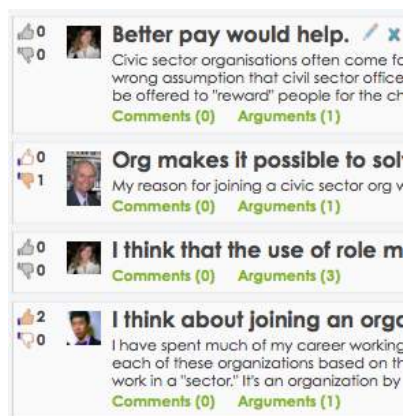


Figure 6: Voting ideas up and down in the issue page

Arguments can be voted in the two-column space below the ideas they support or challenge (Figure 7).

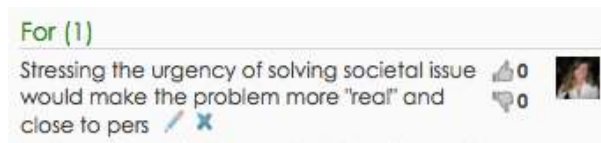


Figure 7: Voting Arguments in the "For" list.

In the future phase of development, and depending on other coding priorities, we consider supporting more sophisticated prioritisation mechanisms for ideas, such as idea ranking and possibly multi criteria voting.

#### 2.4.4 Moderation

DebateHub has a moderation toolkit, which consists of a series of Moderators' features to help re-structuring and organising community's content. Two main functionalities have been implemented so far: **Merging** and **Splitting**.

##### 2.4.4.1 Merging contributions

When two or more contributions seem to make the same point, or when they would be better phrased in one higher-level idea, moderators can merge them. In order to activate the "merging" function moderators should click on the "organise" tab (Figure 8).

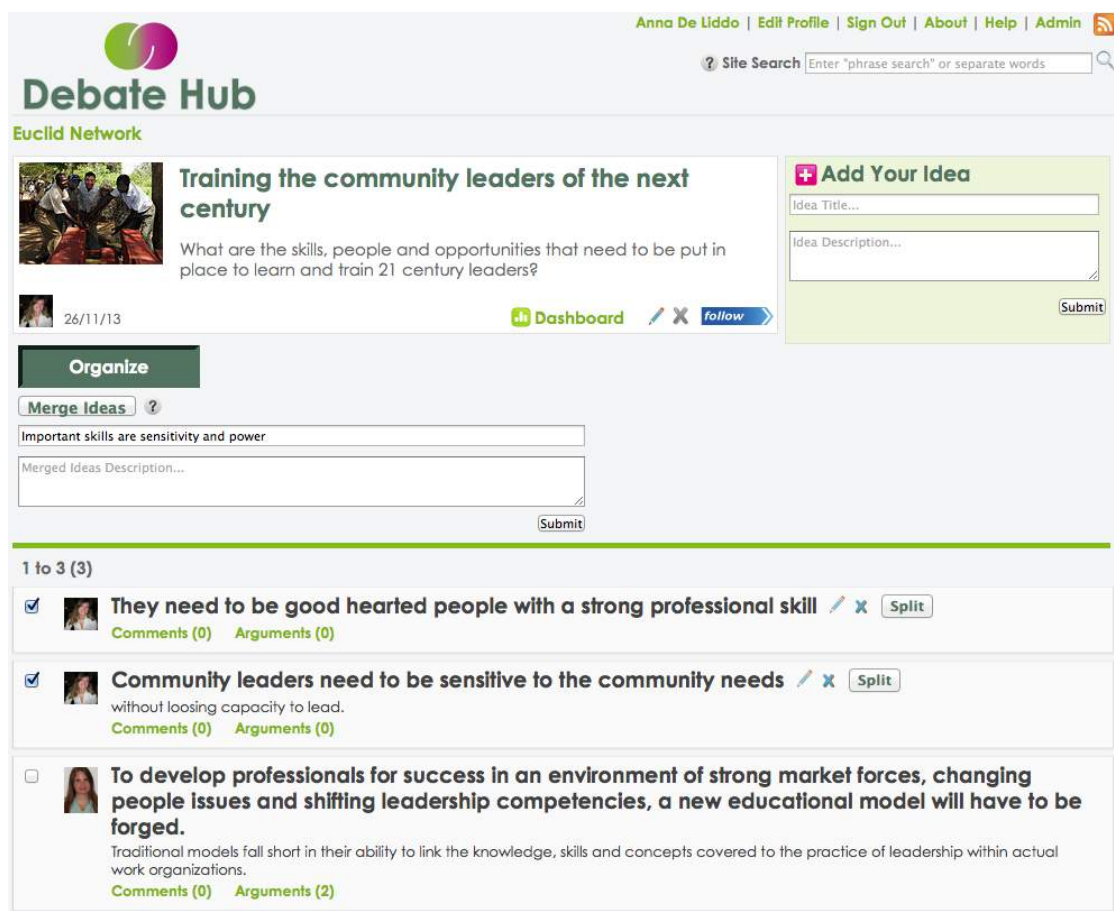


Figure 8: Organise tab and Merge Idea function

This shows an additional “merge idea” button below the “organise” tab (Figure 8). Check boxes also appear at the left hand side of the ideas list. Users can select the ideas they want to merge and click on the “merge idea” button. This will expand a text box below the Merge button in which the text of the new idea can be filled in (Figure 8). Once the new idea is created the two (or more) merged ideas will be replaced by the new idea in the idea list. A little star sign on the side of the new idea tile will show that this idea was built from previous ideas, and clicking on the star sign people can see from which ideas the new idea was merged from. This functionality allows tracking provenance of ideas. See the demonstration video at section 4 for an example of this feature in action (<http://youtu.be/u9Ln18Zx8sw>).

