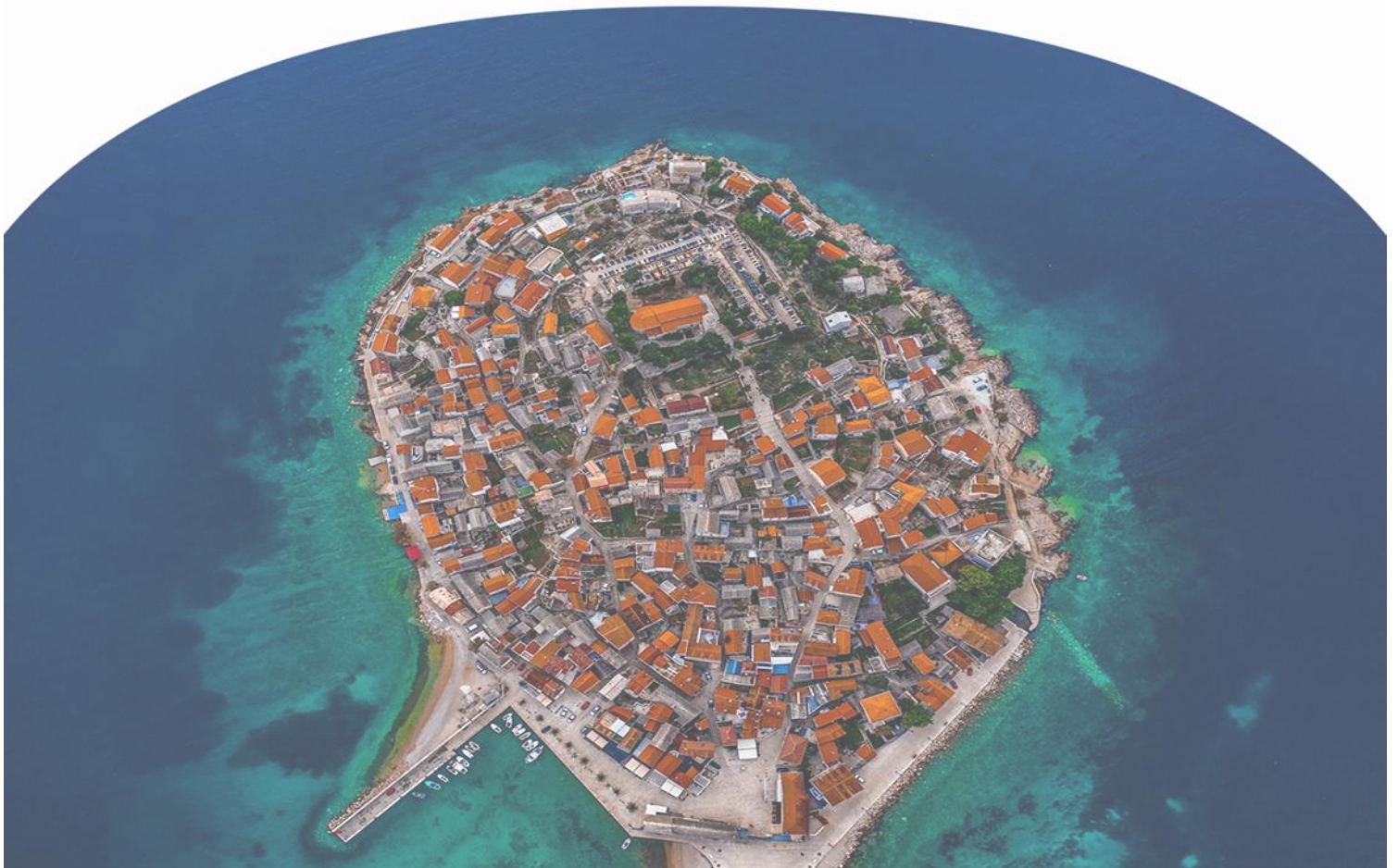New Energy Solutions Optimised for Islands

NESOI

EUROPEAN ISLANDS FACILITY

D2.1: NESOI Facilitating Platform Architecture, Design Mock-ups and MVP definition
WP2, T2.1

_____

D2.1: NESOI Facilitating Platform Architecture, Design Mock-ups and MVP definition

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Konstantinos Kostopoulos (CERTH)

Technical references

Project Acronym	NESOI
Project Title	New Energy Solutions Optimized for Islands
Project Coordinator	SINLOC, Andrea Martiez nesoi@sinloc.com
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Deliverable No.	D2.1
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*	PU = Public
	PP = Restricted to other programme participants (including the Commission Services)
	RE = Restricted to a group specified by the consortium (including the Commission Services)
	CO = Confidential, only for members of the consortium (including the Commission Services)

DISCLAIMER

Version	Date	Authors	Beneficiary
1	29/9/2020	Dr. Dimos Ioannidis, Konstantinos Kostopoulos	CERTH

NESOI
EU ISLANDS FACILITY

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List of Acronyms

Term	Description
BS	Business Scenario
NEF Platform	NESOI Facilitating Platform
UC	Use Case
UML	Unified Modeling Language

1 Introduction

1.1 Scope and objectives of the deliverable

The EU Island Facility NESOI (New Energy Solutions Optimised for Islands) is a four-year Horizon 2020 project funded under call topic LC-SC3-ES8-2019 (European Islands Facility – Unlock financing for energy transitions and supporting islands to develop investment concepts). It began on October 1st, 2019 and will finish on September 30th, 2023 and is made up of a multi-disciplinary consortium consisting of 10 partners from seven EU member states. It has a total budget of €10 million of which approximately €3 million is dedicated to a cascade funding mechanism to provide direct financial support to EU Islands

Coupled to consortium capacity building activities, the facility aims to mobilise more than €100 million of investment in sustainable energy projects to an audience of 2,400 inhabited EU islands by 2023, giving the opportunity to test innovative energy technologies and approaches in a cost-competitive way and leading to an expected 440 GWh/year in energy savings.

This Deliverable is the output of Task 2.1 "Technical Specification and Architecture Design" which aims to design the overall architecture of the NESOI Facilitating web-platform (NEF). The NEF has been structured following partners' inputs resulting from the co-creation activities conducted in WP1 and mapping the user requirements and suggestions to system functionalities and technical specifications. The outcome of this Task, described in the current Deliverable Report, is the overall system architecture design.

1.2 Structure of the deliverable

This report presents the methodology adopted to design the NEF, through the following steps:
- User Requirements Collection Methodology, based on the Volere approach;
- NESOI Business Scenario Definition, to guide the development process in terms of meeting the expected goals
- NESOI Use Case Definition, where UML diagrams are depicted and describe in a universal manner Business Scenarios and Use Cases
- NESOI User Requirements Definition through the distribution of a specific template for the collection of partners' inputs
  Mock-ups, based on the collected requirements the first mockups have been created for the various components of the NEF.

It is understood that the NEF will be evolving through the project duration, both in its structure and contents to betters adapt to the final users' needs.

1.3 Relation to other tasks and deliverables

WP2 to is central to the progress of all the other WPs. It is partly based on the work carried out in WP1, whose outcomes will be integrated into the NEF Platform. W2 and WP1 partners are in regular contact to ensure smooth coordination and synchronisation of activities between the WPs. To date, a first version of the self-check eligibility tool to the NEF Platform, as described in D1.2, is publicly available at https://nesoi.eu/nef-platform/#/eligibility-tool. The next step will be the integration and adaptation of the results of WP1, particularly the Financial Instruments into the platform.

The NEF is also closely interconnected with WP3 and WP5 as it includes all the procedures for the submission of the NESOI calls, including the online application forms, guidelines, helpdesk service and tutorials.

A dedicated section of the Platform will host the e-learning activities which will be developed by WP7 to support the capacity building activities.

WP4 will also rely on the NEF to act as a point of reference for all tools, documents and guidelines related to project implementation.

2 User Requirements Collection Methodology

In order to design the overall architecture of the NESOI Facilitating web-platform (NEF), which is the goal of Task 2.1, building upon user requirements, it was necessary to collect user requirements. To achieve this the Volere Methodology was adopted based on the JIRA tool.

2.1 The JIRA Volere Template in NESOI

The "Create" button in the NESOI Project opens a form where issue type can be selected. The option of interest is "Volere Requirement". The following three figures depict this form.

Figure 1: Volere Requirement Template

In addition to the 'Project' and 'Issue Type' fields, the following fields must be filled in: (The fields marked * are mandatory in the Volere template)

Field	Explanation
* Summary	Clear and brief one-sentence description of the requirement
* Partner	Project Partner name. This does not derive from Volere.
Priority	Priority defines the relevance of the requirement in relation to the other requirements Scale: Highest, High, Medium (= default), Low, Lowest
*Requirement Type/ Sub-type	Functional: Something the system should do Non-functional: How the system works (several sub-types are pre-defined)
Description	Use this field to further clarify or elaborate interpretation of the Summary
Labels	These are custom labels mainly intended for filtering purposes. Each requirement is suggested to have at least one label e.g. defining which use case(s) it is part of, e.g. UC-BSL-3
Attachment	Multiple attachments are valid. These files should provide supportive useful information e.g. a mock up of the screen, examples, diagrams etc.
* Component/s	To which component(s) does this requirement belong? Based on this association, the responsible assignee will be defined (after the requirement has passed Quality Check) Components defined as of December 2016 are shown in Section 1.2 NEF Platform Components below
Linked Issues	Issues that are somehow linked to current issue
* Source	Where did this requirement originate? E.g., the DoA, document XYZ, a workshop, etc.
* Fit Criterion	The Fit Criterion must be measurable for testing/verification that the requirement is fulfilled
* Rationale	The rationale for submiting the request

