D. 1.1 Methodology of project emergence in interclustering and intersectoral context (1)

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D. 1.1

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Abstract

The animation of creative sessions permits to identify new opportunities for collaborative innovation projects. To support this process, a **dedicated methodology** called **STAR** (*Structured and sTructuring Animation methodology for emeRgence)* **facilitates project emergence in interclustering and cross-sectoral context** during innovation clubs.

This deliverable gives animation guidelines to cluster facilitators of the NEPTUNE project in order to explain how the STAR methodology shall be used during the NEPTUNE innovation clubs sessions.

Each step of the animation process is described following the same format:

1. **prerequisites** to check that the facilitator has enough information before starting a step,
2. **description** of the step, which details the aims and how to use the animation tools dedicated to this step,
3. expected **outputs** from the use of the STAR methodology.

For each step, **recommendations** are specified to limit issues during animation and avoid misunderstandings.

The STAR methodology intends to offer the best conditions to bring out innovation projects without claiming to be a systematic methodology to be exhaustively followed. Thus, the steps, advices and notes composing this document are to be taken as recommendations and should be adapted to each situation.

To support clusters managers in animating the NEPTUNE innovation clubs sessions, this deliverable will be completed with a face-to-face *Training session for clusters managers (D1.3).*

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ADI ALPC: Agence de Développement et d'Innovation Aquitaine Limousin Poitou-Charentes

Admin: Administrator (=ESTIA in the case of NEPTUNE)

ESTIA: Ecole Supérieure des Technologies Industrielles Avancées

Innovation Club: Workgroup to facilitate the emergence of collaborative innovation projects and networking on a given topic

MLC: Asociacion cluster de movilidad y logistica de Euskadi

NWRDA: Agentia de dezvoltare regionala Nord-Vest

PMM-TVT: Pôle Mer Méditerranée – Toulon Var Technologies

SPACE PL: Polish Space Industry Association

STAR: Structured and sTructuring Animation methodology for emeRgence

STAR Platform: Immersive Collaborative Virtual Environment powered by STAR methodology

Theme leader: cluster manager who is in charge of ensuring the proper animation of the thematic sub-workgroup he/she is leading during the creativity session

WIN: Water Innovation Accelerator

WP: Work Package

Overall approach

GENERAL PRINCIPLE

In the frame of the NEPTUNE project, ESTIA is in charge of delivering a specific methodology of project emergence in interclustering and intersectoral context to animate innovation clubs. The innovation clubs can be defined as sustainable sub-workgroups addressing innovative topics. This specific proposed methodology is named STAR methodology.

Following a creativity approach, in the case of NEPTUNE, the STAR methodology stimulates the emergence of Blue Growth projects and the identification of the best ones. The potential participants to NEPTUNE innovation clubs, in particular SMEs, are located all around Europe. Specifically, the SMEs are spread out in the 7 countries the NEPTUNE consortium is located. In order to optimize travels, staff costs, and efficiency of the work sessions, innovation clubs will rely on the interconnection of 9 physical meeting rooms (one in each NEPTUNE region) combined with the use of a dedicated software (called hereafter the STAR platform). Hence, the proposed approach allow the participants (SMEs mainly) to be distributed into different virtual thematic sub-workgroups, as shown in Figure 1. Furthermore, participants will be able to join the innovation clubs sessions through their own laptop from a remote place.
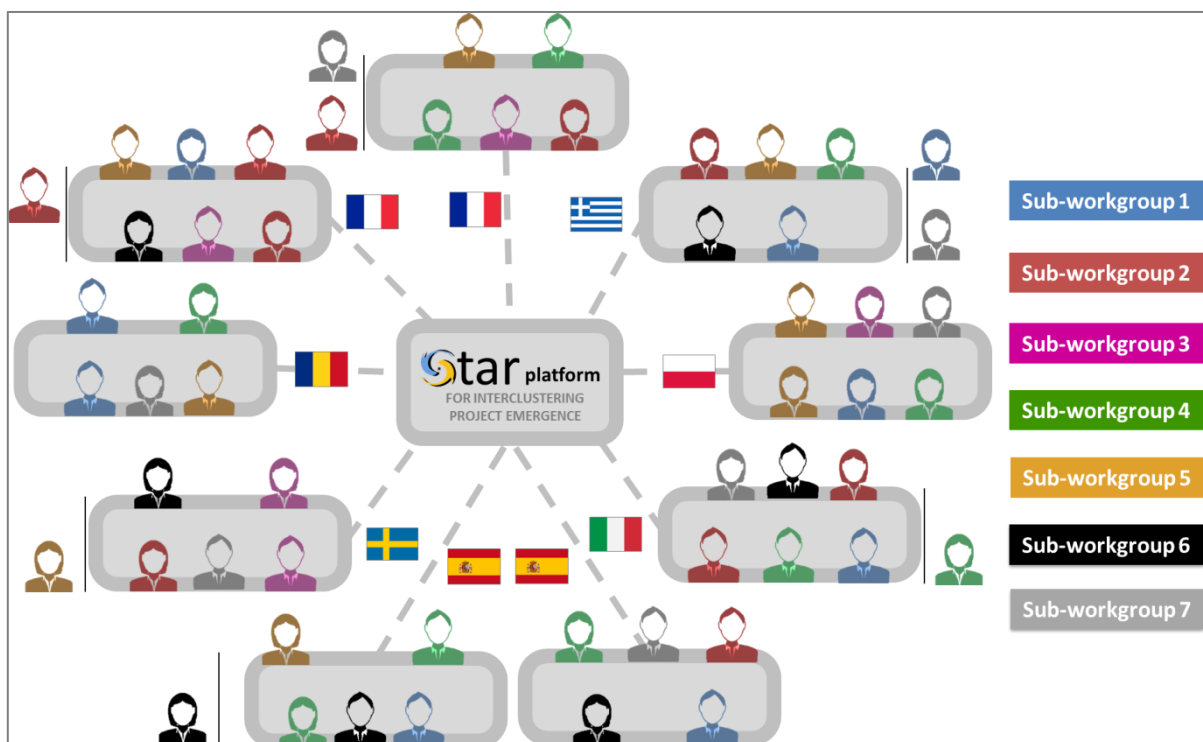
Figure 1: Interconnection principle, from physical locations to virtual rooms

This interconnection principle permits to facilitate the work on a same theme between participants who are not in the same physical meeting room. As explained later in the STEP III, each sub-workgroup deals with a specific theme.