#### 2.4.4.2 Splitting Contributions

Another moderation function is splitting. This can be used when newcomers to the website, or people not trained in argument mapping, add very long contributions in one place. For instance, users may not be used to think in terms of ideas and arguments as separate contribution types and they may add only one contribution containing both. Or, they may add one contribution containing more than one idea. In these cases, community managers can use the **split** function to fragment contributions to the right granularity, in example splitting one idea in two. The “split” button is at the right hand side of each idea label (Figure 9). This button appears only when a community manager or moderator is signed in. By clicking on “split” a window pops-up with two text-entry fields. Moderators can then just type the text of the two ideas they want to create to replace the idea they splitted. A link to “add another idea” is also provided in the pop-up window to allow further splitting (Figure 9).

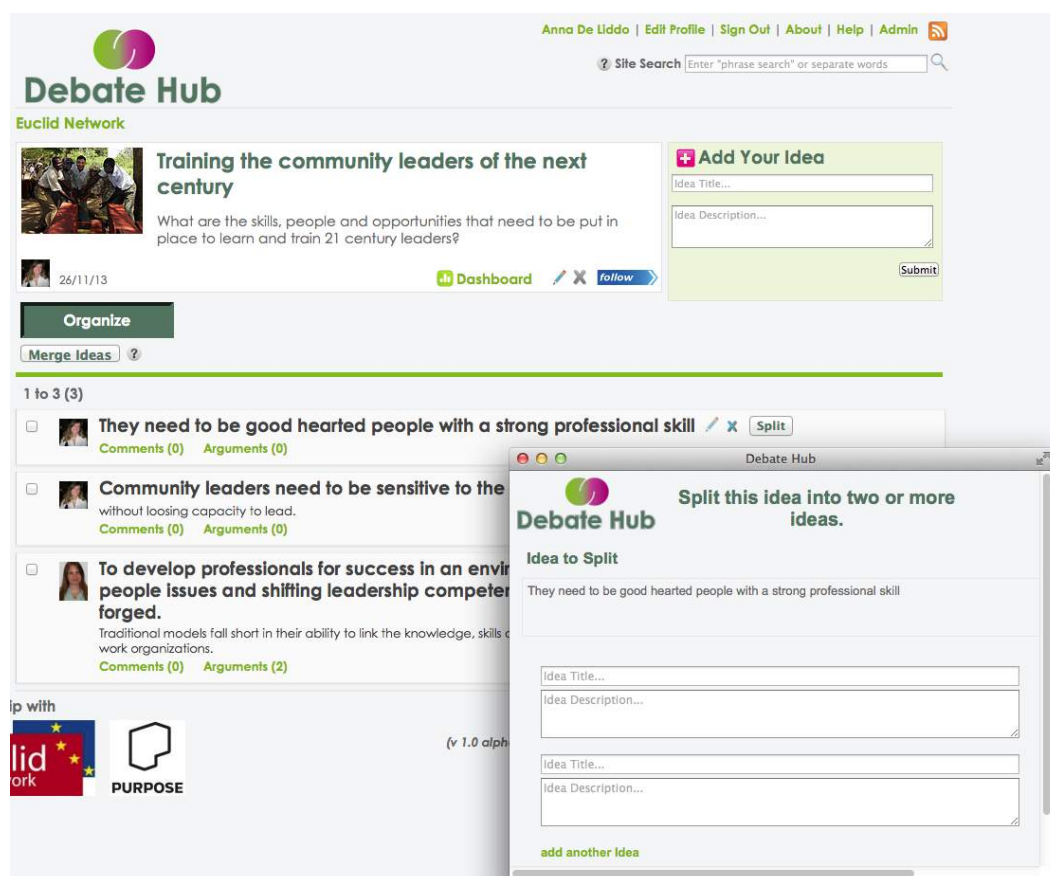


Figure 9: Split Button at the right hand side of ideas and Split pop-up window



At the moment only Discussion Group Administrators have the moderation features active on their account so that, when they log in to the site, additional functionalities are offered to them. In the future, we need to create an interface for Group admin to invite moderators. We may also create a new role in the group management structure, which differentiate between Discussion Group Administrators and Moderators.

## 2.5 Demonstrations

As a way to describe the tool in action and exemplify DebateHub features we created two demonstration screencasts. All the Demonstration Videos have been uploaded to the CATALYST YouTube channel at:

<https://www.youtube.com/user/CATALYSTFP7>

In the following we describe the video content and provide links to the screencasts.

