TRIPLE-A

Enhancing at an Early Stage the Investment Value Chain of Energy Efficiency Projects

Deliverable 4.3: User Manuals

(first version)

June 2020

The Triple-A project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 846569.

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Enhancing at an Early Stage the Investment Value Chain of Energy Efficiency Projects

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Preface

Triple-A has a very practical result-oriented approach, seeking to answer three questions:

- How to ***assess*** the financing instruments and risks at an early stage?
- How to ***agree*** on the Triple-A investments, based on selected key performance indicators?
- How to ***assign*** the identified investment ideas with possible financing schemes?

The Triple-A scheme comprises three critical steps:

- ***Step 1 - Assess:*** Based on Member States (MS) risk profiles and mitigation policies, including a Web based database, enabling national and sectoral comparability, market maturity identification, good practices experiences exchange, reducing thus uncertainty for investors.
- ***Step 2 - Agree:*** Based on standardised Triple-A tools, efficient benchmarks, and guidelines, translated in consortium partners' languages, accelerating and scaling up investments.
- ***Step 3 - Assign:*** Based on in-country demonstrations, replicability and overall exploitation, including recommendations on realistic and feasible investments in the national and sectoral context, as well as on short and medium term financing.

Who We Are

	Participant Name	Short Name	Country Code	Logo
1	National Technical University of Athens	NTUA	GR	
2	ABN AMRO Bank N.V.	ABN AMRO	NL	
3	Institute for European Energy and Climate Policy Stichting	IEECP	NL	
4	JRC Capital Management Consultancy & Research GmbH	JRC	DE	
5	GFT Italy srl	GFT Italy	IT	
6	CREARA Consulting SL	CREARA	ES	
7	Adelphi Research Gemeinnützige GMBH	adelphi	DE	
8	Piraeus Bank SA	PB	GR	
9	University of Piraeus Research Center	UPRC	GR	
10	SEVEn, The Energy Efficiency Center	SEVEn	CZ	
11	Public Investment Development Agency	VIPA	LT	
12	National Trust Ecofund	NTEF	BG	

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Executive Summary

The Triple-A Standardized Tools are a web-based application, which supports the identification and financing of Triple-A investments. More specifically, the Assess Tool evaluates mainly the risks and maturity of the proposed investments together with the EU Taxonomy compliance, the Agree Tool identifies the Triple-A investments and the Assign Tool matches the investments with state-of-the-art green financing trends.

The report provides a user manual for each phase of the Tools, including all necessary steps that a user should follow for each one of the Tools and explains the produced output in each methodological step. The Triple-A Tools are analysed individually, reporting all the operations that are required during the navigation to the information system.

1 Introduction

The Triple-A scheme is introduced for identifying “Triple-A” energy efficiency (EE) investments, aiming to reduce the respective time and effort required at the crucial phase of the investment's conceptualization, as well as to increase transparency and efficiency of respective decision making.

The Triple-A Standardized Tools provide a result-oriented approach, trying to answer the following questions:

- How to **assess** the finan cing instruments and risks?
- How to **agree** on the Triple-A investments, based on selected key performance indicators?
- How to **assign** the identified investment ideas with possible financing schemes?

The purpose of this report is to provide a user manual for each Tool, in order to support the user of the Triple-A Standardized Tools to better navigate the web-application. The aim is to describe the approach that is followed for the identification of the Triple-A investments, criteria, examples and methodology. These guidelines include a step-by-step navigation, providing specific screenshots from all the steps of the process. In this context, every decision that could be made by the user of the Triple-A Standardized Tools is explained in detail.

The deliverable proceeds as follows:

In chapter 2, the basic operations of the tools are presented, such as the homepage, the login and the register operations. In chapter 3, the Triple-A Assess Tool is explained, which is divided into two steps: The Go/No-Go phase, which is based on EU Taxonomy criteria and the Aggregated Risk Assessment phase, which is based on project-specific questions. Chapter 4 is dedicated to the Triple-A Agree Tool, which includes the process for the project classification. All details about the necessary input data are thoroughly described. Finally, chapter 5 presents the theoretical setup for the Triple-A Assign Tool, which is currently under construction.

2 Quick Start

Once landed to the Tools Homepage the user has to Register in order to gain access. When registered and redirected to the Tools Homepage, by clicking on one of the Assess, Agree, Assign icons the user can navigate to the corresponding Tool (Figure 1).

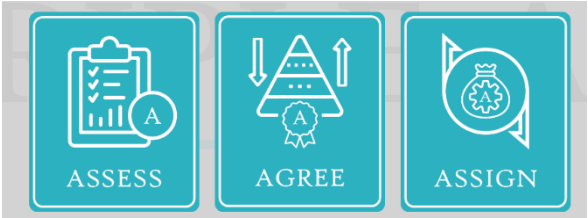

Figure 1 Assess, Agree, Assign Links

The basic steps of the Tools are show below (Figure 2).