MAJOR STEPS

The STAR methodology encourages following 5 major steps in order to structure the session (see Figure 2). It is expected that the session takes place during half a day: morning or afternoon (around 3 hours and 35 minutes in total).
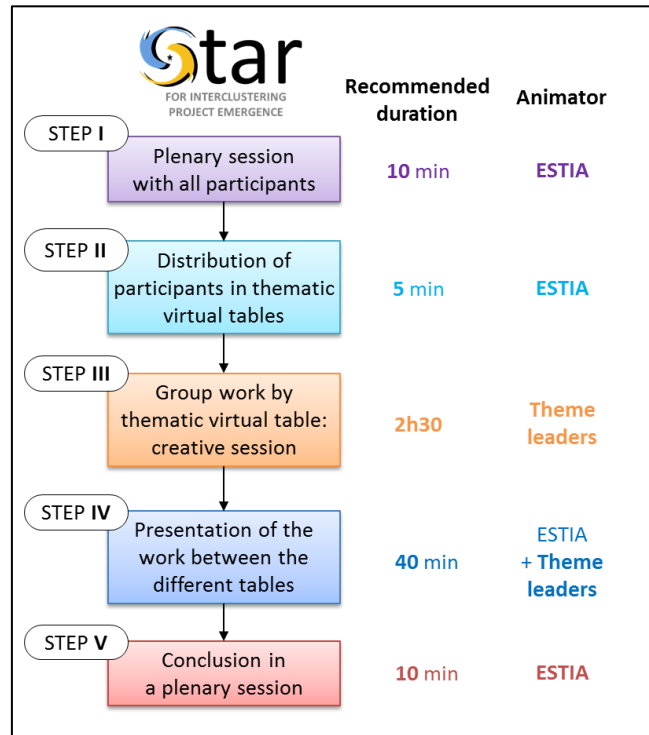
Figure 2: 5 steps to animate innovation clubs

Each of the presented steps is described in more details within this document and contributes to give a global scenario to set up the session.

Globally, ESTIA (administrator) animates the full session and in the STEP III, when sub-workgroups collaborate together, theme leaders (one per virtual table designated among the NEPTUNE partners clusters managers) have to use creative methods and tools to animate each of them as it is explained in Section 3.

SESSIONS OF INNOVATION CLUBS

NEPTUNE plans to set up at least 2 innovation club sessions during the project duration in order to foster emergence as many projects as possible:

- For the first one (12/2016 approximately), the 5 steps will be performed. It is expected to have simultaneously up to 7 sub-workgroups in the same session gathering up to 115 people together to bring out collaborative innovation projects answering Blue Growth challenges. The challenges must be identified by NEPTUNE partners before the session. After the session, group meetings will be organized by the idea leaders and supported by the NEPTUNE team in order to mature their project and apply the NEPTUNE calls.
- For the second one (03/2017 approximately), the principle remains identical, but the topics to be addressed are slightly different. The topics for which a support is awarded after the 1st NEPTUNE selection meeting will not be dealt anymore in order to stimulate the emergence of ideas answering the remaining topics and challenges contained in the NEPTUNE calls.

THE ACTION UNFOLDING
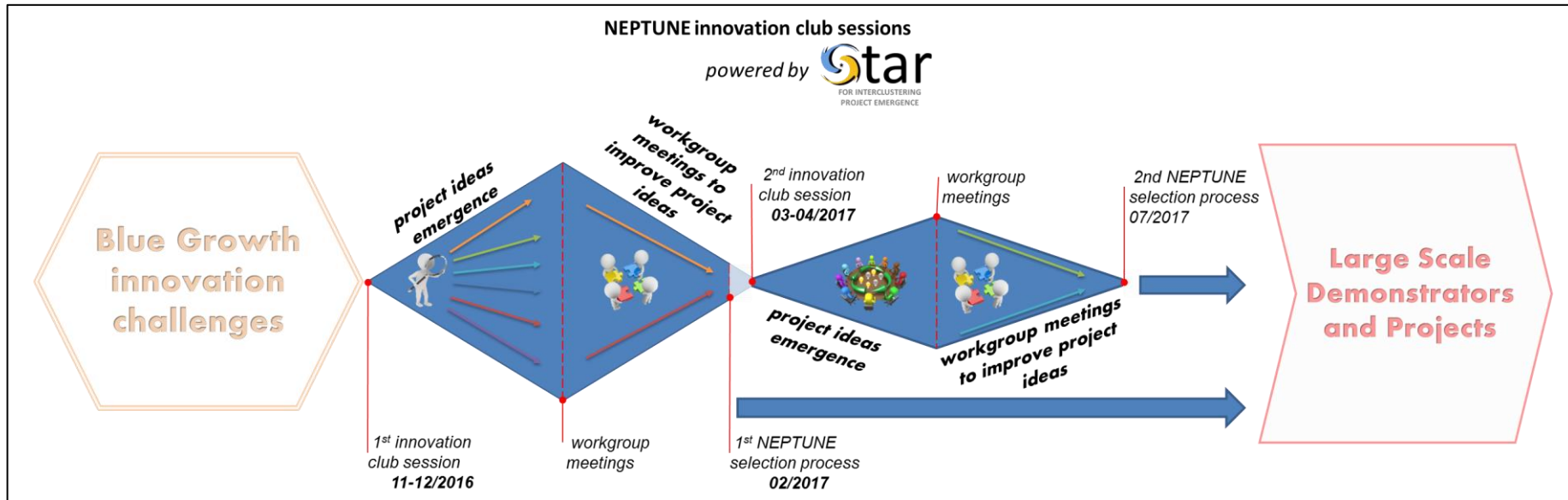
Figure 3: A global overview of the unfolding of innovation clubs sessions

Figure 3 gives a global overview of the action unfolding by articulating the STAR methodology deployment.