### 2.5.1 *DebateHub intro and argumentation-based discussion Interface*

This Video describes DebateHub in action. DebateHub is a tool for online deliberation of complex problems. These are societal challenges that have more than one point of view to consider, and require a collaborative argumentation process and multiple expertises in order to be understood and addressed. The video shows how users can create Discussion Groups to debate a specific challenge and how different issues can be added and discuss to a discussion group. The video also demonstrates: 1) how issues can be discussed by adding potential solutions and arguments for and against it; 2) how support and challenge to various solutions can be expressed by voting on contributions.



Watch the Video at: <http://youtu.be/TqoQWpuHzbA>

### 2.5.2 *DebateHub: Community moderation features to merge and split contributions*

This video shows two DebateHub's features designed to help community managers to re-structure and organise online debate content. Two main features are described: Merging and splitting contributions. The video details how two or more ideas added to a conversation can be merged in one new higher-level idea. This feature is meant to reduce duplication of ideas, which is one shortcoming of most collective ideation platforms and that could be particularly problematic when it gets to focusing users' attention and selecting or voting ideas. The second functionality demonstrated in the video is splitting one contribution in two or more contributions. Splitting is required when inexperienced users add too much content in one contribution. Community managers can then split long contributions in more than one contribution. Both, merging and splitting, preserve authorship provenance, so people can always find out what are the contributions an idea was built from, and who are the authors that initially created them. Provenance mechanisms are built in to ensure idea recognition in the community platform.



Watch the Video at: <http://youtu.be/u9Ln18Zx8sw>

## 3. Assembl

### 3.1 Concept mapping in Assembl

Most concept mapping tools in the Collective Intelligence field are based on a pre-existing structure, most commonly IBIS. To participate in the process participants need to find an adequate location on the map to propose a new node, or modify an existing one. This has obvious advantages, the main one being that all contributions are structured. The major drawback is that this is not the way most people are used to communicating.

Assembl tries a different path: progressive structuring of chronological discussion. At any given point in time the structure (the Table of Ideas in Assembl) represents the entire discussion, including off-topic debates, side conversations and things of that general nature. The structure is progressively refined as the size of the conversation grows (to keep the number of Posts per node manageable), and as the collective understanding of the subject matter is refined.

The Table of Ideas is based on a free-form tree view that is manipulated by drag and drop. We call the nodes of that tree “Ideas”, but one can also see them as topics/sub-topics, concepts, etc. They are currently untyped and the only supported link is a containment link between parent ideas and children ideas.

This concept map is built progressively by Harvesters. It is designed to provide 5 key functionalities:

1. Organise ideas within the Table of Ideas through dragging and dropping.
2. Associate clipped content from messages or web annotations with existing ideas, or create new ideas from them.
3. Select a subset of the ideas and reformulate them into a synthesis of the discussion.
4. Allow teams of harvesters to work together at the same time
5. Exploiting the structure to organise the original conversation, and reduce the workload of the Harvesters.

The following sections describe these key functionalities in more detail.

### 3.2 The Table of Ideas

#### 3.2.1 *Reorganising within the Table of Ideas - Drag and drop*

Once ideas have been organised into the Table of Ideas, they are placed into idea threads. Ideas can be reorganised as the discussion evolves by dragging and dropping. Harvested content can likewise be reorganised into different ideas by dragging and dropping the associated post-its.

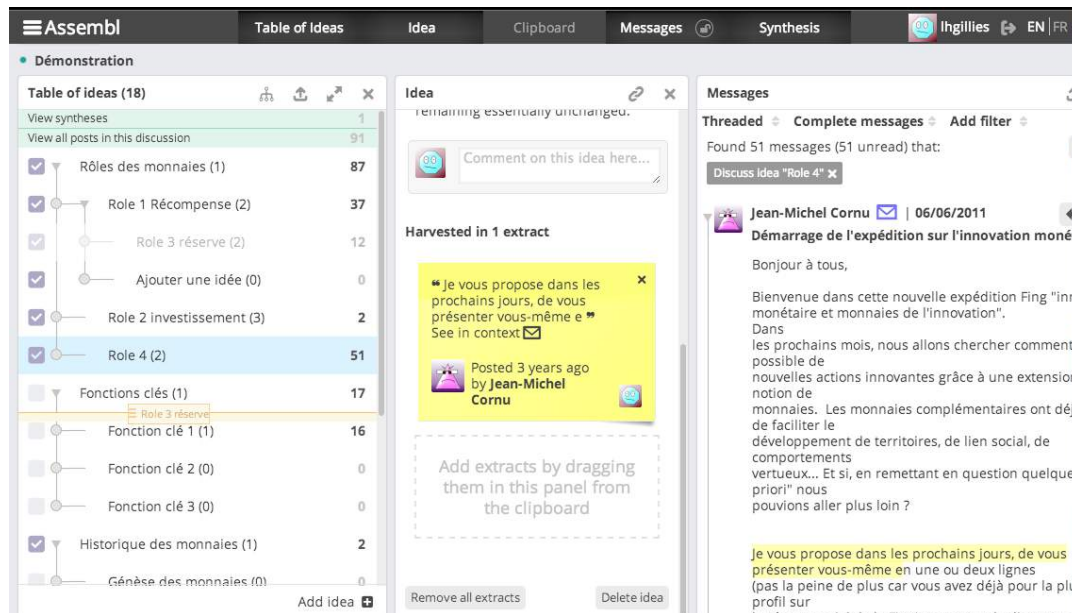


Figure 10: Re-organising ideas within the Table of Ideas (1:00 in Assembl Video 2.0)