The figure below depicts the Volere Workflow we have used.
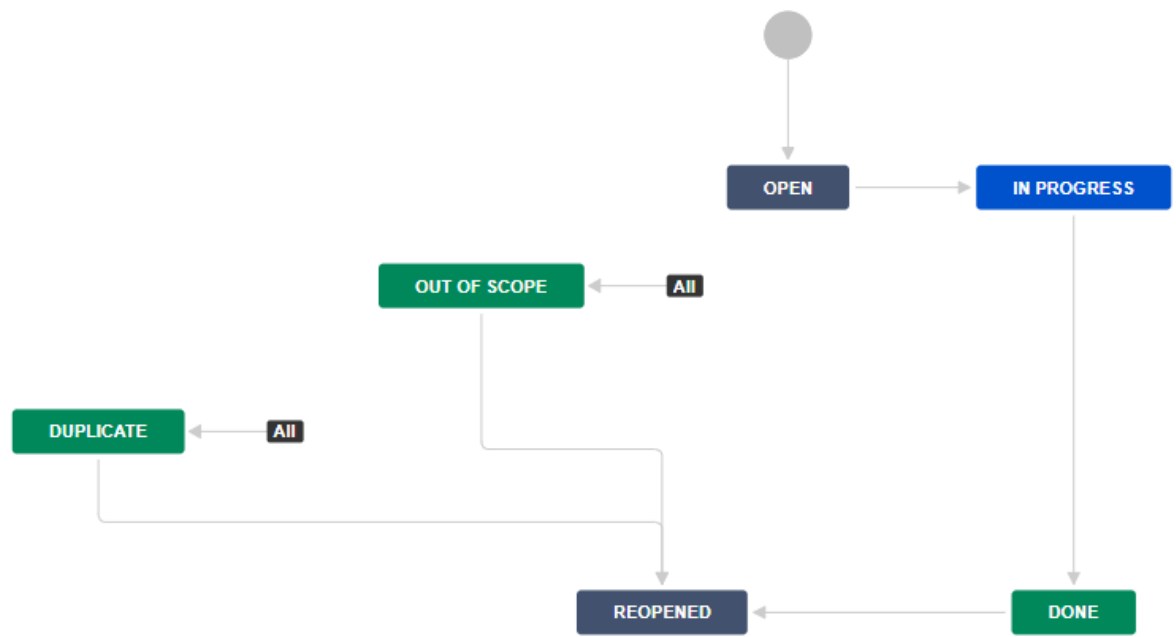
Figure 2: Volere Workflow

2.2 NEF Platform Components

Each requirement refers to a component of the NEF Platform. The available options are presented in the image below.

Figure 3: NEF Platform Components

2.3 NEF Platform Context diagram

The following image illustrates NEF Platform Context Diagram where the NEF Platform Components are visible as also their relationships.
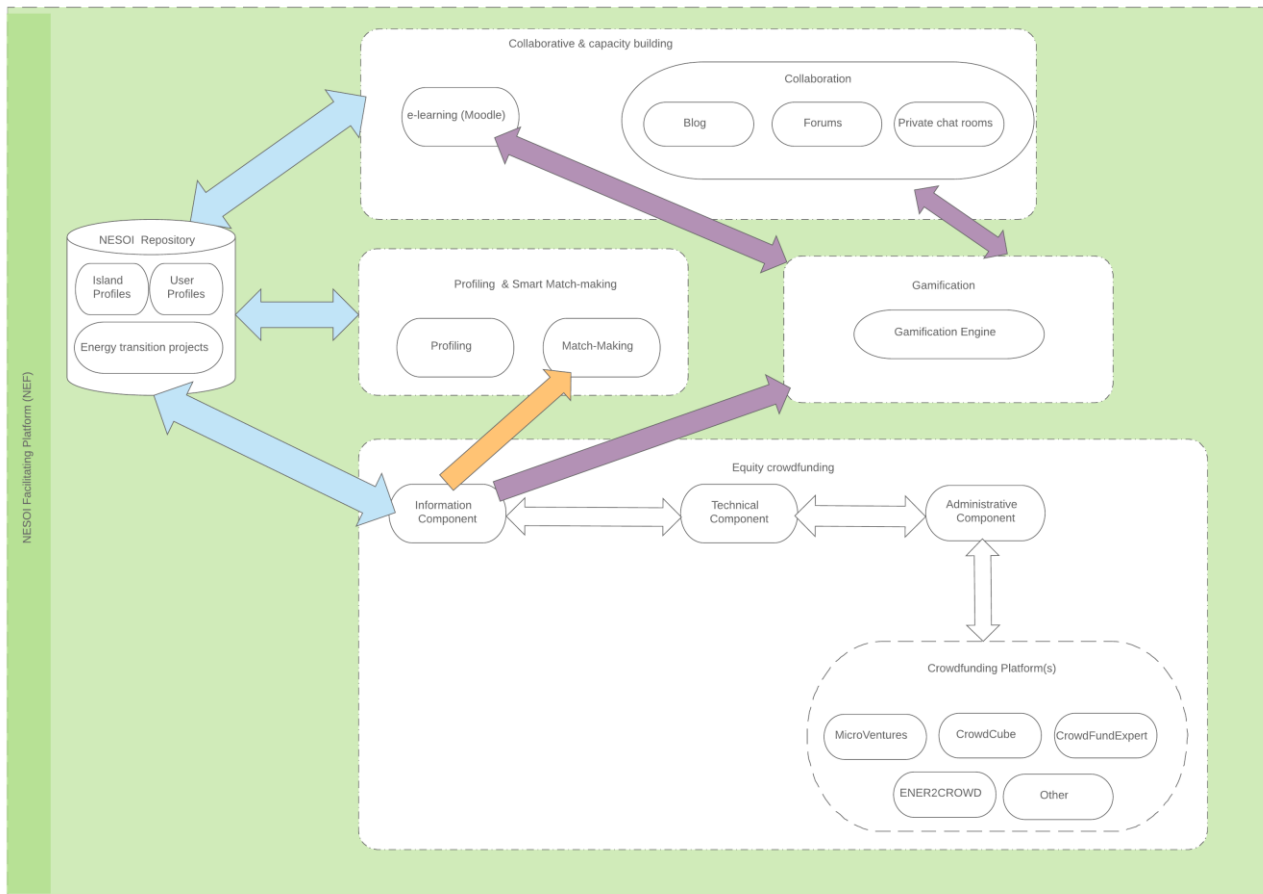
Figure 4: NEF Platform Context Diagram

3 NESOI Business Scenario Definition

Based on the requirements collected as described in Chapter 0 *WP2 to is central* to the progress of all the other WPs. It is partly based on the work carried out in WP1, whose outcomes will be integrated into the NEF Platform. W2 and WP1 partners are in regular contact to ensure smooth coordination and synchronisation of activities between the WPs. To date, a first version of the self-check eligibility tool to the NEF Platform, as described in D1.2, is publicly available at https://nesoi.eu/nef-platform/#/eligibility-tool. The next step will be the integration and adaptation of the results of WP1, particularly the Financial Instruments into the platform.

The NEF is also closely interconnected with WP3 and WP5 as it includes all the procedures for the submission of the NESOI calls, including the online application forms, guidelines, helpdesk service and tutorials.

A dedicated section of the Platform will host the e-learning activities which will be developed by WP7 to support the capacity building activities.

WP4 will also rely on the NEF to act as a point of reference for all tools, documents and guidelines related to project implementation.
User Requirements Collection Methodology, the required NEF Member roles and the Business Scenarios have been designed. Business Scenarios will guide the development process in terms of meeting the expected goals.

3.1 NEF member roles

Before presenting the Business Scenarios, here below the NEF Platform members' roles are listed. More precisely the NEF Platform members can have one of the above roles:
- **Administrator:** This role applies to users that will undertake platform overall management and technical support.
- **Project Manager:** Island municipality or other local authority or private entities that manages energy transition projects in the NEF Platform.
- **Individual Investor:** Investor searching for investment opportunities in the NEF Platform
- **Course Manager:** This role applies to users that manages courses in the e-learning component of the NEF Platform
- **Forum Moderator:** This role applies to users that will manage forums in the NEF Platform

Members will select their role upon registration. Of course, the Administrator will not be an available option during registration for safety reasons. At any given time Administrators will be able to change the role of other users, besides Administrators.

3.2 NESOI Business Scenario 1: Collaboration amongst NEF members

The focus of this business case is to provide to NEF members the means to communicate and share opinions and experiences. The main goals are to ease sharing experience and exchange opinions, and information amongst NEF members. Key areas of this scenario are:

- **Sharing experience by blog storytelling:** NEF members will be able to publish success stories of energy transition projects that can influence other members. Moreover, members' discussion over the project e.g. its timeline and obstacles that have been overcome may provide valuable information for future or ongoing projects.
- **Enhance interactivity with fora and chat rooms:** Moreover, open discussions in *fora* both open and *ad-hoc* and communication in private chat rooms will ease member communication.
- **Provide informational and educational content on the sector:** Content will be available to NEF members in NEF's e-learning component. Thus, providing the means to members to be educated in energy technologies and in feasible ways to implemented them in their island. The objective is to provide sector knowledge and assist islands undertake and complete energy transition projects.

3.3 NESOI Business Scenario 2: Profiling and matchmaking

Key areas of this scenario are:

- **Profiling:** This business scenario aims in profiling project owners and projects, corporate entities also supporting a) technology showcasing, b) sectoral experts on technological, legal and financial aspects, c) community members and d) investors. Profiles will include personal preferences and interests.
- **Smart Matchmaking:** Based on the above profiles, NEF's matchmaking component will highlight related projects, proposals, job postings in the sector and will undertake content promotion and personalized alerts and notifications. Moreover, geolocation will be taken into account so that results will reflect activity in local area.
- **Motivate user engagement:** To ensure user overall engagement a gamification engine will be implemented. The latter will provide rewards to engaged NEF members. New games and the relevant rewards can be defined by NEF Platform administrators.