PREPARATORY WORK BEFORE THE INNOVATION CLUB SESSION

Before the innovation club session, the following actions listed here below have to be undertaken. They are reminded in each step detailed hereafter in the document under the prerequisites box as well as summed up in the following Figure 4.

- ✓ 7 themes defined before the session (identification of local challenges / needs / trends through a survey filled in by NEPTUNE partners and local stakeholders)
- ✓ One theme leader defined per theme among the following NEPTUNE cluster managers (PMM-TVT, MLC, SPACE PL, WIN, NWRDA, ADI ALPC) as set in the NEPTUNE grant agreement annex 1 Description of the action
- ✓ Each theme leader prepared between 3 to 10 challenges (or needs, trends, etc.) given by users (formulated as: "How to… ?") which are included in his/her theme
- ✓ Each NEPTUNE partner cluster manager targeted and invited between 5 to 15 participants (mainly SMEs) per theme by email and phone
- ✓ Each NEPTUNE partners cluster managers prepared some potential technology solutions which can answer the selected challenges (in the cluster's area of expertise)
- ✓ The proposed technologies and challenges were checked with the administrator (ESTIA) and entered into the *IdeaValuation tool* (tool presented in 3.2.3)
- ✓ One short presentation (< 5 slides) about each theme (context, main trends, local challenges, precisions on the theme, etc.) prepared by each theme leader before the session
- ✓ Each NEPTUNE partner cluster managers indicated to the participants that they must install the STAR platform software and create a profile before the session
- ✓ Each theme leader prepared some relevant information (documents, pictures, reports, etc.) concerning his/her theme to be shared on his/her thematic virtual table with participants
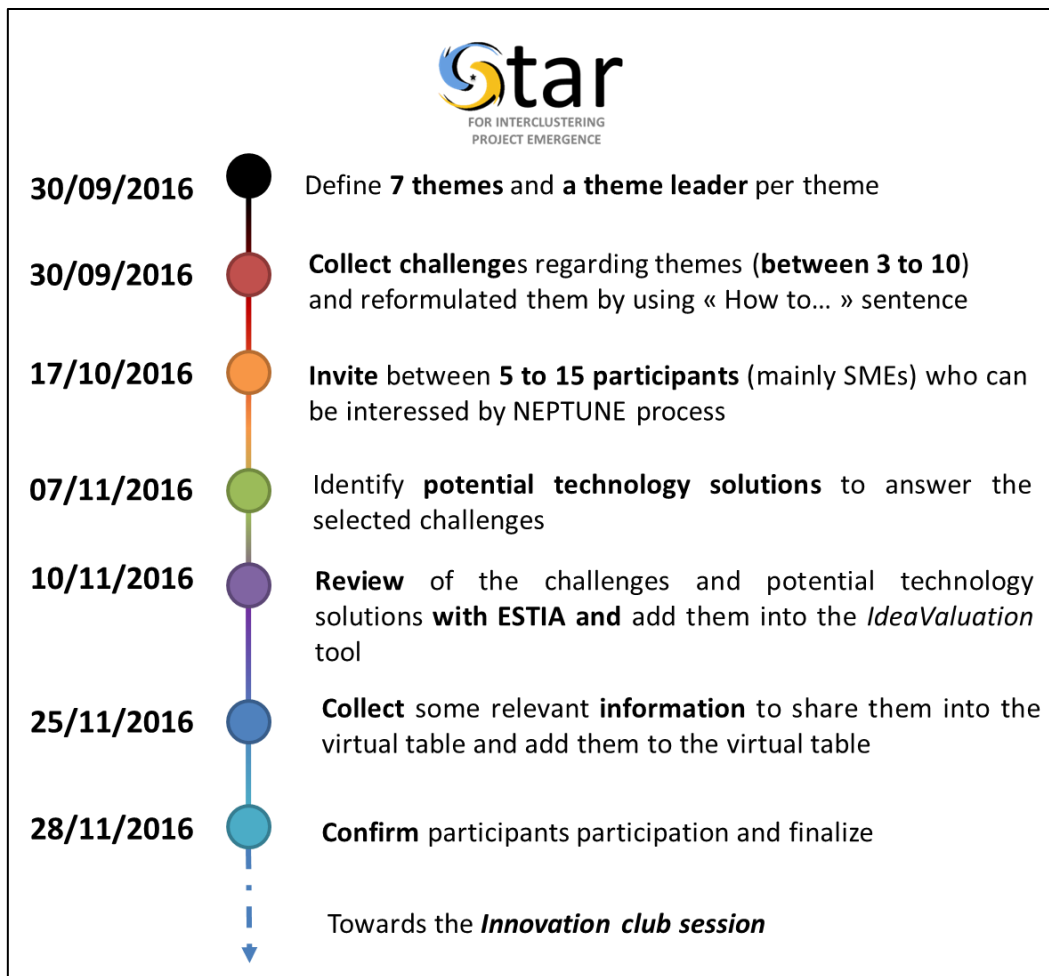
Figure 4: Timeline of the preparatory work

1 STEP I: Plenary session

1.1 PREREQUISITES

> ✓ Each **room** has to be **connected** thanks to the dedicated NEPTUNE software. Each NEPTUNE partner cluster manager targeted and invited between 5 to 15 participants per theme by email and phone
> ✓ Each NEPTUNE partner cluster managers indicated to the participants that they must install the STAR platform software and create a profile before the session
> ✓ Between **8 to 12 participants** per room (including cluster managers, with a majority of SMEs)
> ✓ Each participant is connected to the software platform with his/her own profile
> ✓ Each participant must have a connected **personal device** (PCs, laptops or tablet)
> ✓ A cluster manager leader identified for each connected room
> *Please be connected <u>5 minutes before the beginning</u> of the session!*

1.2 DESCRIPTION

1.2.1 Aims

Advantages
Share global information
Visualize potentials partners

This first step permits to inform and present the objectives of the innovation club to all participants.

Cluster managers leaders can give additional information for example for isolated participants, about key facts (linked to the physical room or specific theme), etc.

Representatives of NEPTUNE Work Package (WP) 2 and WP 3 give information about the NEPTUNE calls and project idea selection process.