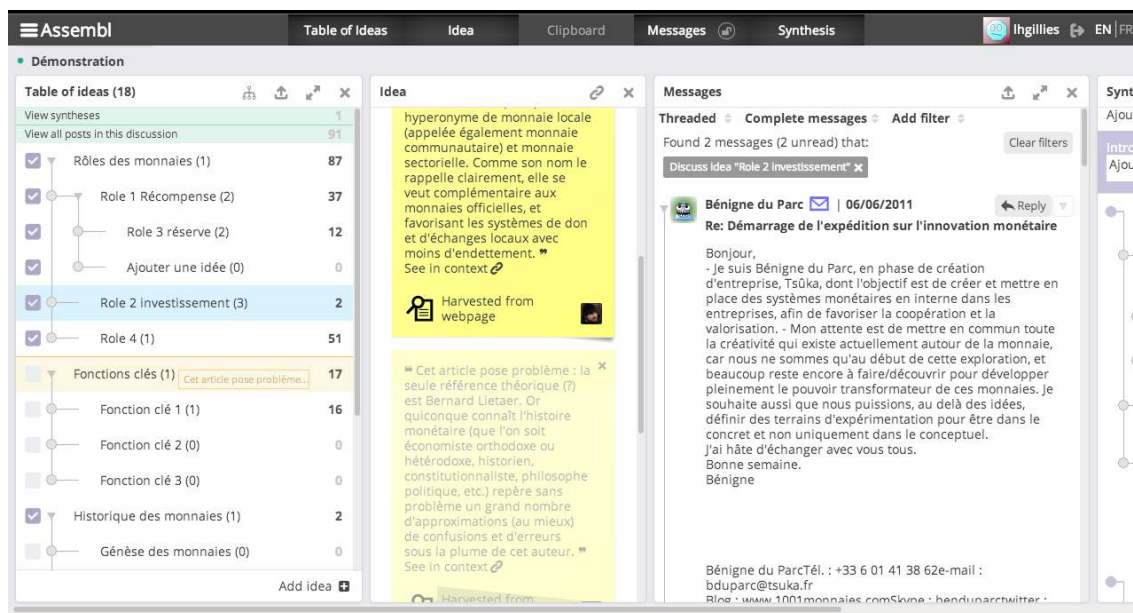


Figure 11: Re-organising harvested ideas (3:40 in Assembl Video 2.0)

An idea can be merged into another one (to keep the size of the table of ideas in check) by moving the extracts from the idea to be merged, from into the idea to be merged into, and subsequently deleting the source idea. Similarly, when a conversation around an idea becomes too big to manage, an idea can be refined into two (or more) sub-ideas by clicking on the 'Add idea' button and moving the appropriate extracts from the parent idea into the appropriate sub-idea.

### 3.2.2 Create new idea from harvested content

Note: Harvesting content is part of Task 3.3, and is not covered in detail here.

Users who harvest content are able to create a new idea by directly dragging the clipped content below an idea in the Table of Ideas.

They can also associate the extract with an existing idea by dragging it on top of the idea.

The message thread from which the extract was taken will follow and be visible when clicking on the idea. This is key for reducing the workload of Harvesters. All messages associated with an idea can be accessed by clicking on the harvested idea. This allows Harvesters and general users to quickly find associated messages.