3.4 NESOI Business Scenario 3: Crowdfund energy transition projects

This business scenario aims in assisting participants to fund ongoing or upcoming energy transition projects. Key areas of this scenario are:

D2.1: NESOI Facilitating Platform Architecture, Design Mock-ups and MVP definition

- **Connectivity with existing and upcoming crowdfunding platforms:** NEF will provide a connector, that is the Administrative component, that will undertake the connectivity with several crowdfunding platforms. Since new crowdfunding platforms continue to emerge, the appropriate agreements between NEF and crowdfunding platforms will be established. Moreover, agreements that are not foreseen up to date should be easily supported.
- **Showcase crowdfunding opportunities:** NEF platform will inform members about opportunities to fund their projects on any of the connected crowdfunding platforms based on project profile and its characteristics e.g. project goals, island location etc.
- **Showcase investment opportunities:** Investors will also have the opportunity to learn about both ongoing or upcoming projects. The latter will be shown both to investors in crowdfunding platforms as also in NEF platform. Especially for investors registered in NEF platform, NEF can assist them identify projects based on their preferences, interests and location as described in business scenario 2 *Profiling and matchmaking*.

4 NESOI Use Case Definition

This chapter presents the use cases for the aforementioned Business Scenarios. UML diagrams are also depicted. UML diagrams can be used to visually describe in a universal manner Business Scenarios and Use Cases –among other things-, providing an easy way to validate them.

4.1 Use cases association with Business Scenario 1: Collaboration amongst NEF Members

This section describes the use cases of Business Scenario 1 described in 3.2 *NESOI Business Scenario 1: Collaboration amongst NEF   members*.

4.1.1 NESOI BS1-UC1: Sharing experience by blog storytelling

|	
Use Case Name	Sharing experience by blog storytelling
Version	V0.1
Last Update	
Authors	CERTH
Brief Description	NEF members can blog about their energy transition projects and share their experience
Assumptions & Preconditions	Users are NEF members
Objective	Engage communication amongst NEF members and share information with other energy transition projects.
Effects/Post Conditions	Facilitate ongoing and upcoming projects to ease their pipeline and achieve better results.
Involved Actors	Blog
Use Case Initiation	A NEF member blogs about a topic on sector triggering a discussion with other members
Main course	1. A NEF member blogs about a project sharing personal experience e.g. obstacles that have been overcome or appeared or how and why the project come to a dead end. The member may also ask for opinions of other members about specific project issues. 2. Other NEF members can be inspired or comment their opinion providing valuable insights on how to better manage the project. 3. The discussion and its outcome can also be of interest for similar future projects.
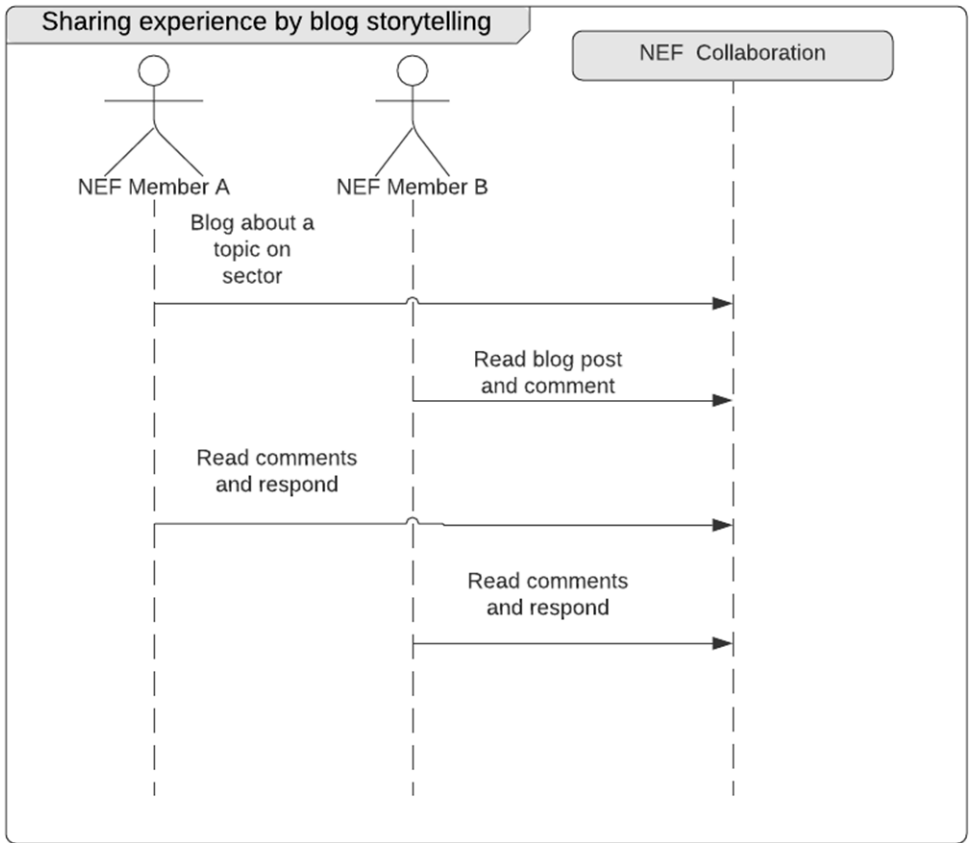
Figure 5: BS1-UC1 Sharing experience by blog storytelling

4.1.2 NESOI BS1-UC2: Enhance interactivity with fora

Use Case Name	Enhance interactivity with fora
Version	V0.1
Last Update	
Authors	CERTH
Brief Description	NEF members can discuss issues on their projects or on the sector and exchange opinions.
Assumptions & Preconditions	Users are NEF members
Objective	Facilitate communication and collaboration amongst NEF members
Effects/Post Conditions	NEF members can easily exchange opinions and collaborate
Involved Actors	Collaboration, Fora

| Use Case Initiation	NEF member creates a new forum
Main course	1. A NEF member publishes some questions for issues concerning a project on a forum in the NEF platform. 2. Other NEF members offer advices and contribute with the knowledge they gained in similar projects. 3. Discussion on the issue takes place and the relevant information comprise a knowledge base for future reference.
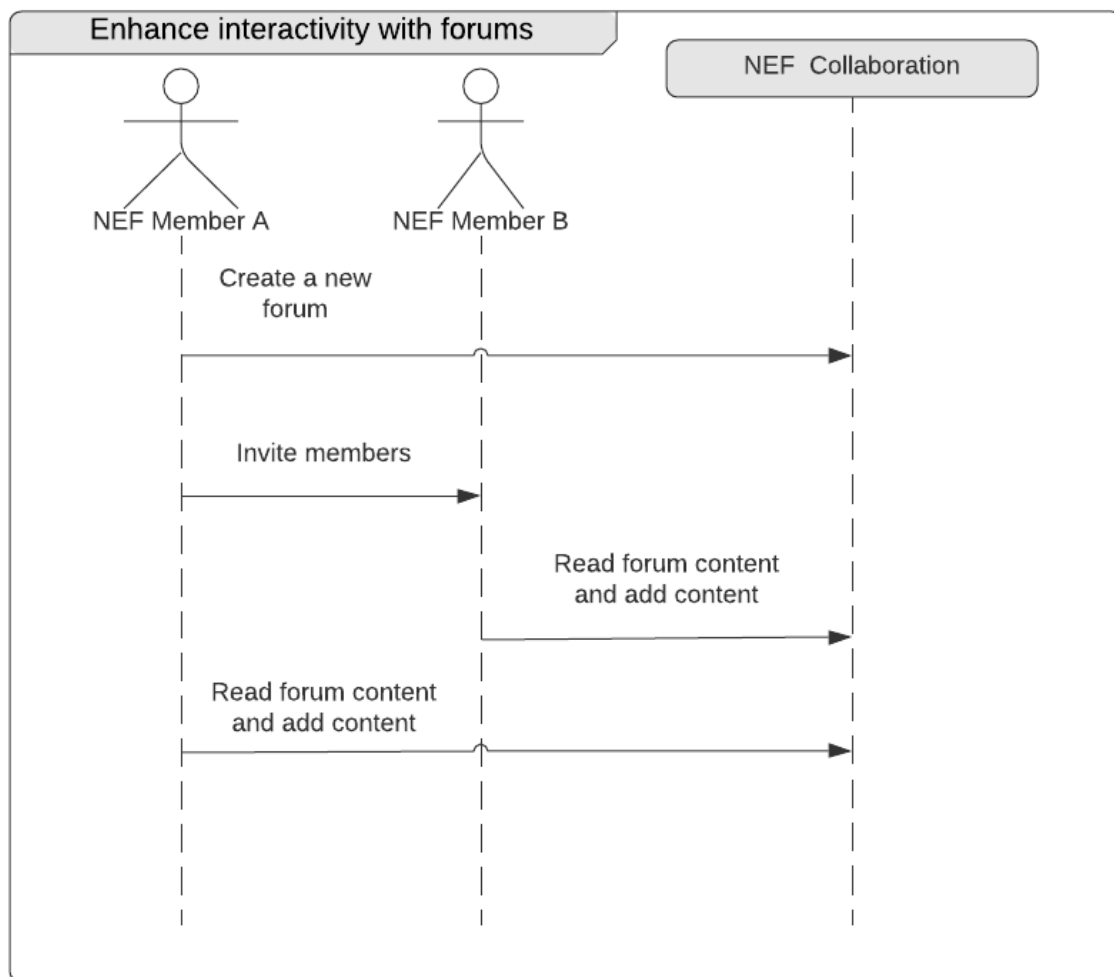
Figure 6: BS1-UC2 Enhance interactivity with fora