1.2.2 How to use-it?

Visio Room A *(administrator)* | Visio Room B | Visio Room C | Visio Room D | Visio Room E | Presentation *(.ppt)*

Visio Room F | Visio Room G | Visio Room H | Visio Room I *(talking)* | Visio Remote participants
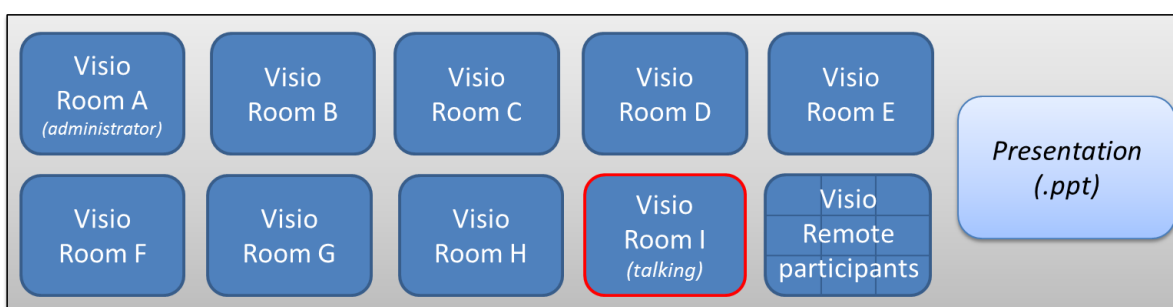
Figure 5: Example of the STAR platform view of the STEP I
(interface to be confirmed when the software will be delivered)

Once cluster managers leaders of each room are ready and have checked the proper functioning of the room, administrator (ESTIA) starts the meeting by presenting the aims and if necessary let cluster managers leaders to very quickly introduce participants for the rest of the people in the session.

Hence, the objective is to inform participants about the innovation –club powered by the STAR platform to encourage the emergence of cross-sectoral innovative initiatives related to Blue Growth.

Precautions to be taken
Check the good functioning of the equipment before the session ⚠

1.3 OUTPUTS

> ✍ Participants understood the unfolding of the session and the expected outputs
> ✍ All the participants joined the meeting through their own devices

2 STEP II: Distribution of the participants in thematic virtual tables

2.1 PREREQUISITES

> ✓ Outputs of STEP I achieved
> ✓ 7 themes defined before the session (identification of local challenges / needs / trends through a survey filled in by NEPTUNE partners and local stakeholders)
> ✓ One theme leader defined per theme among the following NEPTUNE partners cluster managers (PMM-TVT, MLC, SPACE PL, WIN, NWRDA, ADI)
> ✓ Each theme leader prepared between 3 to 10 challenges (or needs, trends, etc.) given by users (formulated as: "How to… ?") which are included in his/her theme
> ✓ One short presentation (< 5 slides) about each theme (context, main trends, local challenges, precisions on the theme, etc.) prepared by each theme leader before the session

2.2 DESCRIPTION

2.2.1 Aims

Advantages
Give an overview of all the different themes
Distribute participants into sub-workgroups

This step permits to share information about the themes addressed during the session.
According to the needs and wishes of participants, the group is split into thematic sub-workgroups.

2.2.2 Examples of themes

For example, each sub-workgroup could work on one of the following themes:

1. Seabed dredging, port infrastructure development, harbor and port waters mapping, protection of water environments and fight against erosion on the coastline
2. Optimization of port logistics, interconnection between cargo shipping, waterways transportation, rail and trucking, intermodal transportations and new freight solutions
3. Ship safety, maritime route optimization and navigation assistance, Vessel Traffic Management on busy sea highways, fight against off-shore pollution
4. Water savings for a sustainable agriculture, agriculture in water-poor regions, precision farming, smart irrigation systems
5. Efficient urban water resources management, smart grids adapted to tap water distribution systems, leaks and pollution monitoring, eco-friendly treatment solutions for waste water
6. Improvement of MREs energy output, optimization of marine hydrokinetic energy technologies (current, tidal and wave energy)

7. Further development of new MRE technologies, i.e. Ocean Thermal Energy (OTE), osmotic energy, etc.

These themes need to be defined before the session according to the feedback collected by clusters managers on the particular strengths and needs of NEPTUNE regional ecosystems. These themes should be aligned with the topics selected for the NEPTUNE calls to be launched in parallel to the innovation clubs sessions.

2.2.3 How to use-it?

Figure 6: Example of the STAR platform view of the STEP II
(interface to be confirmed when the software will be delivered)

During this step, the theme leaders (one per one) present the 7 themes to the participants. Once, all the themes have been presented, each participant is invited by the administrator to select a virtual table according to their interests to continue the session into sub-workgroups (in the limit of 15 participants per sub-workgroup).

Precautions to be taken
Define before the session the 7 themes
Be clear on the presentation of the themes

2.3 OUTPUTS

> ✍ Participants chose their theme of interest and joined the virtual table corresponding to this sub-workgroup

3   STEP III: Thematic virtual table sub-workgroup: creative session

3.1   PREREQUISITES

1st Innovation Club session	✓ Each NEPTUNE partners cluster managers prepared some potentials technologies which can answer the thematic selected challenges (in the cluster's area of expertise) ✓ The proposed technologies and challenges were checked with the administrator (ESTIA) and entered into the *IdeaValuation tool* (tool presented in 3.2.3) ✓ Each theme leader had to prepare some relevant information (documents, pictures, reports, etc.) concerning his/her theme. This information has to be shared on his/her thematic virtual table with the rest of participants
2nd Innovation Club session	✓ Similar prerequisites as the ones explained in the STEP III for the 1st innovation club session. The difference relies on the themes that will differ between sessions (at least for part of them). Therefore, those themes already addressed by awarded applicants to the NEPTUNE call at the first cut-off date will not be included in the themes of the 2nd innovation clubs session ✓ Outputs coming from the 1st NEPTUNE selection process

3.2   DESCRIPTION

3.2.1   Aims

Advantages
Stimulate the emergence of cross-sectoral ideas
Identify innovation opportunities
Foster discussions between participants and attract their interest on the themes