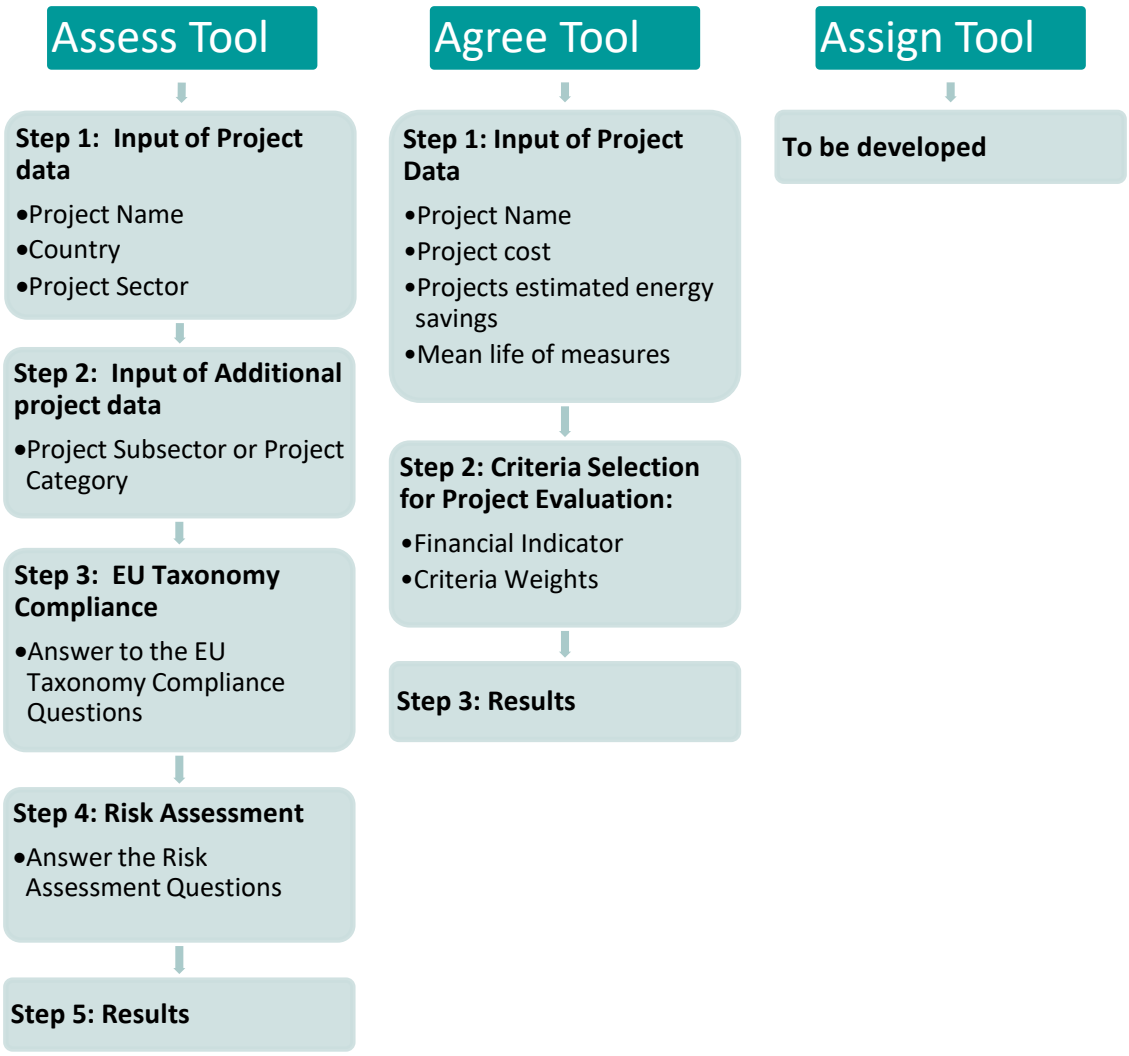

Figure 2 Quick Start: Tools basic steps

3 Accessing the Triple-A Tools

The following sections provide basic information that is of general interest to all users of the Triple-A Standardized Tools.

The Triple-A Tools are accessible though the Triple-A Standardized Toolbox platform[1] which could be reached through the dedicated Triple-A webpage[2].

3.1 Homepage

The Triple-A Tools homepage contains some initial information about the Triple-A methodology. When the user enters the Tool is able to access and navigate the homepage without any additional subscription. The user has also the opportunity to navigate easily to the three individual steps of the methodology, by clicking on the according icon of the homepage.

On the top of the page, there is a navigation bar which includes hyperlinks for the three individual steps of the Triple-A Tools.

In the right part of the navigation bar the user may find the login and register buttons.