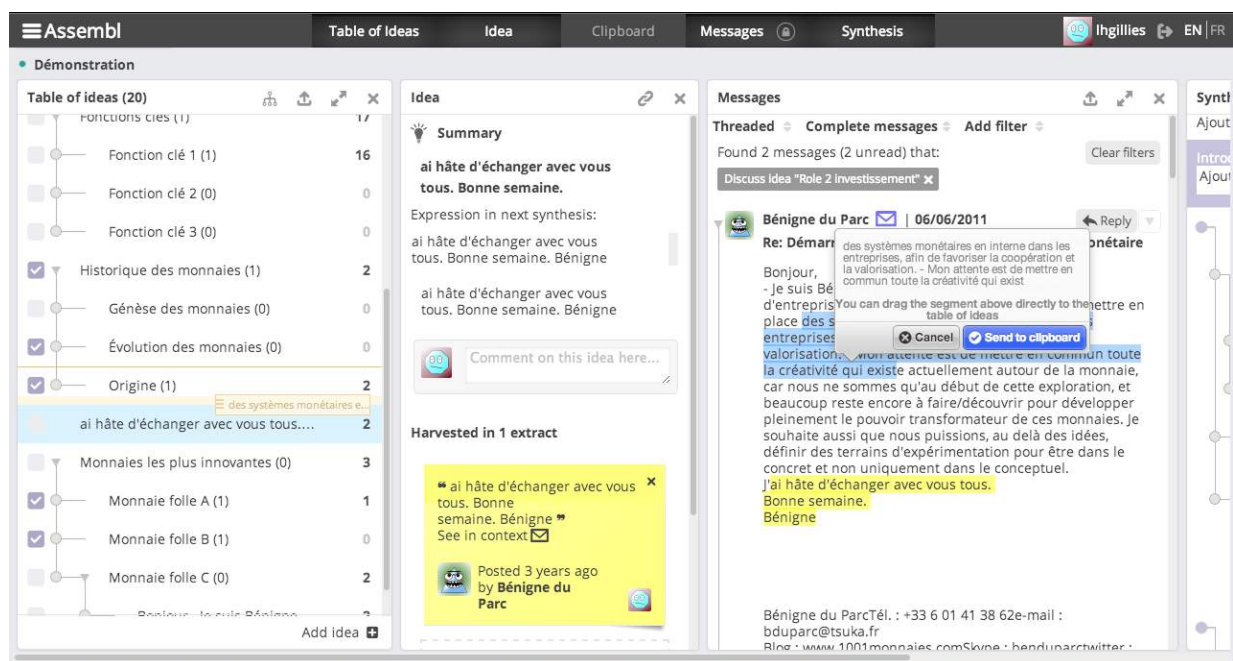


Figure 12: Creating a new idea from harvested content (3:40 in Assembl Video 2.0)

## 3.3 The Synthesis

A synthesis is a subset of the Table of Ideas, taken at a specific point in time to provide a cohesive view of the discussion at a specific point in time. The most common use is to outline the evolution of the discussion from the previous week.

### 3.3.1 Adding and removing ideas from the synthesis

Ideas can be added and removed from the Synthesis by checking or unchecking them in the Table of Ideas. A checked idea will be included in the Synthesis, an unchecked one will not. This synthesis updates along with harvested content on all screens, allowing multiple harvesters to work together simultaneously.

The screenshot shows the Assembl platform interface. The top navigation bar includes 'Assembl', 'Table of Ideas', 'Idea', 'Clipboard', 'Messages', and 'Synthesis'. The 'Table of Ideas' panel on the left shows a hierarchical tree of ideas with checkboxes for selection. The 'Synthesis' panel on the right shows a structured outline of the synthesis, including sections for Introduction, Conclusion, and various idea entries with associated counts and user avatars.

Figure 13: Adding or removing an idea from the synthesis (2:55 in Assembl Video 2.0)

Note that it is perfectly acceptable to “skip” levels of ideas from the Table of Ideas when including ideas in the synthesis. The above screenshot illustrates this as the first idea (Rôles des monnaies) in a subset is included, the second level idea is skipped but a third level idea (Ajouter un idée) is included.

### 3.3.2 Reformulating and formatting the synthesis

The synthesis shares the structure with the Table of Ideas as is shown in Figure 13

### 3.3.3 Publishing the Synthesis

Once published, the synthesis is “frozen” and becomes visible in the message panel.



The screenshot displays the Catalyst web application interface. At the top, there's a navigation bar with tabs: 'Table of Ideas', 'Idea', 'Clipboard', 'Messages', and 'Synthesis'. The 'Table of Ideas' panel on the left shows a hierarchical list of ideas under the heading 'Table of Ideas (20)'. Ideas include 'Rôles des monnaies (1)', 'Rôle 1 Récompense (2)', 'Rôle 3 réserve (2)', 'Ajouter une idée (0)', 'Rôle 2 Investissement (3)', 'Rôle 4 (1)', 'Fonctions clés (1)', 'Fonction clé 1 (1)', 'Fonction clé 2 (0)', 'Fonction clé 3 (0)', 'Historique des monnaies (1)', 'Génèse des monnaies (0)', 'Évolution des monnaies (0)', 'Origine (1)', 'ai hâte d'échanger avec vous tous. Bonne semaine. (1)', 'Monnaies les plus innovantes (0)', 'Monnaie folle A (1)', 'Monnaie folle B (1)', 'Monnaie folle C (0)', and 'Bonjour, Je suis Bénigne du Parc, en phase de cré (1)'. The 'Messages' panel on the right shows a thread of messages. The top message is from 'Benoit Gregoire' with the subject 'Re: Démarrage de l'expédition sur l'innovation monétaire'. Below it, there's a message from 'Frank Escoubes' with the subject 'Add a title'. The main content of the message thread includes an 'Introduction' section, a list of ideas with comments, and a 'Conclusion' section. The 'Introduction' section starts with 'Rôle des monnaies By Olivier Maurer comment'. The list of ideas includes 'La fonction récompense consiste à récompenser un comportement souhaité (social design). By Jean-Michel Gomis, Olivier Maurer comment', 'Le rôle de monnaie de réserve est lié à la fonction d'épargne By Thierry Grousset comment', 'L'investissement est une activité consistant à utiliser la monnaie alternative comme monnaie de placement. By Bénigne du Parc comment', 'Fonctions clés By Genevieve Bauchel comment', 'Historique des monnaies comment', 'Contrary to popular belief, Lorem Ipsum is not simply random text. It has roots in a piece of classical Latin literature from 45 BC, making it over 2000 years old. Richard McClintock, a Latin professor at Hampden-Sydney College in Virginia, looked up one of the more obscure Latin words, consectetur, from a Lorem Ipsum passage, and going through the cites of the word in classical literature, discovered the undoubtable source. comment', 'Évolution des monnaies comment', 'Cette idée fait partie de la prochaine synthèse XXXXXX By Anthony REMAUX comment', 'Monnaies les plus innovantes comment', and 'Monnaie folle A By Simon Sarazin comment'. The 'Conclusion' section has a text input field labeled 'Add a conclusion'.