This STEP III permits NEPTUNE consortium to identify the most promising innovation opportunities.
Participants can exchange knowledge on the themes, share files and discuss with experts from all around Europe. Thanks to the STAR methodology, ideas are generated by teams work.
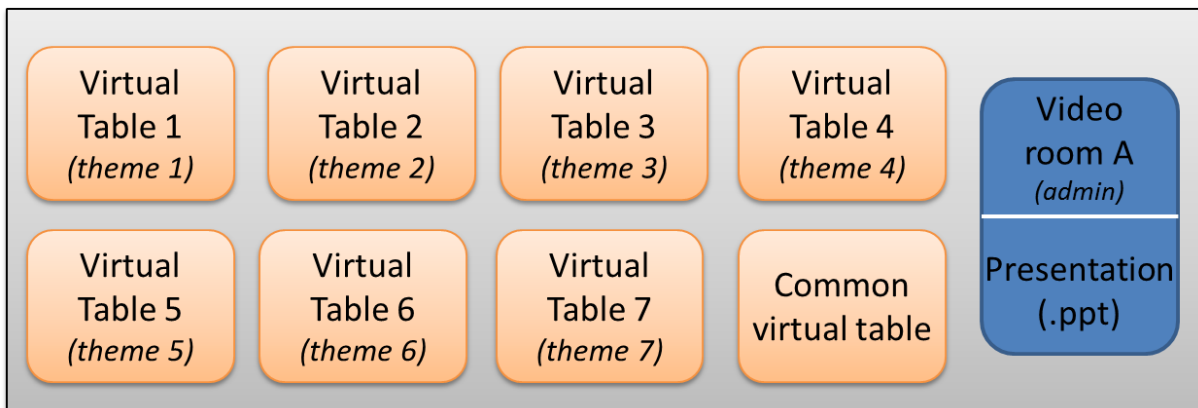
3.2.2   How to use-it?
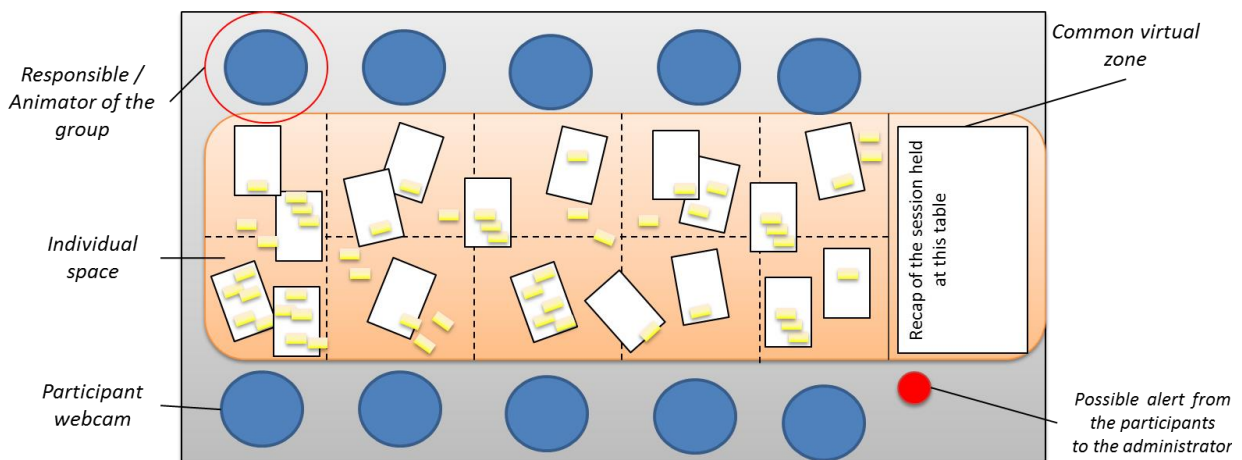
Figure 7: Example of the STAR platform view of the STEP III
(interface to be confirmed when the software will be delivered)

The theme leader is in charge to animate and moderate the creative session that will take place in each thematic sub-workgroup (corresponding to one virtual table) through using the STAR platform. STEP III can be divided into several sub-steps (detailed in Section 3.2.3) to be implemented by each theme leader at his/her own virtual table.

3.2.3   Sub-steps of STEP III for the 1st innovation club session

The STEP III permits to investigate the thematic challenges. The animation and moderation of STEP III has to be flexible in order to adapt the session to the participants' expectations. According to the scientific studies[1] and experimentations, the STAR methodology proposes to divide STEP III into 5 sub-steps, as shown in Figure 8.
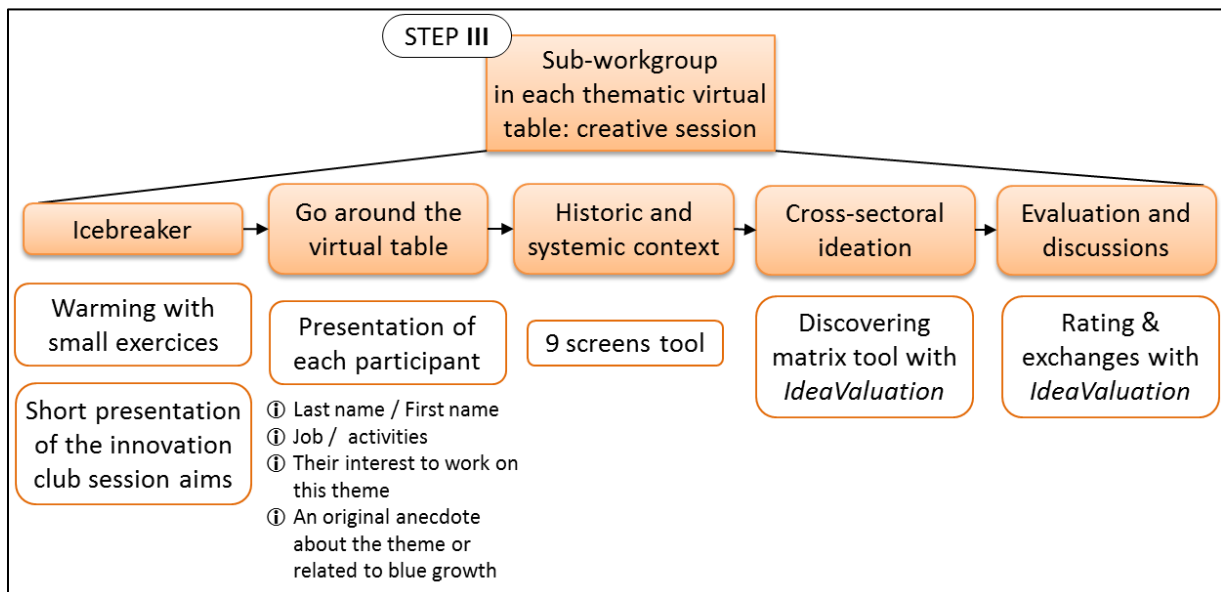
Figure 8: Sub-steps of STEP III