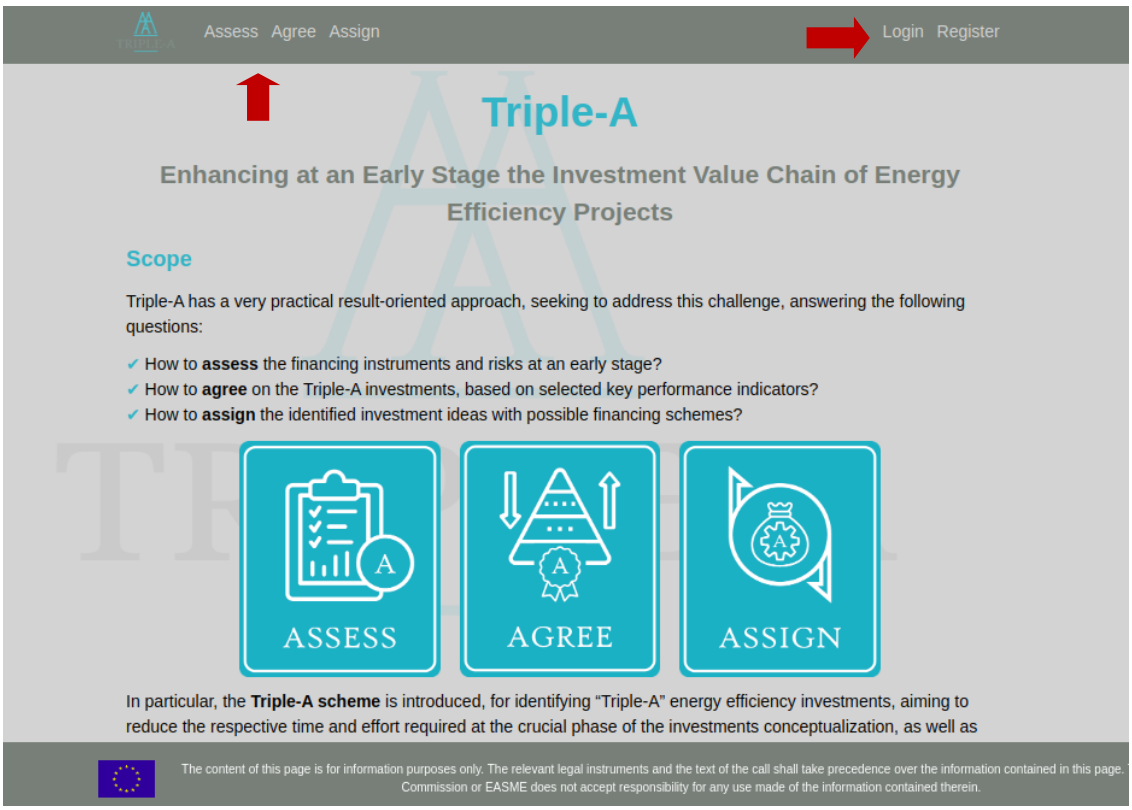

Figure 3: Triple-A Tools homepage

[1] Standardized Triple-A Toolbox: http://toolbox.aaa-h2020.eu/

[2] Triple-A Webpage: https://aaa-h2020.eu/tools/

3.2 Signing up to the Triple-A Tool

The access to the Triple-A Standardized Tool is protected by **username** and **password credentials**. If the user is not logged in, the access to the Tool is limited. The first time that the Tool is used, a registration is required. The registration is a quick process that is completed in a few minutes.

Firstly, the user selects a username, which has to contain only letters, digits and some specific special symbols, as it is thoroughly described in the screen. Secondly, the user should enter his personal **email**. The final step of the process is to select a password and type it twice. The password cannot be similar to the username or the email and it cannot be a commonly used password for safety reasons. It should contain at least 8 characters and it must not be entirely numeric.

In case the user already has an account, he could just click on the login button and login to the Triple-A Tool and access all the available functionalities. The only required information in this case is the username and the password.

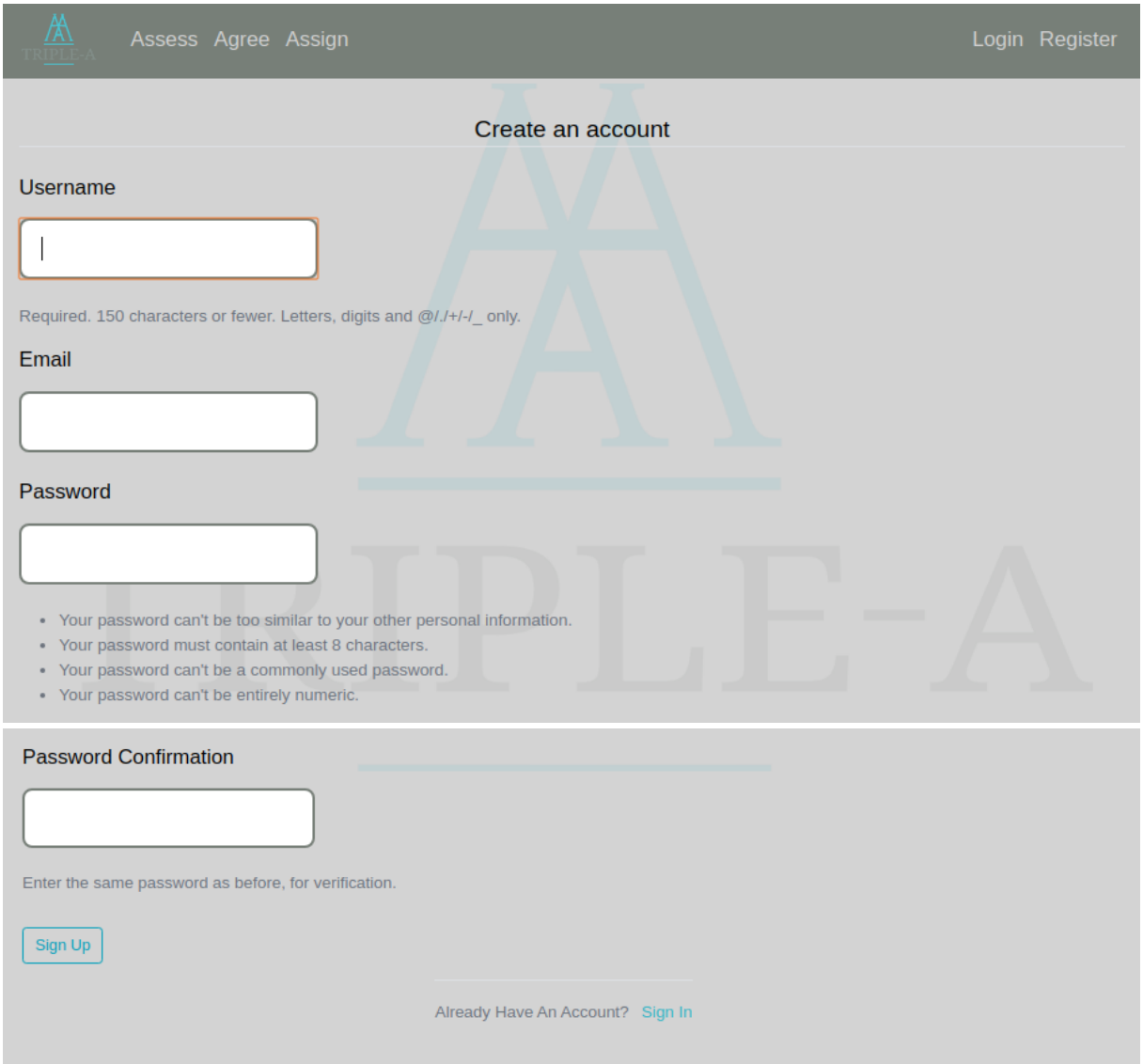

Figure 4: Triple-A Tool Registration Screen

3.3 Login into Triple-A Tool

In order to log into the system, the user needs to fill in valid username and password credentials into the corresponding fields and to hit the “Login” button. In case the user types in wrong credentials, the software will deny access to the other available functionalities. Please note that the number of attempts is not limited. Also, the system does not lock the user account if several attempts were made with a wrong password.