4.1.3 NESOI BS1-UC3: Enhance interactivity with chat rooms

|	
Use Case Name	Enhance interactivity with chat rooms
Version	V0.1
Last Update	
Authors	CERTH
Brief Description	NEF members can discuss issues on their projects and exchange information both publicly and privately in NEF chat rooms.
Assumptions & Preconditions	Users are NEF members
Objective	Facilitate communication and collaboration amongst NEF members
Effects/Post Conditions	NEF members can easily exchange opinions and collaborate
Involved Actors	Collaboration, Chat Rooms
Use Case Initiation	NEF member create a chat room
Main course	1. A NEF member creates a chat room, either public or private, and invites other members. 2. Other NEF members join the chat room, offer advices and contribute with the knowledge they gained in similar projects. 3. Discussion takes place and the relevant information comprises a knowledge base for future reference.
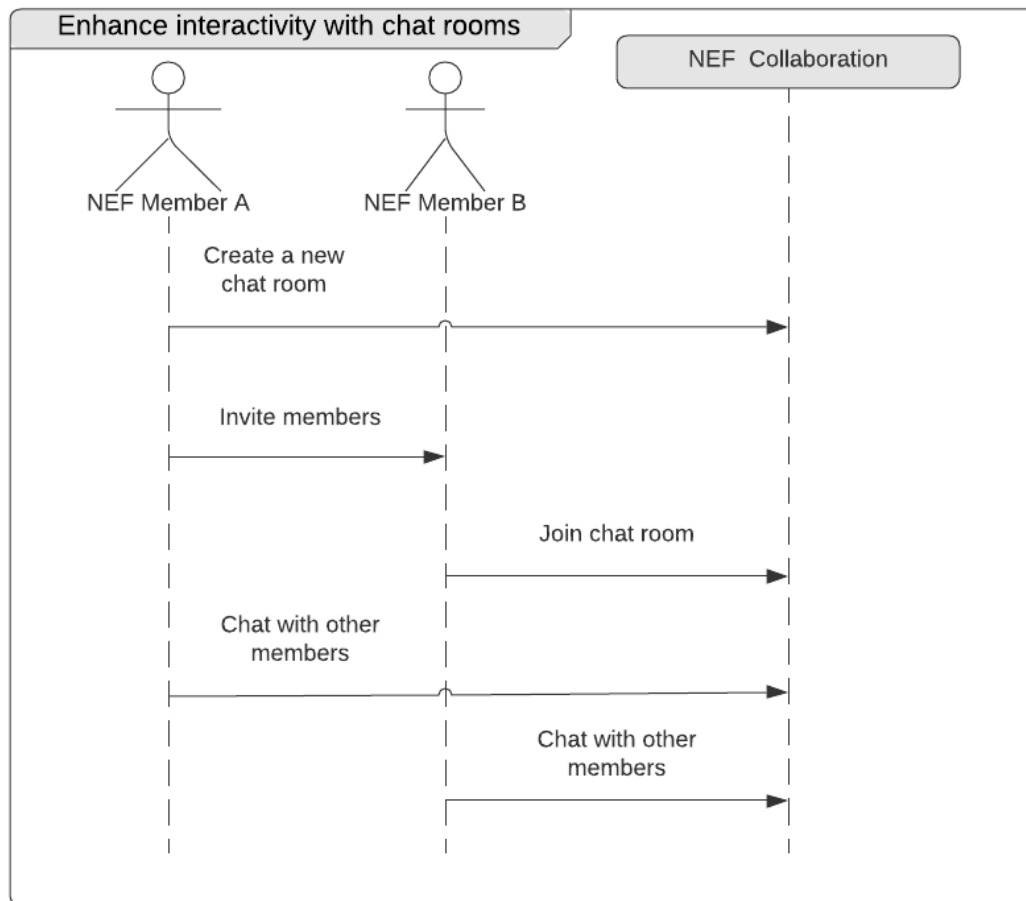
Figure 7: BS1-UC3 Enhance interactivity with chat rooms

4.1.4 NESOI BS1-UC4: Provide informational and educational content on the sector

Use Case Name	Provide informational and educational content on the sector
Version	V0.1
Last Update	
Authors	CERTH
Brief Description	NEF members can access learning material on sector and be educated on energy technologies and the opportunities of adopting them
Assumptions & Preconditions	Users are NEF members
Objective	Educate NEF members on energy solutions and efficient

	ways to adopt and implement them on their island
Effects/Post Conditions	NEF members education on the sector and facilitation of energy transition project completion
Involved Actors	e-learning
Use Case Initiation	NEF members want to train on a topic on sector
Main course	1. NEF Members enroll into e-courses in NEF Platform's e-learning component. 2. Members can access the e-learning material. They can also start discussion with questions on the subject.

4.1.5 NESOI BS1-UC5: Engage user in e-learning component with gamification

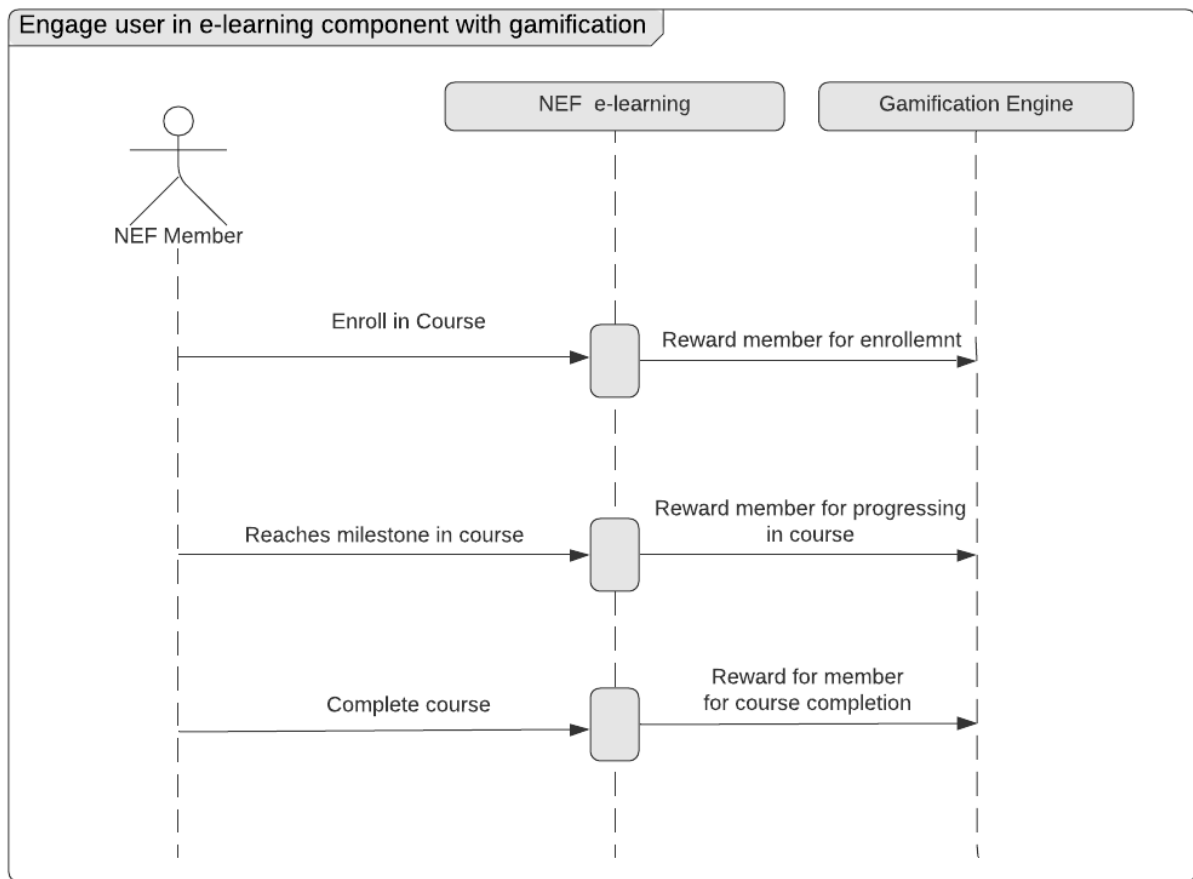|	
Use Case Name	Engage user in e-learning component with gamification
Version	V0.1
Last Update	
Authors	CERTH
Brief Description	Gamify e-learning component in order to motivate members to participate in courses.
Assumptions & Preconditions	
Objective	Motivate NEF members to take and complete courses on the sector
Effects/Post Conditions	
Involved Actors	e-learning, gamification engine
Use Case Initiation	NEF member enrollment in e-learning course
Main course	1. NEF member enrolls in a course 2. Gamification engine rewards with some points due to enrollment 3. Member proceeds course up to a point e.g. half the course. Gamification engine rewards with more points due to progress 4. Member completes course. Gamification engine rewards with more points and a badge. Also when a member completes a number of courses e.g. 5 courses, then member is rewarded with a relevant badge.