ICEBREAKER

This first sub-step permits to warm up the participants in order to set them into a creative mood. The theme leader animating one thematic virtual table sub-work group has to start the icebreaker phase with warming simple exercises to stimulate the minds. Each theme leader may use at least 2 specific exercises: geometric figures (square to divide, 3 circles to draw), matches to move, dancer who rotates, etc[2]. Then, the theme leader gives a quick overview of the session objectives: to make emerge project ideas, discuss and evaluate them, identify participants sharing the same interest.

GO AROUND THE VIRTUAL TABLE

The main objective of this step is the presentation of each participant in the session. The theme leader introduces himself to the participants (his/her name, job activities and an original anecdote about the theme addressed in the sub-workgroup he/she is animating). Similarly, each of the participants at that thematic table (one by one) will have the opportunity to introduce him/herself the same way. At this time, participants can discuss and share documents about themselves by using the STAR platform.

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[1] G. Wallas. The Art of Thought. J. Cape: London The art of thought.(1926). Pp. 320 pp.
[2] Those exercises will be provided and explained to theme leaders during the clusters managers training session to be held on November 2016.

HISTORIC AND SYSTEMIC CONTEXT

In order to get an overview of the theme, the STAR methodology advices to use 9 screens tool, which permits to exchange about the solutions used in the past and imagine the solutions to be developed in the future. In the same way, this tool raises questions about super-systems and subsystems used, as illustrated in Figure 9. For example, if we consider a tree as the system, the subsystems are branches, the leaves of the trees, etc. and the super-system can be a forest. Each theme leader must ask questions to participants as indicated in the Figure 8 to be able to complete the boxes[3].
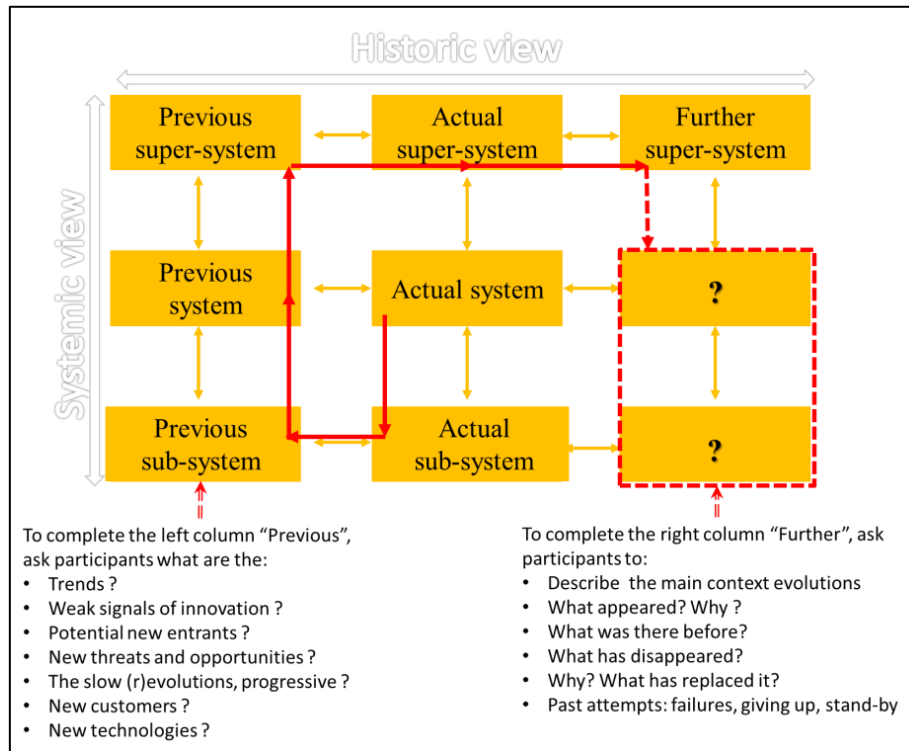
Figure 9: 9 screens tool helps to define the framework for thinking

CROSS-SECTORAL IDEATION

Then, the two next sub-steps proposed by the STAR methodology rely on the *IdeaValuation* free tool made available for the NEPTUNE project by ESTIA and Aerospace Valley. *IdeaValuation* is a live evaluation tool which improves the efficiency of creative sessions[4]. This collaborative tool is accessible by a simple internet connection [5] and it displays a matrix which forces ideation between thematic challenges and potential solutions. This matrix is built by theme leader before the session thanks to all the information gathered, i.e. he/she completed the rows and columns of the matrix in order to prepare it for the session.

During the session, participants are invited to login on *IdeaValuation*. Then, during 20 to 25 minutes, each participant proposes ideas and includes them directly in the cells of the matrix (Figure 10). After this time slot, the theme leader stops the ideation phase.

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[3] A 9 screens tool template will be provided and explained to theme leaders during the clusters managers training session to be held on November 2016.

[4] J. Ambrosino, D. Masson, J. Legardeur, G. Tastet. IdeaValuation : Favoriser les échanges lors d'un atelier de créativité par le vote qualitatif des idées à l'aide d'un outil numérique. Ergo'IA 2016. Bidart, France. <hal-01346087>.

[5] The website where participants will be able to find the tool will be communicated later.

Figure 10: Screenshot of the *IdeaValuation* tool
Example of a matrix completed during a creative session in the health sector

EVALUATION AND DISCUSSIONS

The theme leader asks participants to rate the ideas according to certain criteria (originality, feasibility, potentiality and if they are interested in the idea) directly into the *IdeaValuation* tool. These evaluations offer additional information to the theme leader when he/she will debrief the projects ideas. The STAR methodology advises the facilitators to focus on divergent assessments about a same idea. Thanks to the *IdeaValuation* tool, the detection of "treasures" can be facilitated.