Figure 14: 'Frozen' synthesis, published in the message panel

From this point on, selecting ideas in the Table of Ideas will only affect the next synthesis.

### 3.3.4 Commenting via the Synthesis

Participants can comment on ideas that have been selected for the Synthesis directly via the Synthesis. Participants must click 'comment' to post their message. The message will appear in the message thread that relates to the idea.

The screenshot shows the Assembl platform interface. On the left, the 'Table of Ideas (20)' lists various topics with their respective counts. The 'Synthesis' panel on the right shows a hierarchical structure of ideas and a text input area for adding a response. The 'Idea' panel in the center shows a summary and a comment input area.

Figure 15: Reply directly through the synthesis (3:14 in Assembl Video 2.0)

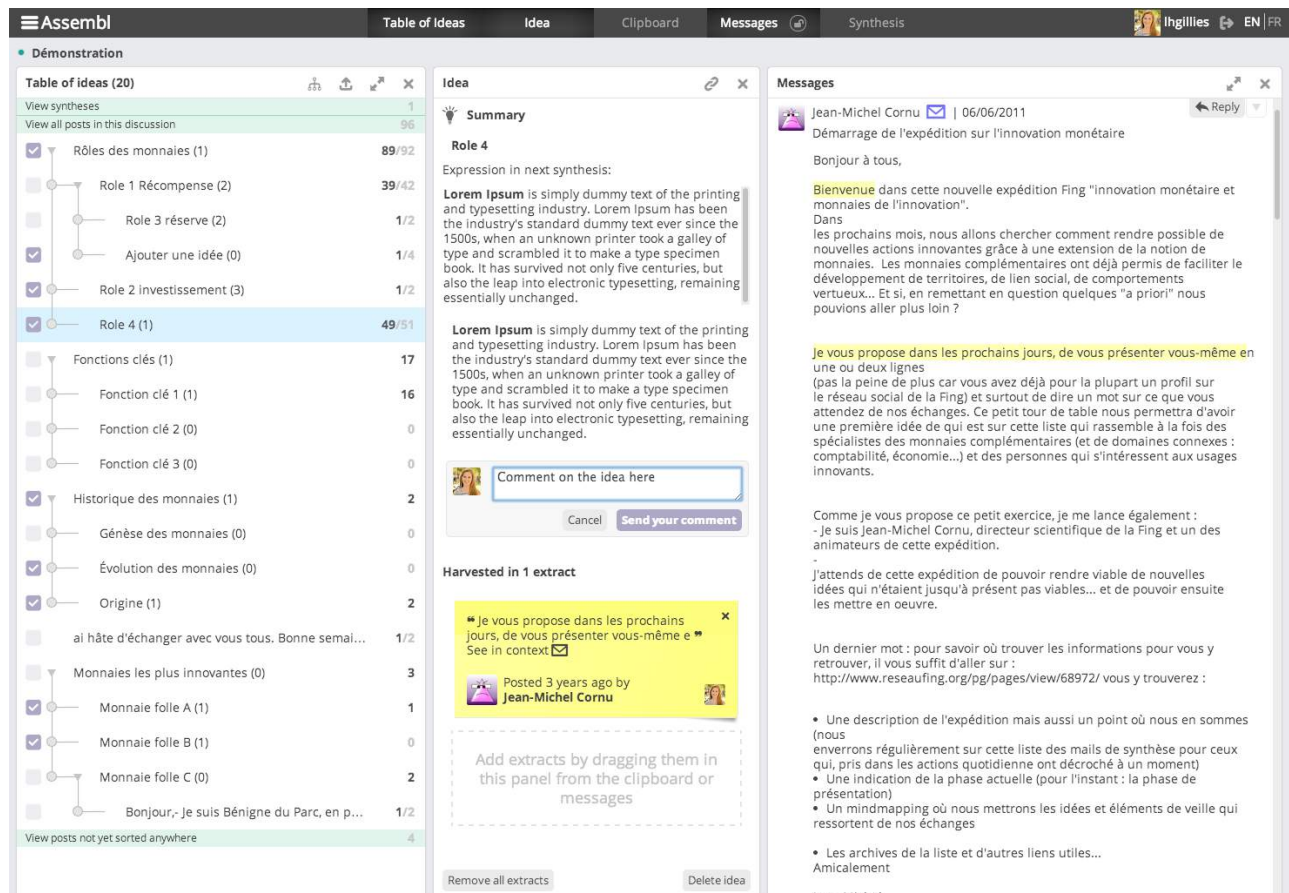
The screenshot shows the Assembl platform interface. On the left, the 'Table of Ideas (20)' lists various topics. The 'Messages' panel on the right shows a list of messages, with one message highlighted in red, indicating a reply. The 'Idea' panel in the center shows a summary and a comment input area.