Figure 8: BS1-UC 5: Engage user in e-learning component with gamification

4.2 Use cases association with Business Scenario 2: Profiling and matchmaking

4.2.1 NESOI BS2-UC1: Profiling NEF members and projects

Use Case Name	Profiling NEF members and projects
Version	V0.1
Last Update	
Authors	CERTH
Brief Description	Create profiles for NEF members and projects
Assumptions & Preconditions	

Objective	Capture member preferences and interests as also energy technologies used by the island up to date
Effects/Post Conditions	Create profiles of NEF members and islands necessary for the matchmaking component
Involved Actors	Profiling
Use Case Initiation	A new member registers or a new project is registered
Main course	1. NEF members can manage their profile and describe their preferences, their interests and their geolocation. Moreover, they can manage their island status in terms of energy technologies e.g. ongoing or upcoming projects, possible impacts in the local community etc. 2. At any given time, the matchmaking component utilizes the current profile as described later on subsection **Errore. L'origine riferimento non è stata trovata. Errore. L'origine riferimento non è stata trovata.**.
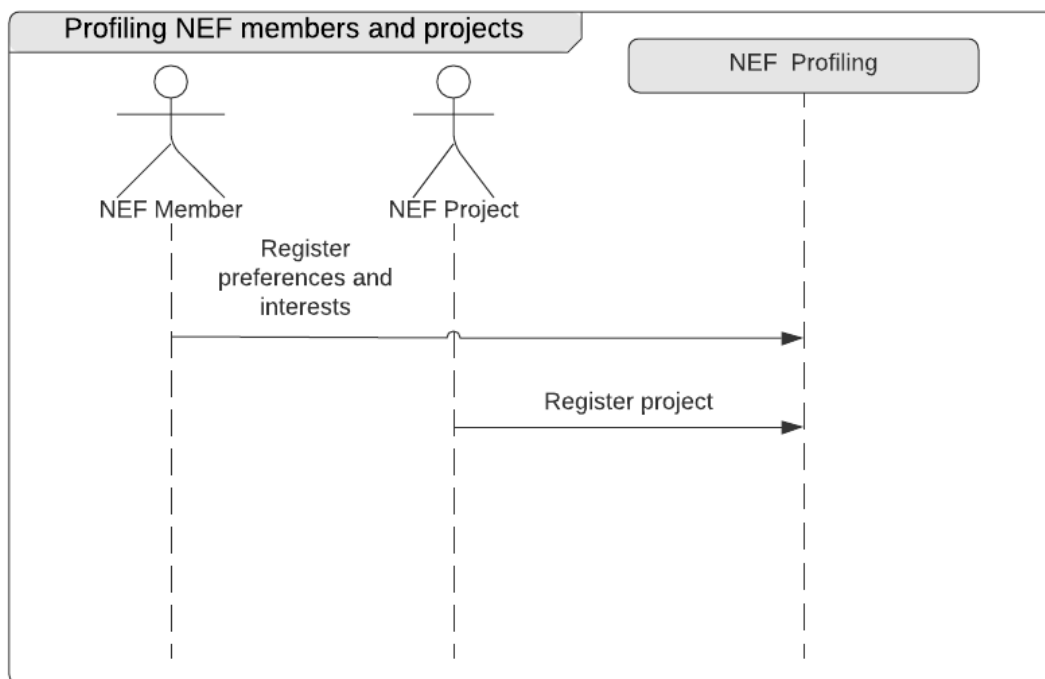
Figure 9: BS2-UC1: Profiling NEF members and projects

4.2.2 NESOI BS2-UC2: Smart Matchmaking

Use Case Name	Matchmake projects, proposals and job openings to NEF members' profiles
Version	V0.1
Last Update	
Authors	CERTH
Brief Description	Personalize NEF members alerts and notifications
Assumptions & Preconditions	NEF Member has provided personal preferences and interests to create his/her profile
Objective	Detect opportunities, projects, proposals and job postings that may be of interest for a specific NEF member.
Effects/Post Conditions	
Involved Actors	Matchmaking
Use Case Initiation	A new project or a new job posting is created
Main course	1. A new project is registered in NEF, or a new proposal or new job postings. 2. Matchmaking takes into consideration specific fields of projects, proposals or job postings, as also custom defined tags, and matches it with NEF members profiles (created as described in **Errore. L'origine riferimento non è stata trovata. Errore. L'origine riferimento non è stata trovata.**). 3. For each member matched in the previous step a new notification is created.
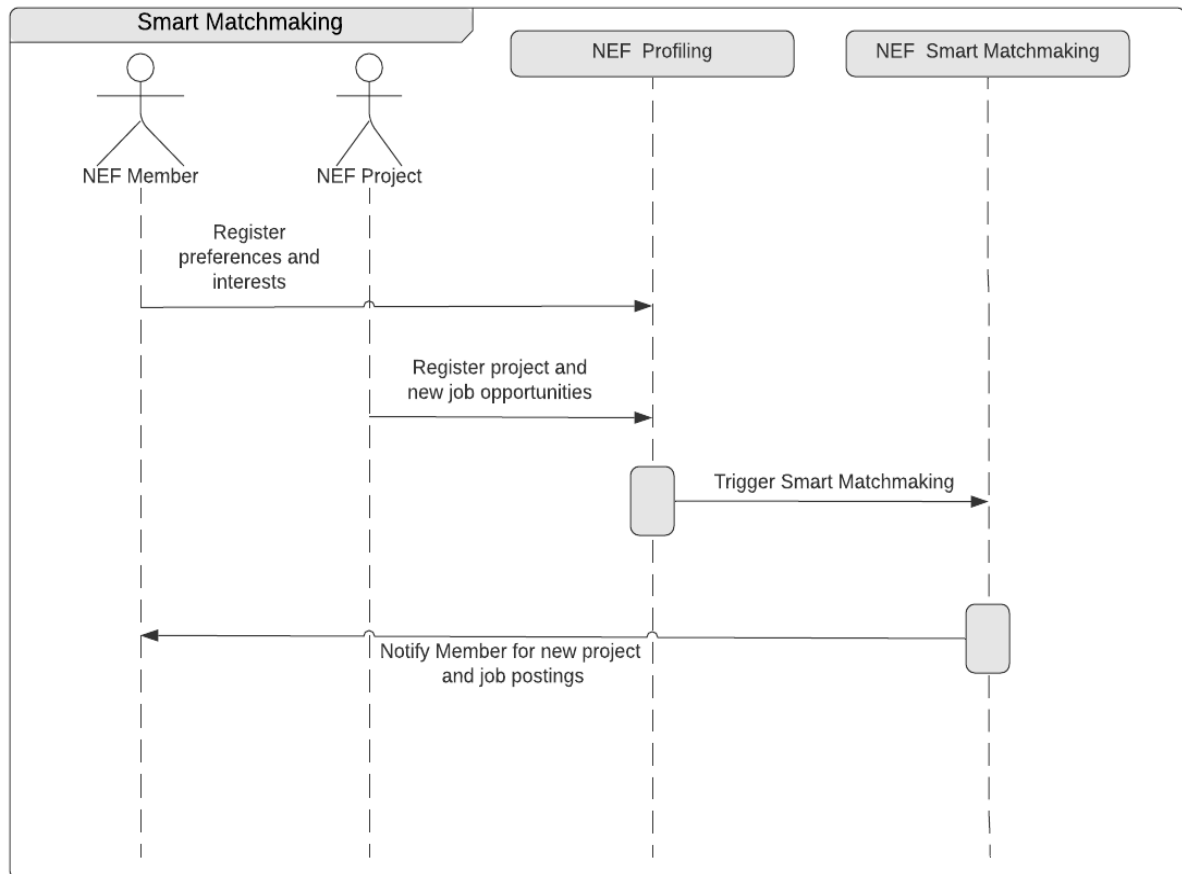
Figure 10: BS2-UC2: Smart Matchmaking

4.2.3 NESOI BS2-UC3: Gamify NEF members activity in forums

Use Case Name	Gamify NEF members activity in forums
Version	V0.1
Last Update	
Authors	CERTH
Brief Description	Engage user forum activity
Assumptions & Preconditions	
Objective	Motivate NEF members to participate in discussions in NEF forums
Effects/Post Conditions	
Involved Actors	Collaboration, Forums, Gamification engine

Use Case Initiation	NEF member
Main course	1. NEF member A posts in a NEF forum asking for advice and/or some questions. 2. Several NEF members (B, C) respond to the post with their personal opinion. 3. NEF members that participate in the discussion can rate e.g. like/dislike. 4. Based on rates gamification engine rewards member with the best score in his/her posts.