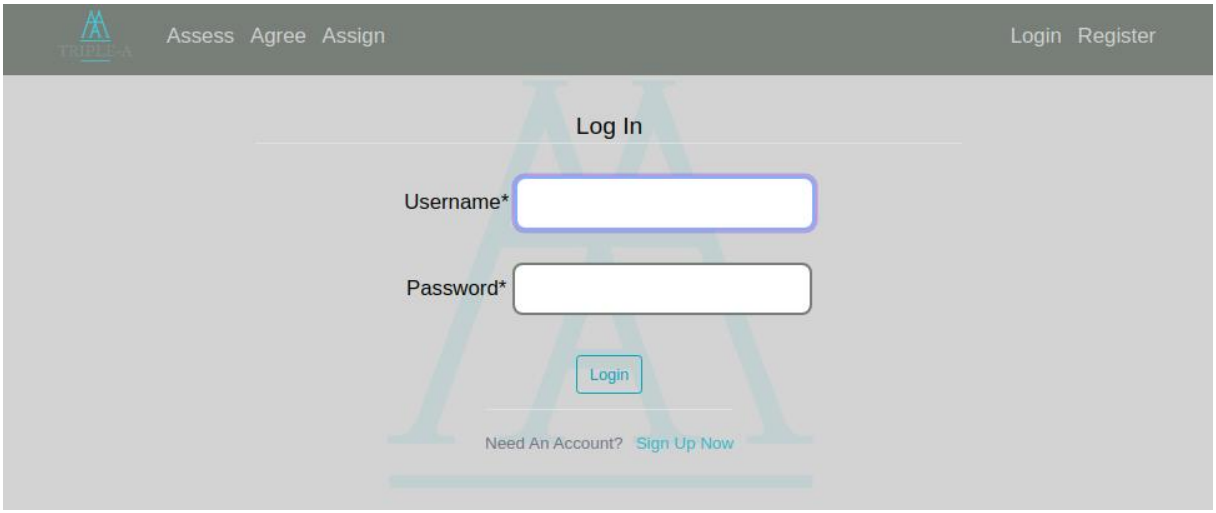

Figure 5: Triple-A Tool Login Screen

Triple-A project is committed to ensuring the security and protection of the personal information that are processed, and to provide a compliant and consistent approach to data protection. If the user has any questions related to our Triple-A compliance, he/she could send an email to contact@aaa-h2020.eu.

4 Managing the Triple-A Assess Tool

4.1 Basic Information

The Triple-A Assess Tool refers to the first step of the Triple-A methodology. The user can access the Triple-A Assess Tool either through the Assess icon on the homepage, or through the navigation bar on the top of the page. By clicking on one of these options, the user is transferred to the homepage of the Triple-A Assess tool. This page includes a short description of the Triple-A Assess tool. The user should click the **Get Started** button in order to start the Assess Phase.

The Triple-A Assess Tool consists of two phases. In the first phase the energy efficiency investments are filtered in terms of EU taxonomy eligibility, resulting to the exclusion of all the non-eligible projects. In the second phase the aggregated risk of the "Go" investments is calculated.

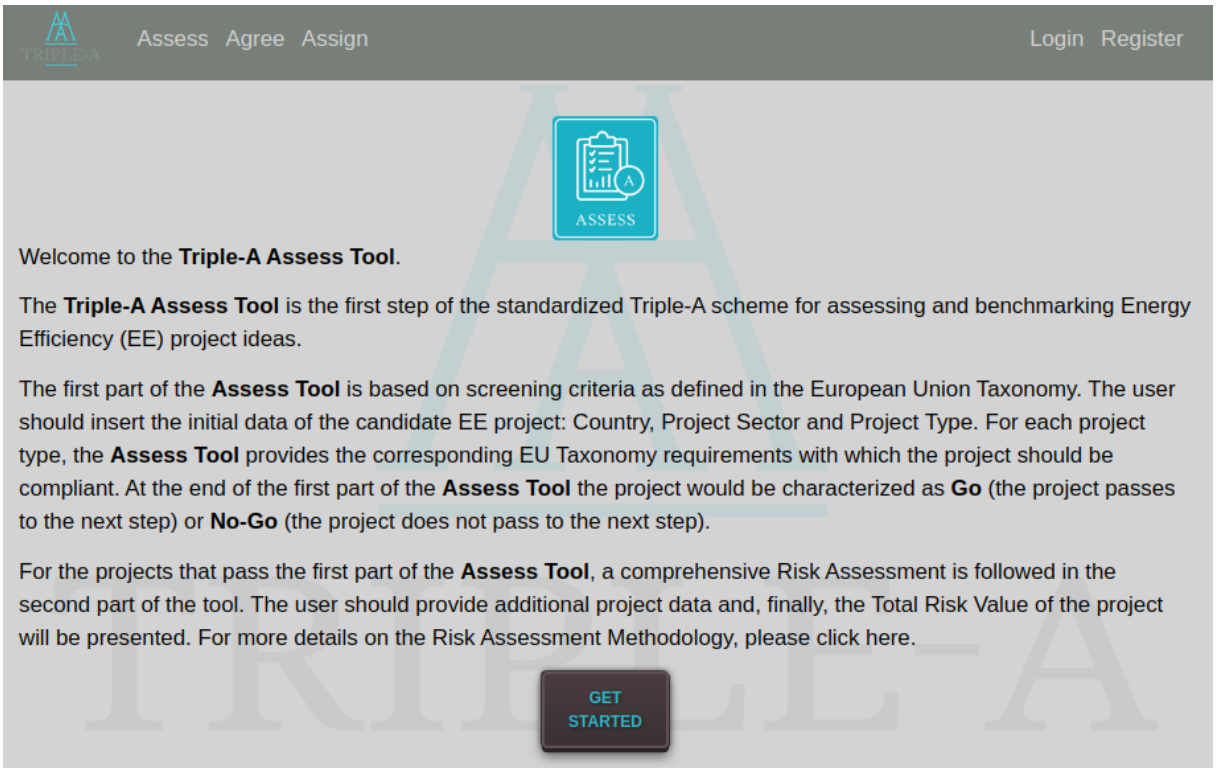

Figure 6: Triple-A Assess Tool Homepage

4.2 Initial EE Project Information

In the first page of the Triple-A Assess Tool the user is required to fill in the basic information of the energy efficiency project under consideration. More specifically, it is required to insert the **project name/type** and the **country**, in which the project is to be developed, as well as to select one of the five sectors:

- Buildings
- Manufacturing
- Transportation
- District Energy Networks
- Outdoor Lighting

After having inserted all the necessary information about the project, the user should click on the **Submit** button in order to proceed to the next step.

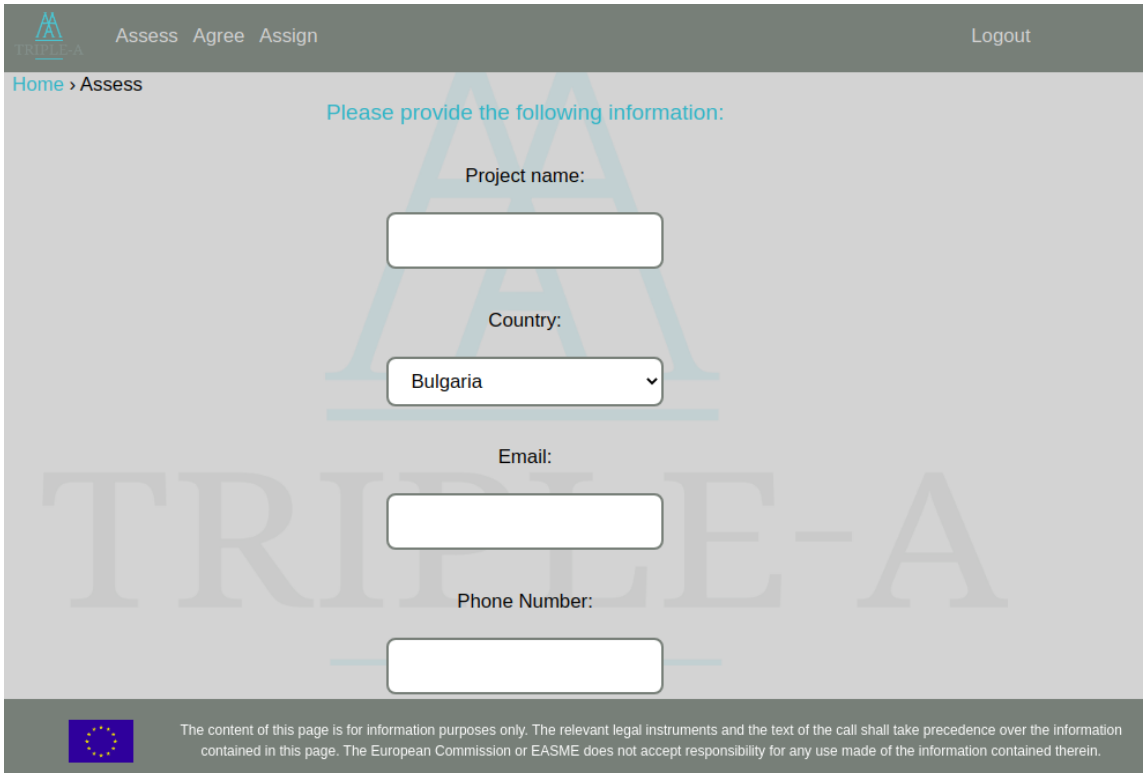

Figure 7: Triple-A Assess Initial Project Information Page

4.3 The "Go/No-Go" Phase

The first phase involves the assessment of whether the EE project is EU taxonomy eligible. This phase is called **"Go/No-Go" Phase**, because the projects which are not EU taxonomy eligible are directly rejected from the Triple-A Assess Tool. The basic concept in this phase is that the user should select whether the EE project fulfils a series of taxonomy criteria, or not. Depending on the sector that was selected in the previous step, this phase may be dimly differentiated. All sectors, except the Outdoor Lighting sector, include an intermediate step that requires the definition of some additional information about the **project subsector and/or category**.

The user will be notified whether the Project is a Go or No-Go, by a corresponding message. If any answer of the EU Taxonomy compliance questions sets a project as No-Go, the user is notified immediately, without being able to complete the Tool and the Risk Assessment.

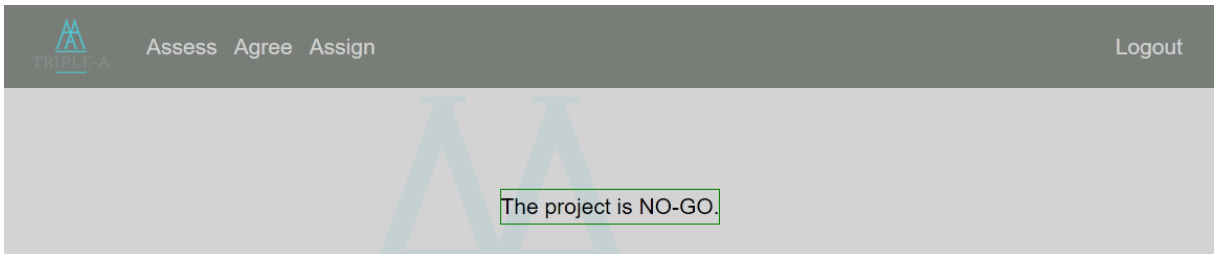

Figure 8 Assess Tool No-Go Notification

In other case, the notification message is displayed at the end of the procedure, along with the risk assessment results (Figure 15).