> **Precautions to be taken**
> If there is **no sufficient ideas generated and entered into the matrix** (< 30 ideas), you can divide the participants into two teams and then, make them play against each other to increase the competition between them. The team with the largest number of ideas wins.
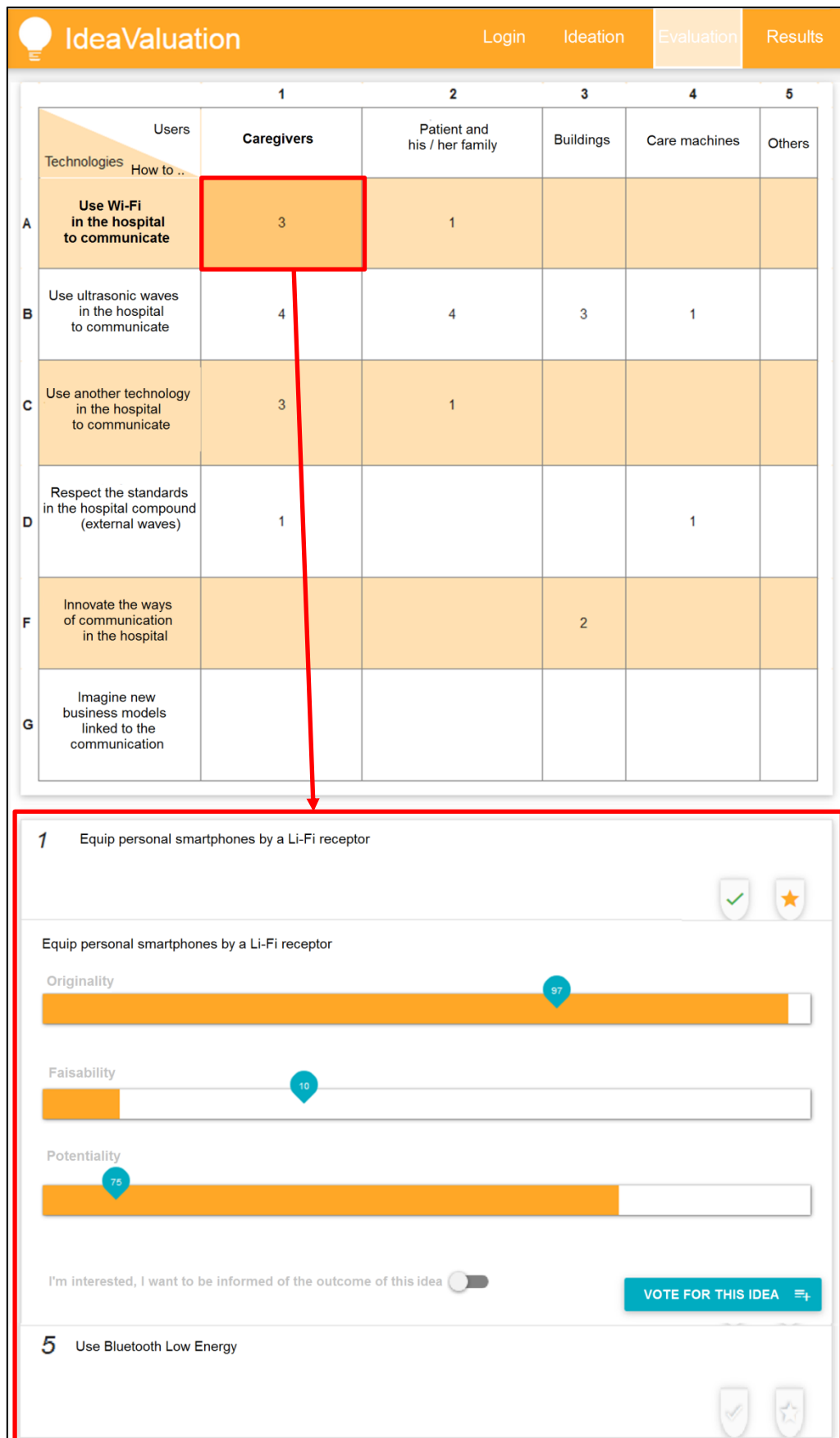> If you have **not sufficient time to debrief** the ideas, you can explain the participants that they will be contacted after the session for the ideas they have pointed out their interest.

Thanks to the evaluation made by participants, the discussions and exchanges, the theme leader has to establish the TOP5 of the best ideas emerged at his/her thematic virtual table. STEP III ends with the conclusion of the creative session by a short presentation prepared by the theme leader. This presentation has to illustrate the TOP5 ideas, the specific exchanges and the theme vision that have emerged from the creativity session.

After the 1st innovation club session, each theme leader has to mindmap the ideas proposed thanks to a mindmapper (for free: [Mindmup](#) - online, [Freemind](#), [XMind](#) – softwares to install, etc.). These mindmaps software give a global overview of the proposed ideas (Figure 11)[6]. Moreover, this kind of software can be re-used for the writing of the minutes.

Figure 11: An example of mindmap in post-treatment of a creative session

After the 1st innovation club session, a project idea leader is designated for each "interesting" emerged idea. Indeed, the project idea leader is in charge of organizing further meetings (thanks to the STAR platform for example) after the session with the partners to mature the selected idea.

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[6] There is no absolute method to mindmap ideas, but the theme leader can elaborate the mindmaps following examples which will be provided to them during thecluster training session held on November 2016.

These next meetings will be organised with the support of the NEPTUNE team. An idea is defined as an interesting one, if it has received at least two votes saying "I am interested" in the I*deaValuation* tool.

The project idea leader is usually the person who proposed the idea. In the minutes of the meeting, theme leader has to identify clearly the person (or organization) that proposes a specific idea. Moreover, the theme leader is also in charge of identifying the interest of each partner in order to give sufficient information about how to organise following meetings. The aims of these following meetings are to consolidate the project idea in order to propose it to the NEPTUNE selection process.

3.2.4   The 2nd innovation club session

The 2nd innovation club session will be organised the same way as the 1st innovation club session. In fact, this new session shall use the results of the first one and the results of the 1st NEPTUNE selection process following the first cut-off-date of the calls (February 2017).