4.3 Use cases association with Business Scenario 3: Crowdfund energy transition projects

4.3.1 BS3-UC1: Connectivity with existing and upcoming crowdfunding platforms

Use Case Name	Connectivity with existing and upcoming crowdfunding platforms
Version	V0.1
Authors	CERTH
Brief Description	Interconnect to various crowdfunding platforms via the Administrative Component. The latter will function as an adapter layer to the former platforms.
Assumptions & Preconditions	NEF Administrative component and crowdfunding platforms establish any appropriate agreement
Objective	Support various crowdfunding platforms
Effects/Post Conditions	NEF Administrative component should be able to support future unforeseen agreements with a few enhancements
Involved Actors	Equity crowdfunding, Administrative Component, Crowdfunding Platforms
Use Case Initiation	Administrators or NEF members request to integrate a new Crowdfunding platform
Main course	1. A new crowdfunding platform emerges 2. Interconnection with the Administrative component is verified 3. If steps 2 outcome is positive NEF Administrator completes the interconnection 4. If steps 2 outcome is negative the necessary actions to achieve interconnectivity are defined. 5. Actions described in step 4 are taken care from NEF Administrators
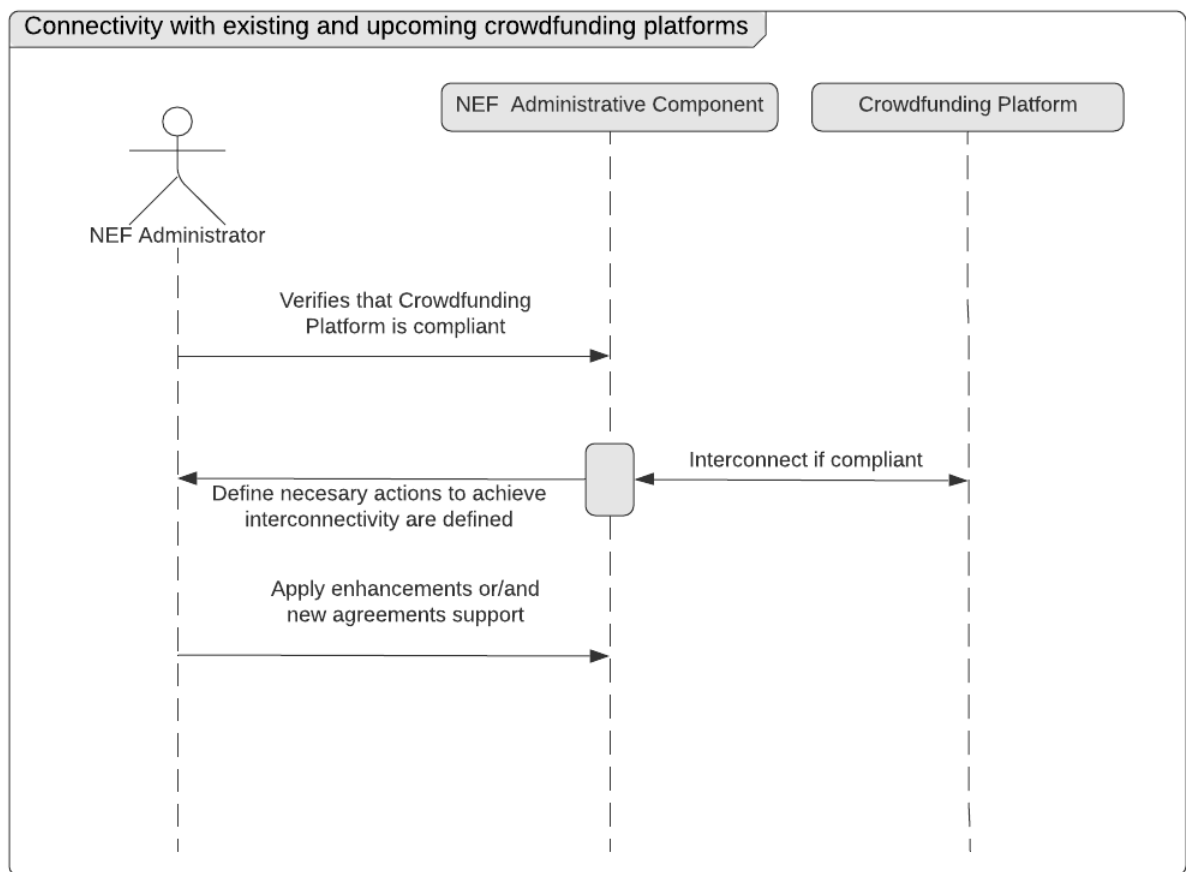
Figure 11: BS3-UC1: Connectivity with existing and upcoming crowdfunding platforms

4.3.2 BS3-UC2: Showcase crowdfunding opportunities

Use Case Name	Showcase crowdfunding opportunities
Version	V0.1
Last Update	
Authors	CERTH
Brief Description	Facilitate funding by notifying members for upcoming opportunities
Assumptions & Preconditions	NEF Platform is interconnected with crowdfunding platforms
Objective	Detect opportunities for NEF projects crowdfunding
Effects/Post Conditions	Request for funding in one or more crowdfunding platforms
Involved Actors	Information Component, Technical Component,

	Administrative Component, Crowdfunding Platforms, Smart Matchmaking Component
Use Case Initiation	NEF member searches for project funding
Main course	1. NEF member searches for project funding 2. Information component retrieves project's profile and triggers the technical component to search for funding opportunities. 3. Technical Component based on project's profile searches in the already interconnected crowdfunding platforms for possible opportunities via the Administrative Component 4. Administrative Component reports potential investors after communicating with the interconnected crowdfunding platforms. 5. Matchmaking takes into account project properties and features (e.g. technology, island location e.t.c.) and Administrative Component report and ranks opportunities ranked by best match. 6. Matchmaking results are propagated back to NEF member.
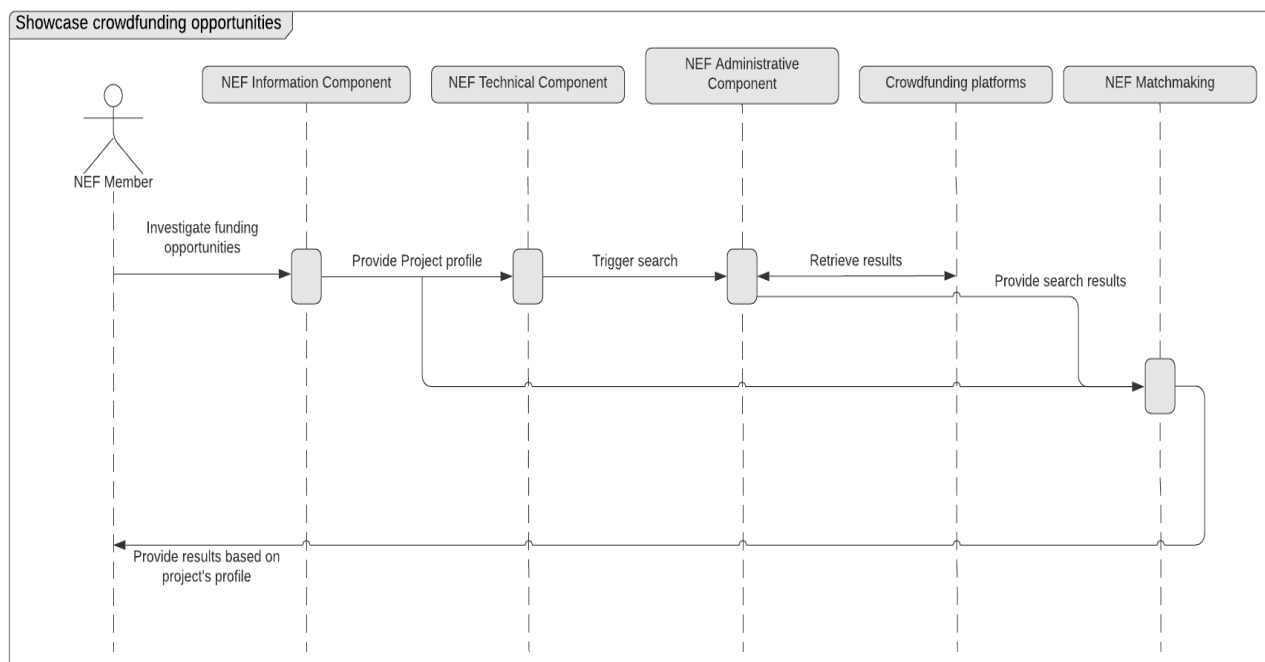
Figure 12: BS3-UC2: Showcase crowdfunding opportunities

4.3.3 BS3-UC3: Open call for project funding

Use Case Name	Open call for project funding
Version	V0.1
Authors	CERTH
Brief Description	NEF member creates an open call for funding
Objective	Create funding opportunity and search for potential partners
Effects/Post Conditions	
Involved Actors	Matchmaking, profiling, chat rooms
Use Case Initiation	Member creates an open call funding
Main course	1. NEF Member creates a new open call for funding 2. Matchmaking detects investors based on project profile and investors profiles and notifies them. 3. If an investor is interested then he/she can communicate with the project owner via a private channel. 4. In case members in step 3 reach an agreement, then they proceed with investment details.

4.3.4 BS3-UC4: Showcase investment opportunities

Use Case Name	Showcase investment opportunities
Version	V0.1
Authors	CERTH
Brief Description	
Objective	Showcase NEF projects to potential investors
Effects/Post Conditions	
Involved Actors	Information Component, Technical Component, Administrative Component, Crowdfunding Platforms, Smart Matchmaking Component
Use Case Initiation	Investor triggers search for opportunities
Main course	1. Investor searches for opportunities e.g. open calls 2. Matchmaking takes into account investor's profile and NEF projects' profile. 3. Afterwards, investor can view matched results based on matching rank.

5 NESOI User Requirements Definition

5.1 User requirement template

In order to document user requirements, the Volere methodology has been used as described previously in this document in chapter 0 *WP2 to is central* to the progress of all the other WPs. It is partly based on the work carried out in WP1, whose outcomes will be integrated into the NEF Platform. W2 and WP1 partners are in regular contact to ensure smooth coordination and synchronisation of activities between the WPs. To date, a first version of the self-check eligibility tool to the NEF Platform, as described in D1.2, is publicly available at https://nesoi.eu/nef-platform/#/eligibility-tool. The next step will be the integration and adaptation of the results of WP1, particularly the Financial Instruments into the platform.

The NEF is also closely interconnected with WP3 and WP5 as it includes all the procedures for the submission of the NESOI calls, including the online application forms, guidelines, helpdesk service and tutorials.

A dedicated section of the Platform will host the e-learning activities which will be developed by WP7 to support the capacity building activities.

WP4 will also rely on the NEF to act as a point of reference for all tools, documents and guidelines related to project implementation.
User Requirements Collection Methodology. The latter adds four more categories hence adding more depth to the standard functional and non-functional classification. More precisely these categories are:

Functional requirements are the fundamental or essential subject matter of the product. They describe what the product has to do or what processing actions it is to take.

Non-functional requirements are the properties that the functions must have, such as performance, usability, data security needs (IS assessment).

Project constraints are restrictions on the project due to the budget or the time available to build the product.

Design constraints impose restrictions on how the product must be designed. For example, implementation in hand-held devices, use of existing servers or other hardware, software or business practice.

Project drivers are the business-related forces. For example, the purpose of the project is a project driver for NEF's energy transition projects.

Project issues define the conditions under which the project will be done. Our reason for including them as part of the requirements is to present a coherent picture of all factors which contribute to the success or failure of a project and to illustrate how managers can use requirements as input when managing a project.

As a result, the template for the collection of user requirements includes the fields below.