Figure 16: Replies will appear in the message thread related to the idea that was commented on (3:14 in Assembl Video 2.0)



### 3.3.5 Organising the conversation to reduce Harvester workload

The ability of participants to comment directly on ideas in the idea panel greatly reduces the workload for Harvesters as the comment will be automatically linked to the idea. In addition, the ability of the Harvester to see the entire parent thread when clicking on an idea reduces the time spent searching for related ideas.



The screenshot shows the Assembl interface with three main panels: 'Table of Ideas', 'Idea', and 'Messages'. The 'Table of Ideas' panel on the left lists 20 ideas, including 'Rôles des monnaies', 'Fonctions clés', 'Historique des monnaies', and 'Monnaies les plus innovantes'. The 'Idea' panel in the center shows a selected idea with a summary and a comment box. The 'Messages' panel on the right shows a message from Jean-Michel Cornu with a comment that is linked to the idea in the 'Idea' panel.

Figure 17: Comments on ideas will appear linked to the idea in the message panel

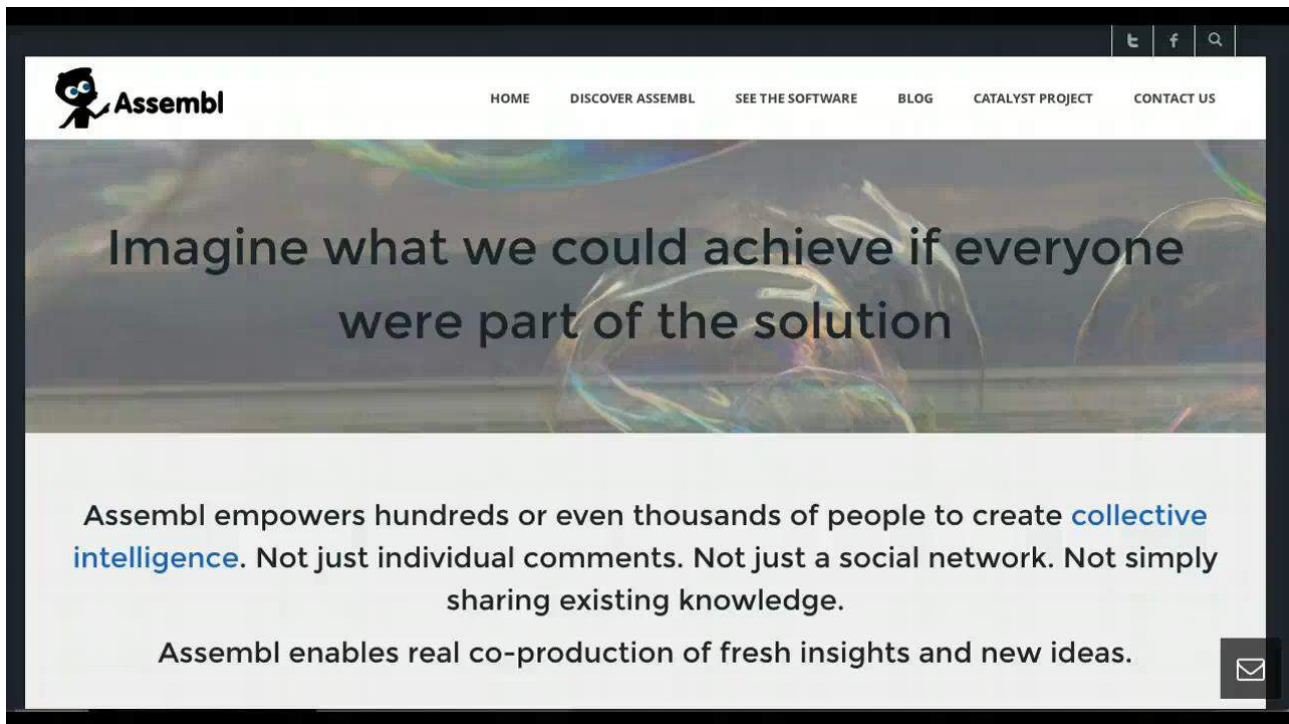
## 3.4 Demonstration and source code

The functionalities in this document can be played with in a sandbox. This sandbox is generally available at the following address: <http://assembl.coeus.ca/sandbox/> with the express purpose to play with the interface. An account needs to be created before you can edit anything, but will automatically be granted all permissions once you do.