After the 1st NEPTUNE selection process, NEPTUNE clusters managers have to define themes to be addressed during this 2nd session. Clusters managers will select the themes and the challenges. The themes and challenges selection are the ones not already addressed by applicants of NEPTUNE calls after the first cut-off date or new ones derived from the themes not addressed during the 1st innovation clubs session but still linked to the NEPTUNE calls.

Then, the defined themes are distributed between PMM-TVT, MLC, SPACE PL, WIN, NWRDA and ADI ALPC as set in the NEPTUNE grant agreement annex 1 Description of the action. Thus each one animates one thematic virtual table sub-workgroup during the 2nd innovation clubs session. Cluster managers shall use the same previous sub-steps to facilitate the emergence of new project ideas.

3.3   OUTPUTS

> ✎   Right after Step III, in relation with each theme, each theme leader makes a **short presentation** of :
> - number of participants in the sub-workgroup,
> - number of challenges studied,
> - number of ideas generated in the sub-workgroup,
> - the TOP5 of the best ideas which will be presented during the next Step,
> - the specific exchanges about some ideas (if some ideas are discussed a lot).
>
> ✎   After the innovation club session, each theme leader has to establish the minutes of the creative session by adding to the previous short presentation:
> - the name of participants interested by which projects ideas,
> - record of the networking (exchange of opinions between participants),
> - an innovation roadmap in mindmap which presents the different ideas proposed.

4 STEP IV: Plenary session to present the work of the different sub-workgroups

4.1 PREREQUISITES

✓	Outputs of STEP III achieved (excluding the ones expected after the innovation club session)

4.2 DESCRIPTION

4.2.1 Aims

Advantages
Share the results obtained during the innovation club creative sessions to all the participants

This step gives a quick overview of the results derived from the creative sessions to all participants.
Each participant can be informed about the TOP projects identified, the specific exchanges and the theme vision that emerged.

4.2.2 How to use-it?

Webcam of the animator of virtual table 1

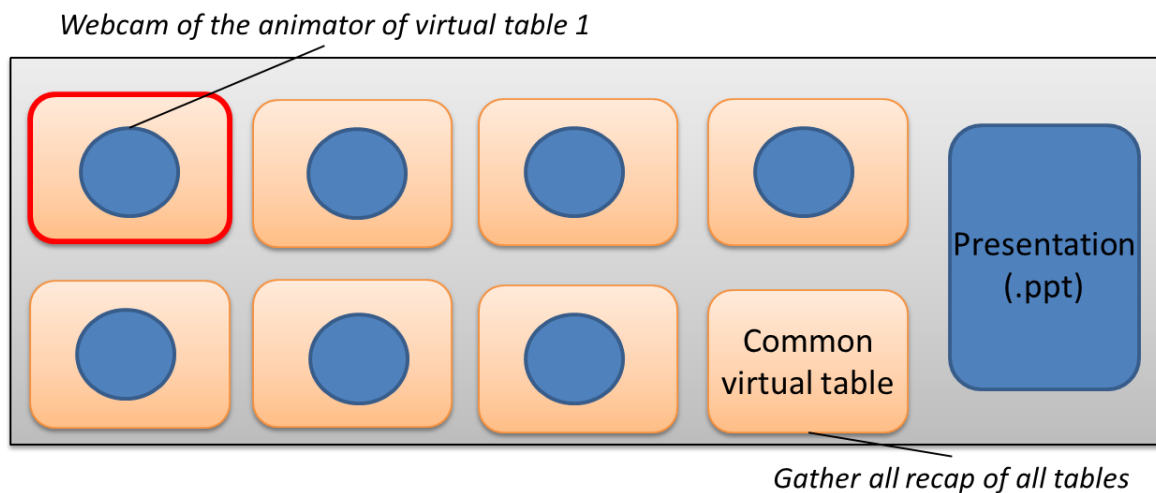*Gather all recap of all tables*

Figure 12: Example of the STAR platform view of the STEP IV
(interface to be confirmed when the software will be delivered)

One by one, each theme leader presents the results of the session with the short presentation prepared, as proposed in 3.3.
The discussions are allowed during the presentation in order to react to ideas but make sure you respect the time allocated to this step.

Precautions to be taken
Be careful to respect the time if questions are raised ⚠

4.3 OUTPUTS

✎	Participants know which interesting ideas emerged during the other creative sessions
✎	Best ideas are presented to all the participants in order to collect potential reactions and interests

5 STEP V: Conclusion in plenary session

5.1 PREREQUISITES

✓ Outputs of STEP IV reached

5.2 DESCRIPTION

5.2.1 Aims

Advantages
Give information concerning the next steps to submit project ideas to answer NEPTUNE calls

This last step permits to conclude with all participants at the same time.
The participants are informed about the NEPTUNE selection process and the support they can get from clusters.

5.2.2 How to use-it?

Figure 13: Example of the STAR platform view of the STEP V
(interface to be confirmed when the software will be delivered)

The administrator summarizes quickly the innovation club session. In conjunction with the cluster managers, they give information about the NEPTUNE calls, procedure and selection process. Moreover, they inform participants about the support they can get from their clusters to push forward their project idea towards NEPTUNE or another public or private funding opportunity.
Participants are invited to re-use the STAR platform and the connected rooms to exchange further with participants and develop further their ideas.

Precautions to be taken
Be clear on the operating mode of the NEPTUNE selection process
Encourage participants to create workgroup to develop further the best ideas in the TOP5 of the session

5.3 OUTPUTS

☞ Information given about the NEPTUNE calls and selection process as well as the support provided by clusters
☞ Participants encouraged to meet virtually with each other to develop further their project ideas

6   After the innovation club session

After the session, cluster managers and theme leaders have to:

- ✓ Write the minutes of the creative session for their tables (for example by using presentations which were presented during the STEP IV and the mindmaps of the generated ideas during STEP III, etc.)
- ✓ Encourage the project idea leaders to organize workgroup meeting in order to improve it, because the aim is to submit the best ones into the NEPTUNE selection process
- ✓ Share the presentations of the creative session results per theme to the concerned participants