- Requirement ID
- Description
- Type
- Rationale
- Originator
- Fit Criteria
- Priority
- Conflicts
- Supporting Materials
- History
- Stakeholders Happiness
- Stakeholders Unhappiness
- Group dependencies
- Reference Use Case

5.2 User functional requirements inventory

The following table summarizes the collected user requirements. The latter have been used to design Business Scenarios and Use Cases.

	Description	Rationale	Originator	Fit Criterion	Priority	Use Case
1	As Project Owner/Manager I should be able to create and manage Open Calls for funding for my project(s).	NEF Platform should assist Project owners/managers to financially support their projects.	CERTH	NEF Platform should support Open Calls management.	High	BS3-UC3
2	Both as investor or public authority or entity active in the energy transition, I might want to get inspired by other existing/on-going projects	From key message at the beginning of the Grant Agreement "for islands where to find ideas and effective organizational, technical and financial instruments for the whole	RINA-C	Create a section dedicated to implemented project/success stories (not only though NESOI) which would help to browse between possible solutions for islands	Medium	BS1-UC1, BS1-UC2, BS1-UC3

		value chain of a project." In addition, we should advertise our work once we performed it				
3	User should be able to submit proposal thought the platform, therefore they should have all information about requirements, timelines, topics, etc. available	The users should be able to submit their proposals to the open calls though the platform and retrieve the info from there	RINA-C	Users should have both the possibility to 1. have the information related to the open call they are applying to 2. upload files, both pdf and supporting documents	High	BS3-UC3
4	Various technology providers should be able to include themselves in such database/section, presenting their products and how they can fit islands needs	The platform should encourage the establishment of new partnerships and match technology providers with islands' needs	RINA-C	The platform should encourage the establishment of new partnerships and match technology providers with islands' needs	Medium	BS1-UC1, BS1-UC2, BS1-UC3
5	We should manage the pseudo-erasmus programme through the platform, therefore finding interested participants and potential hosts	Anyone willing to participate to such programme should be able to find the required information of the platform	RINA-C		Medium	This is not related to a specific BS UC
6	Allow exploiting the NESOI facility after the EU-funding period and for replicating investment concepts		RINA-C		Low	This is not related to a specific BS UC
7	We should favour the clustering of islands according for example to similar conditions and/or being part of the same archipelago		RINA-C		Medium	BS2-UC2
8	Possibility to host the eligibility self-check on the platform		RINA-C		Low	Already publicly available
9	Mutual link to the website		RINA-C		Medium	This is not related to

						a specific BS UC
10	The filters in the presentation seem to be aimed at investors, in order to match them with projects and vice versa. We think that the information in the platform could be used as a tool to allow islands, especially small islands without energy transition plans, to see what kind of projects are being developed and could consider replication. For us this would require: Segmentation of all eligible islands for filtering: each island is segmented in four main categories: climate zone (according to NZEB classification), size (by population), interconnection to mainland and seasonality (user input). These categories could be used as filters for a more advanced search. Self-check analysis tool: after registration, a small self-check questionnaire could be implemented for the assessment of the starting situation of the islands. This was priorly developed and scrapped for T1.2 and intended to give also a score on energy transition based on a small set of questions derived from the survey, which could also be implemented here as a first output after registration. See attached file for specifications. Similar peers' projects for replication: for those islands without projects, as identified in the previous step, the platform could return projects of similar peers (based on the segmentation). This way we could give small islands an overview of projects besides the courses and forum social participation. Also, this could be complemented with		CIRCE		Medium	BS1-UC1, BS1-UC2, BS1-UC3, BS1-UC4

	information about innovative business models defined in T1.4					
11	Administer e-learning content	NEF Platform should provide users with e-learning content on sector.	CERTH	NEF should provide an e-learning section.	Medium	BS1-UC4
12	As a Project Owner/Manager I should be able to participate in the available courses. More precisely I should be able to: 1.save my progress 2.rate the course 3.rate tutor 4.comment and/or ask questions	NEF should allow users to get informed about available technologies on the sector.	CERTH	Courses should be resumable, ratable and should allow users to comment/discuss on the subject.	Medium	BS1-UC2, BS1-UC3, BS1-UC4
13	As a Project Owner/Manager or Stakeholder I should be able to create and update my profile. Moreover, I should be able to define my interests in the sector, my knowledge or expertise on sector topics.	User profiles should be utilized by Matchmaking component to achieve several goals such as suggest projects of interest, facilitate possible partnerships, provide personalized notification.	CERTH		High	BS2-UC1, BS2-UC2
14	As Project Owner/Manager I should be able to create, update and delete profiles for my energy transition projects.	Project profiles should be utilized by Matchmaking component to achieve several goals such as suggest projects of interest, facilitate possible partnerships, provide personalized notification.	CERTH	NEF Platform should support project profiling.	High	BS2-UC3

15	As a User, I should be encouraged to utilize NEF Platform and be more active. For example, I should be prompted to participate in courses, discussions, actively participating in both my projects and projects I am partner.	User engagement and NEF features utilization is essential for NEF Platform to offer its benefits.	CERTH	A gamification engine should be implemented in NEF Platform designed to engage users and take part in the options/activities/actions that NEF offers.	High	BS1-UC5, BS2-UC3
16	As a Project Owner/Manager I should be able to explore crowdfunding opportunities and create/manage a crowdfunding campaign for my projects.	NEF should assist Project Owners/Managers to fund their projects.	CERTH	NEF Platform should support crowdfunding in several crowdfunding platforms.	High	BS3-UC1
17	As a Stakeholder I should be able to search for investing opportunities and participate in projects of interest.	Facilitate Projects in NEF Platform and engage cooperation.	CERTH	NEF Platform should offer the ability to search as also suggest for investing opportunities	High	BS3-UC4
18	NEF Platform should facilitate users' collaboration and cooperation, aiming in forming new partnerships.	NEF should aim in facilitating new partnerships.	CERTH	NEF Platform should provide forums and chat rooms assisting users communication.	Medium	BS2-UC3
19	As a non-logged in visitor I would like to view Eligibility Analysis Tool. The latter will provide a series of predefined questions and answers that Visitor (non-logged in) will answer anonymously. Afterwards a result page will appear with island eligibility results (graphics and textual) Results will NOT be stored e.g. in the database or somewhere else. The questions, their answers and the methodology results are calculated are presented in Deliverable D1.2 *Methodology for evaluation and eligibility of islands*		CERTH		High	This requirement come up as a need later on and does not relate to a specific BS UC
20	From "2020_02_20_NESOI_Mock_Ups		R2M Energy		Medium	BS3-UC2, BS3-UC4

_ADMIN" presentation, related to the crowdfunding part in the NESOI platform, we would like to have it in two section: Funding Opportunities: Map with all crowdfunding platform interested in NESOI, with a direct link to their website (similar to the attached image) where users can select the state (or region or zone) and choose the desired one. It can also open a list or a slider tiles where general info on that crowdfunding platform are present. Who is responsible to add and keep update all this info? Investment Opportunities: Once a NESOI project is launched through a crowdfunding platform then it goes under «investment opportunity» section. It's not clear who should manage this process though.					
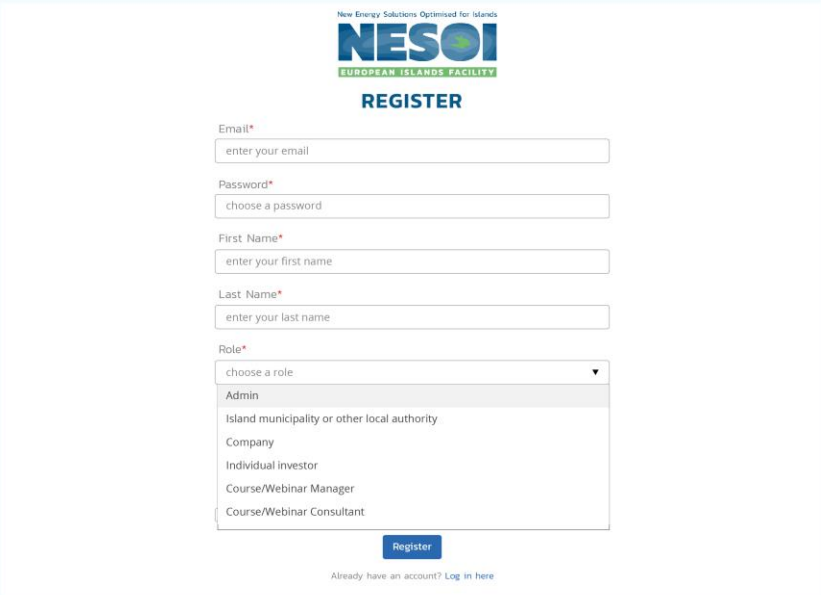
Table 1: User functional requirements

6 Mock-ups

Based on the collected requirements initially some mockups have been created for the various components. The mock-ups are presented in the following sections.

6.1 Registration and Login Forms

Figure 13: Registration Form

Figure 14: Login Form

6.2 Crowdfunding opportunities

As it can be seen from the requirements there are three different opportunities to be integrated in the Platform, namely Investment, Funding and Cooperation Opportunities.