Development on Assembl is completely open, and activity can be followed here on a real-time basis:

- Code browser: <https://github.com/ImaginationForPeople/assembl>
- Commit history: <https://github.com/ImaginationForPeople/assembl/commits/develop>

They can also be viewed in the following video: (Note: all video times in the above Assembl section refer to this video.) Please visit <https://www.youtube.com/watch?v=7E2FUSYO374> to view.



Imagine what we could achieve if everyone were part of the solution

Assembl empowers hundreds or even thousands of people to create **collective intelligence**. Not just individual comments. Not just a social network. Not simply sharing existing knowledge.

Assembl enables real co-production of fresh insights and new ideas.

## 4. Conclusions and Future Directions

This document presented the DebateHub prototype, the main functionalities of the tool and two screencasts to demonstrate the tool in action as well as Assembl's Table of Ideas and synthesis idea visualisation. The DebateHub testing site can be freely accessed and tried at: <http://hubtesting.kmi.open.ac.uk/>. We plan to release the DebateHub software by the end of the project under LGPL license. This implies that all external libraries we are using or intend to use will be compatible with this license.

In the future phase of project we can anticipate the following development directions for DebateHub:

- **Grouping:** new features will be added to allow groups invitation. A mechanism should be put in place so that people can ask to join a group but some check and validation from group Admin and/or moderators is done before a user is allowed to contribute to the discussion.
- **Argumentation-based Discussion:** we plan to assess the DebateHub interface compared to other discussion forum interfaces in order to assess how usable and intuitive is the argumentation-based interface for debate contribution. Changes and redesign will be probably consequence of the testing and they may lead to a new interface by the end of the project.
- **Voting:** new selection mechanisms such as ranking and multicriteria voting may be implemented to improve on existing limitation of binary voting, which does not allow to express the variety of criteria on which support and opposition can be given and it does not allow comparative assessment.
- **Moderation** another key moderation activity that we plan to develop is *moving* contributions within the same Discussion group and *changing contribution type*. These two functionalities are likely to be delivered in combination. This would allow community managers to restructure the debate and correct miscategorisation.

For Assembl we can anticipate the following development directions in the relatively near future:

- **Idea-typing:** ideas in Assembl are currently untyped. It is required to support untyped ideas to support any message a participant may send. This does not preclude however parts of the tree to obey a specific set of rules. We believe that our progressive structuring methodology applies just as well to an IBIS argument structure (for appropriate debates) as it does to a more general topic/subtopic structure. We intend to implement full IBIS support in the near future.
- **Richer email version of the synthesis:** right now, the system provides little help for providing an email version of the synthesis that allows participants to directly respond to a single point like they can on the web.
- **Feedback on the synthesis:** as part of Work Package 4, we intend to use the multi-criteria voting widget developed in Task 3.8 to solicit feedback on the synthesis as a whole (is the structure clear, is it too long/short, clear/unclear, well balanced/slanted, etc.) rather than just comments on individual ideas.

## List of Tables and Figures

FIGURE 1: DEBATEHUB HIGH-LEVEL CODE ARCHITECTURE	9
FIGURE 2: DEBATEHUB HOMEPAGE AND POP-UP WINDOW TO “CREATE NEW DISCUSSION GROUP”	11
FIGURE 3: DISCUSSION GROUP HOMEPAGE	12
FIGURE 4: ISSUE PAGE FOR ARGUMENTATION-BASED DISCUSSION	13
FIGURE 5: ISSUE VOTING	14
FIGURE 6: VOTING IDEAS UP AND DOWN IN THE ISSUE PAGE	14
FIGURE 7: VOTING ARGUMENTS IN THE "FOR" LIST.	15
FIGURE 8: ORGANISE TAB AND MERGE IDEA FUNCTION	15
FIGURE 9: SPLIT BUTTON AT THE RIGHT HAND SIDE OF IDEAS AND SPLIT POP-UP WINDOW	16
FIGURE 10: RE-ORGANISING IDEAS WITHIN THE TABLE OF IDEAS (1:00 IN ASSEMBL VIDEO 2.0)	20
FIGURE 11: RE-ORGANISING HARVESTED IDEAS (3:40 IN ASSEMBL VIDEO 2.0)	20
FIGURE 12: CREATING A NEW IDEA FROM HARVESTED CONTENT (3:40 IN ASSEMBL VIDEO 2.0)	21
FIGURE 13: ADDING OR REMOVING AN IDEA FROM THE SYNTHESIS (2:55 IN ASSEMBL VIDEO 2.0)	22
FIGURE 14: ‘FROZEN’ SYNTHESIS, PUBLISHED IN THE MESSAGE PANEL	23
FIGURE 15: REPLY DIRECTLY THROUGH THE SYNTHESIS (3:14 IN ASSEMBL VIDEO 2.0)	24
FIGURE 16: REPLIES WILL APPEAR IN THE MESSAGE THREAD RELATED TO THE IDEA THAT WAS COMMENTED ON (3:14 IN ASSEMBL VIDEO 2.0)	24
FIGURE 17: COMMENTS ON IDEAS WILL APPEAR LINKED TO THE IDEA IN THE MESSAGE PANEL	25