4.3.1 Project Subsector/Category Selection

As mentioned above, most sectors require from the user to provide some additional information, before presenting the EU taxonomy criteria eligibility checklist. This further classification of the projects is necessary, because each project category and subsector combine different taxonomy criteria. In case that a project belongs to the Outdoor Lighting sector, this intermediate phase is skipped. Therefore, the user is immediately transferred to the EU taxonomy checklist screen. In the following paragraphs, the available options for each sector are presented.

4.3.1.1 Buildings Sector

For projects included in the Buildings sector, the user should select the **project subsector** (residential / non-residential), as well as at least one **project category**.

It is important to note that multiple project types can be selected, thus not restricting the user to include only projects which belong to a specific project type.

Figure 9: Triple-A Assess Buildings Sector Page

4.3.1.2 Manufacturing Sector

For projects included in the Manufacturing sector, the user should select the **project subsector** of the investment. Therefore, the user should select one of the following subsectors:

- Hydrogen
- Iron and Steel
- Aluminium
- Cement
- Low carbon technologies
- Fertilizers and Nitrogen
- Other organic basic chemicals
- Other inorganic basic chemicals

Figure 10: Triple-A Assess Manufacturing Sector Page

4.3.1.3 Transportation Sector

For projects related to the Buildings sector, the user should select the **project subsector** of the investment between public transport and passenger cars and light commercial vehicles.

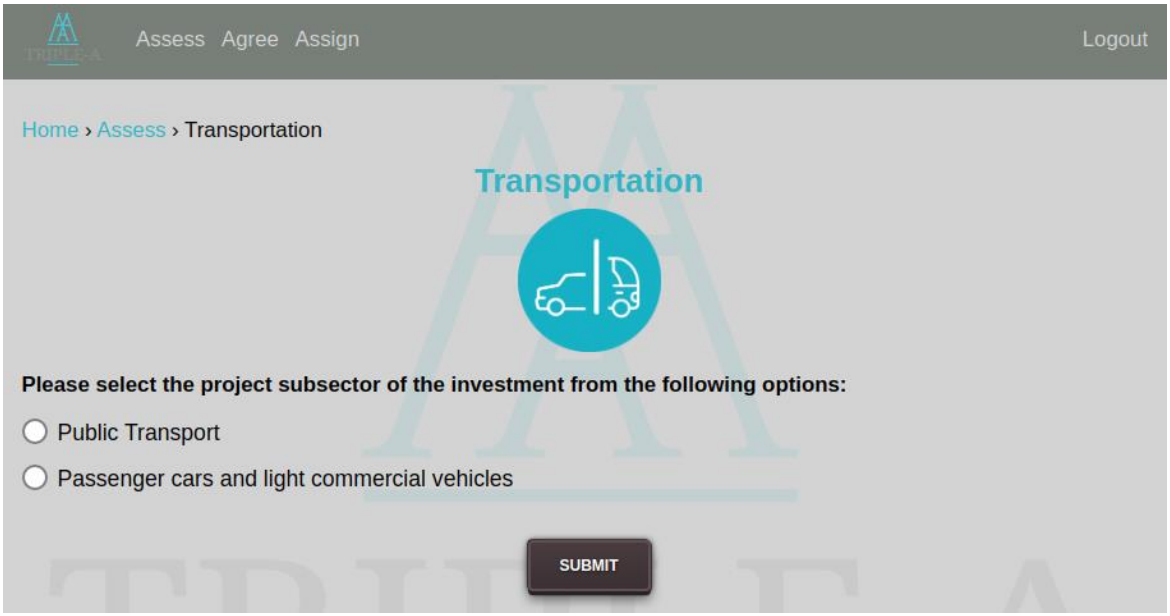

Figure 11: Triple-A Assess Transportation Sector Page

4.3.1.4 District Energy Networks Sector

For projects included in the District Energy sector, the user should select the **project type** of the investment**.**

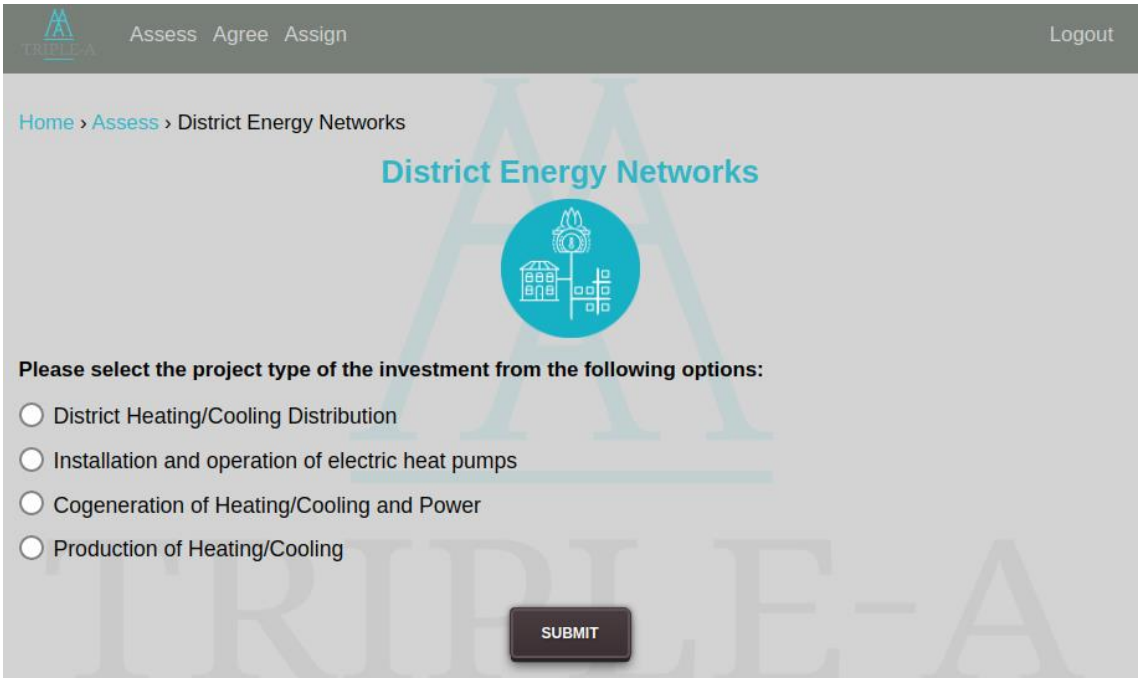

Figure 12: Triple-A Assess District Energy Networks Sector Page

Therefore, the user should select one of the following subsectors:

- District Heating/Cooling Distribution
- Installation and operation of electric heat pumps
- Cogeneration of Heating/Cooling power
- Production of Heating/Cooling

4.3.2 EU Taxonomy Criteria

After having imported all the project-specific information, the user has to select whether the investment is EU taxonomy eligible. The process for the selection is the following:

Depending on the project sector, as well as the additional information given (Project Type, Project Category etc.), an EU taxonomy list appears including the thresholds that need to be met by the investment and some explanations on the requirements, such as the metrics of each threshold.

Then, the user should carefully check if the investment fulfils all the thresholds. In case that all the requirements are met then the **Yes** checkbox should be selected, stating that the investment is taxonomy compliant.

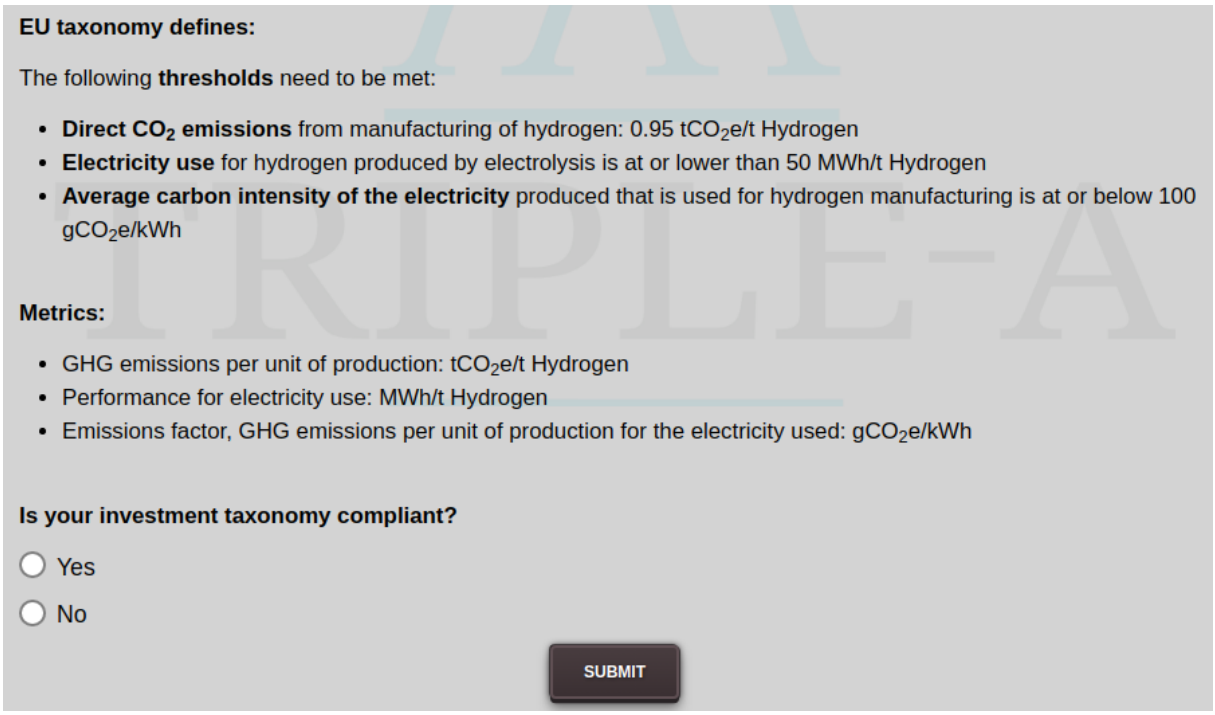

Figure 13: Triple-A Assess EU Taxonomy Criteria Checklist

4.4 The Risk Calculation Phase

The EE project proceeds to the Risk Calculation Phase, in case the project is EU taxonomy eligible and, thus, successfully advances from the Go/No-Go phase. The Assess Tool calculates the aggregated risk of the investment. The user is asked to answer a series of project-specific questions, which are taken into consideration for the aggregated investment risk calculation.