6.2.1 Investment Opportunities

Figure 15: List of Investment Opportunities

Figure 16: Create new Investment Opportunity

6.2.2 Funding Opportunities

Figure 17: List of Funding Opportunities

Figure 18: Filters for Funding Opportunities

6.2.3 Cooperation Opportunities

Figure 19: List of Cooperation Opprotunities

Figure 20: Filters for Cooperation Opportunities

6.3 E-Learning

For the e-learning the open source e-learning platform Moodle will be utilized. The NEF Platform will communicate with Moodle Platform and the e-learning content will be available via the NEF Platform.
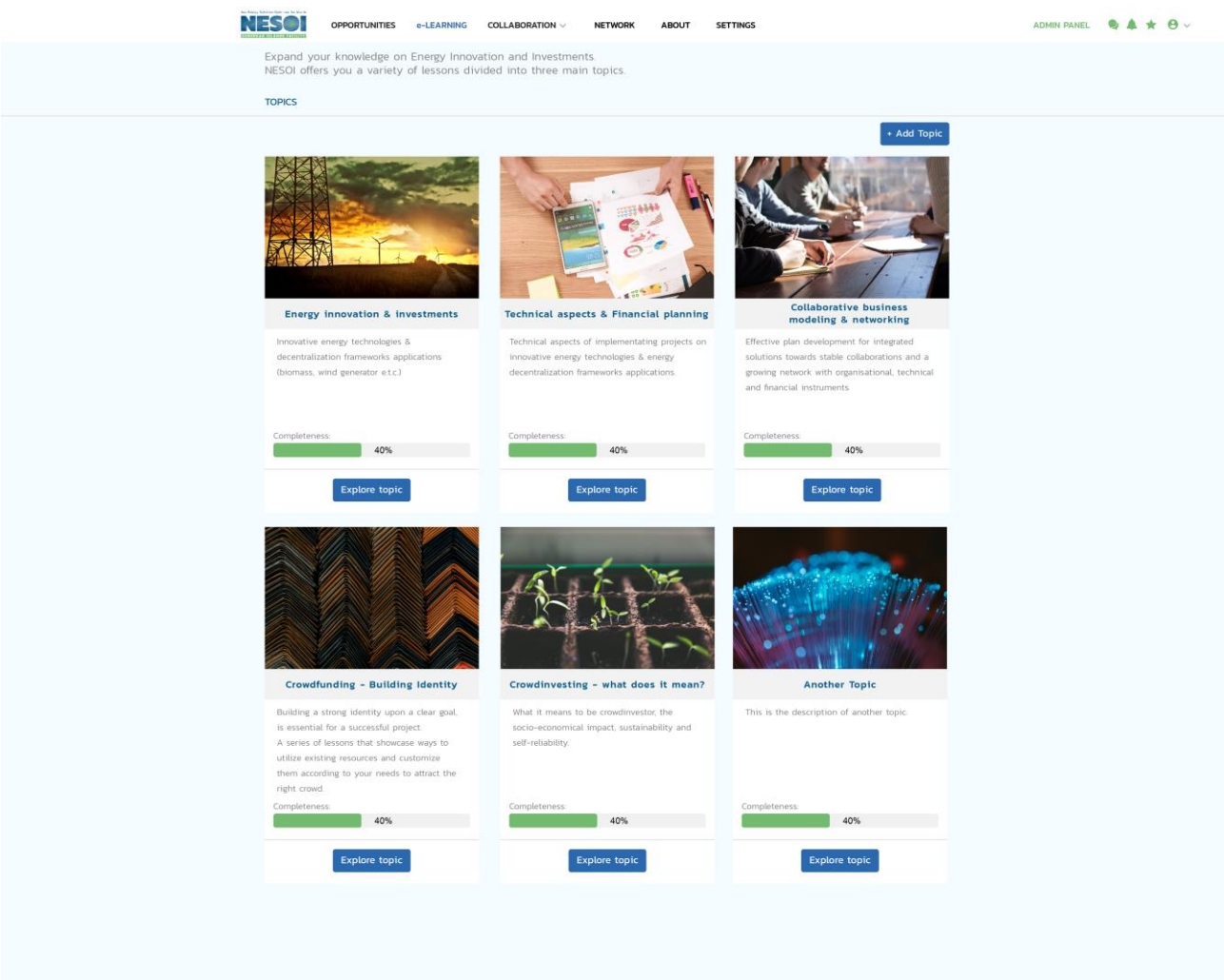
Figure 21: List of User's enrolled Lessons and relevant progress

D2.1: NESOI Facilitating Platform Architecture, Design Mock-ups and MVP definition
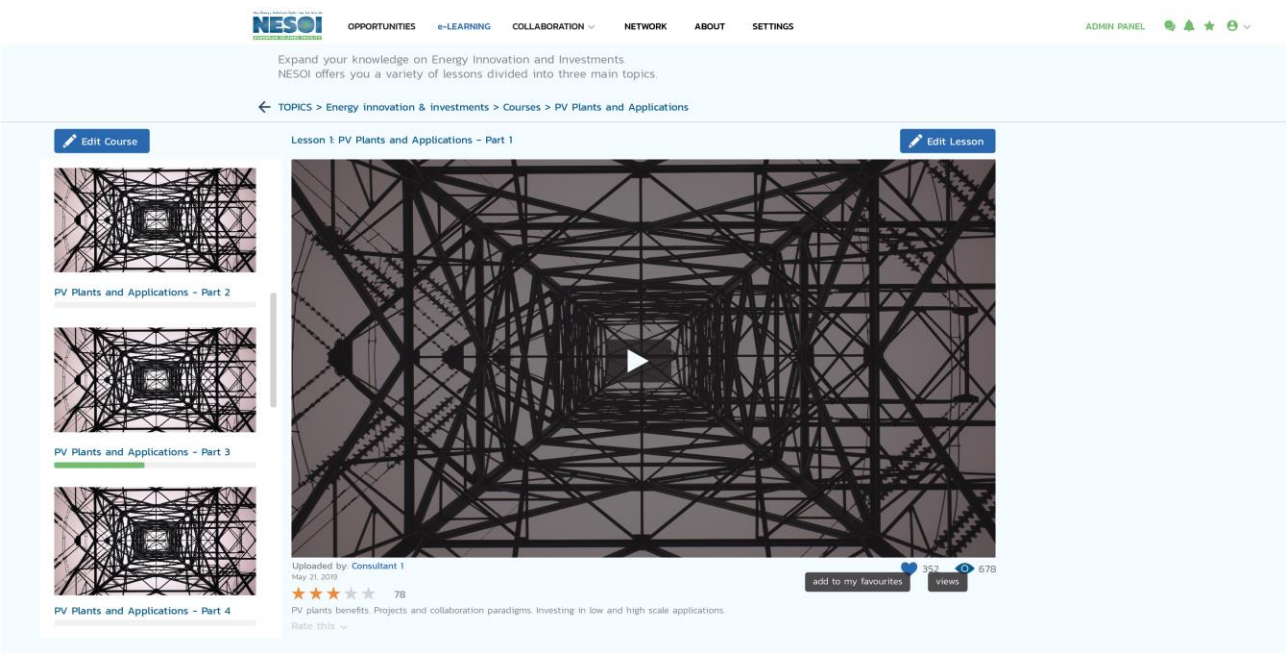
Figure 22: Course videos

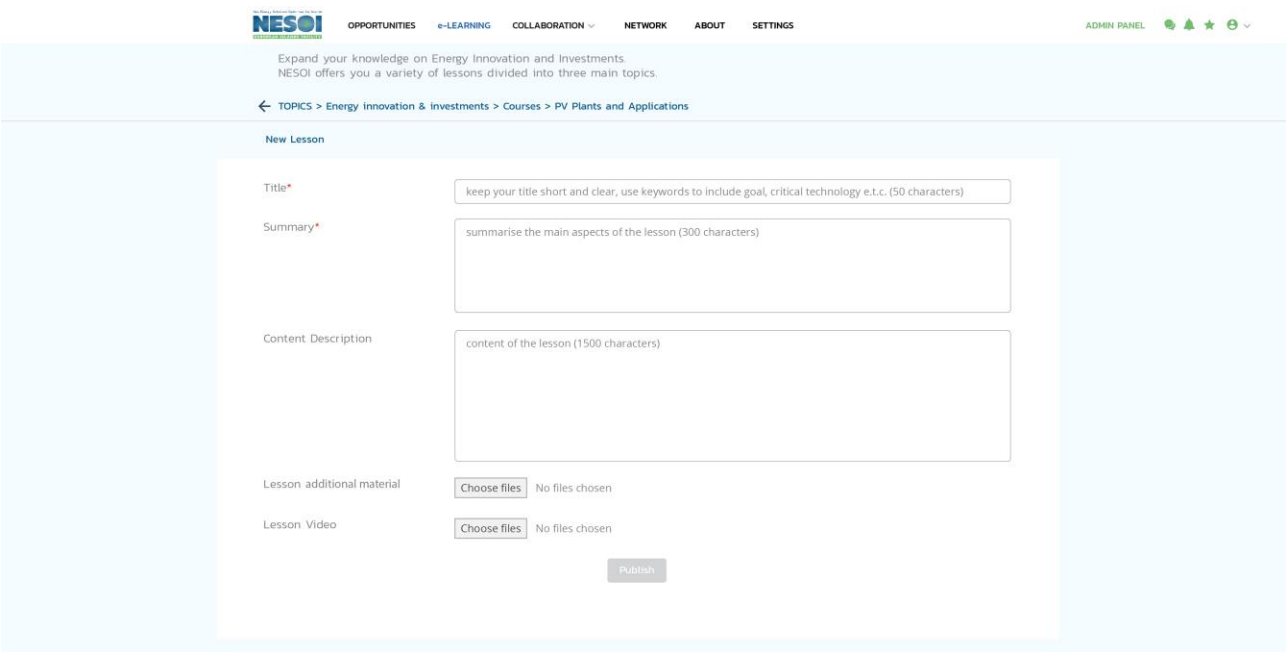Figure 23: Create new course

7 Conclusions

The current document presented the methodology used to collect requirements for the NEF Platform. The collected requirements have also been presented as the NEF Platform Components. Moreover, the present document depicts some mock-ups that will be used to guide the development process. Finally is should be noted that the first draft version is already available at https://nesoi.eu/nef-platform/#/auth/login and the eligibility tool described in the requirements is publicly available at https://nesoi.eu/nef-platform/#/eligibility-tool .

www.nesoi.eu