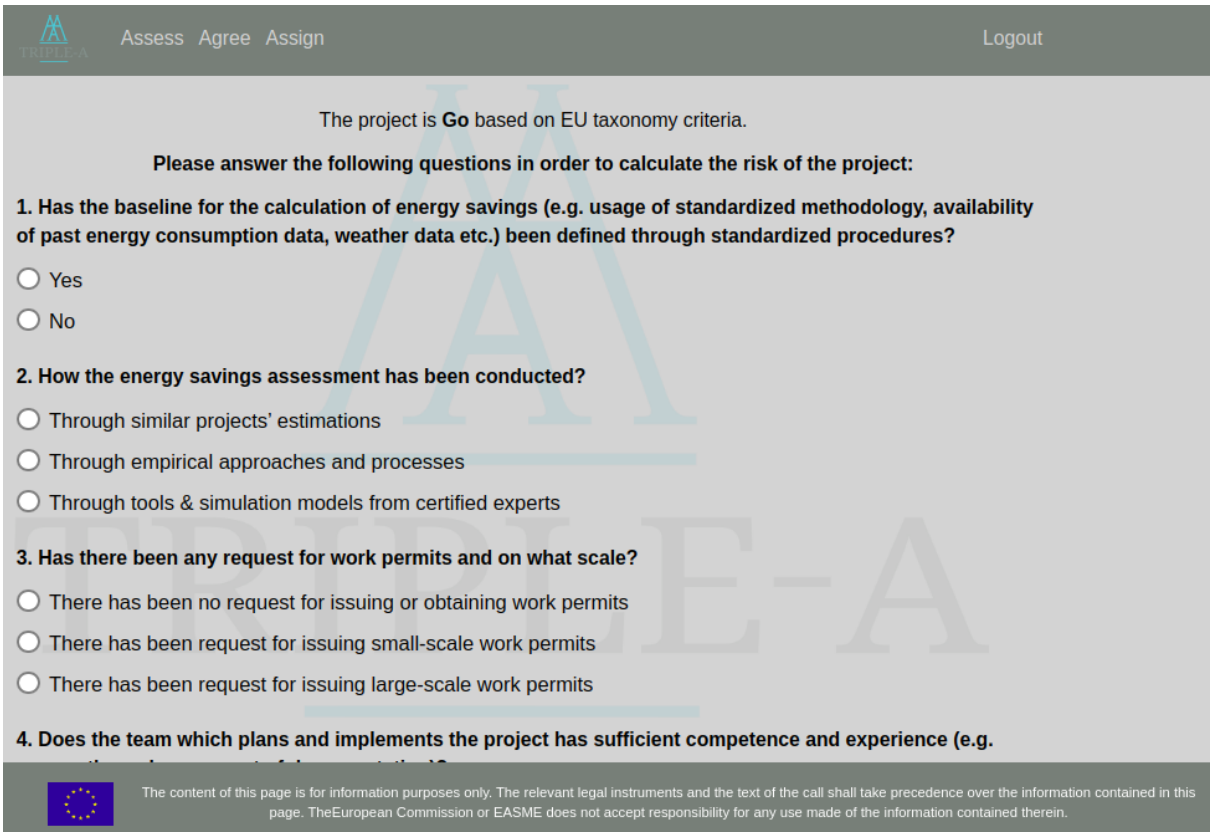

Figure 14: Triple-A Assess Tool's Project Risk Q&A section

Finally, the tool calculates the risk per factor, as well as the aggregated risk of the investment.

- **Financial risk** is related to the credit worthiness of the applicant for the loan/financing.
- **Behavioural risk** is related to the rebound effect that can exist in the context of the inspected EE investment.
- **Energy Market & Regulatory risk** is related to the energy prices and energy taxes volatility of the country in which the investment takes place and the request for issuing work permits that may exist in the context of the inspected project.
- **Economic risk** category is related to the economic environment of the country that the investment takes place.
- **Technological, Planning and Operational risk** is related to the technical complexity, the initial savings assessment, the implemented equipment, the project design, and the Operation & Maintenance of the inspected project.

4.5 Assess Tool Results

After the completion of the EU Taxonomy compliance and Risk Assessment the user is prompted with the results of the procedure, as shown in Figure 15.

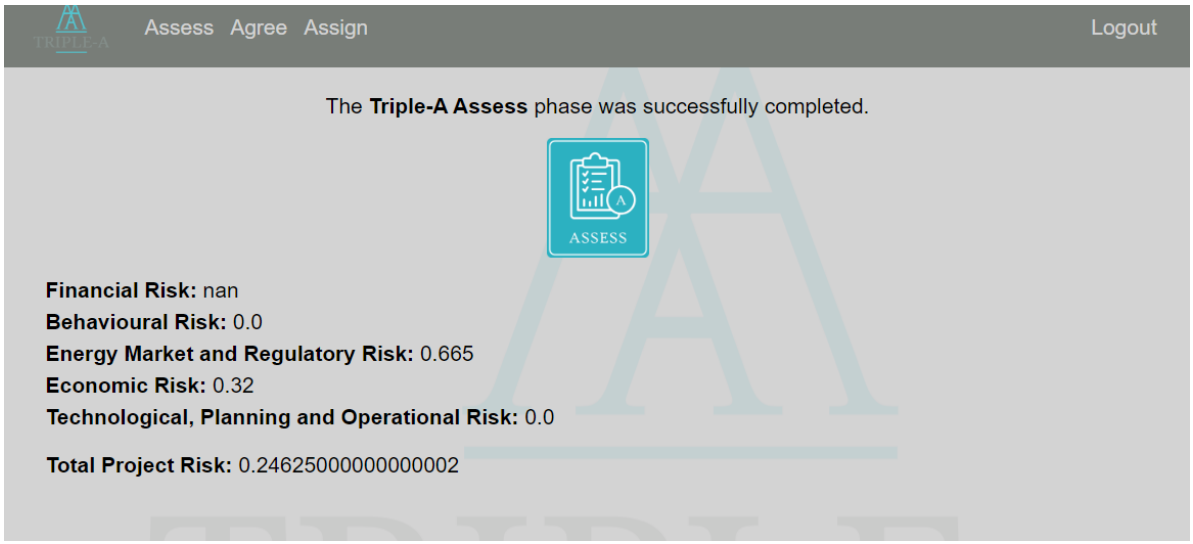

Figure 15 Assess Tool Results

5 Managing the Triple-A Agree Tool

5.1 Basic Information

The Triple-A Agree Tool refers to the second step of the Triple-A methodology. The user can access the Triple-A Agree Tool either through the Agree icon on the homepage, or through the navigation bar on the top of the page. By clicking on one of these options, the user is transferred to the homepage of the Triple-A Agree tool. This page includes a short description of the Triple-A Assess tool. The user should click the **Get Started** button in order to start the Agree Phase.

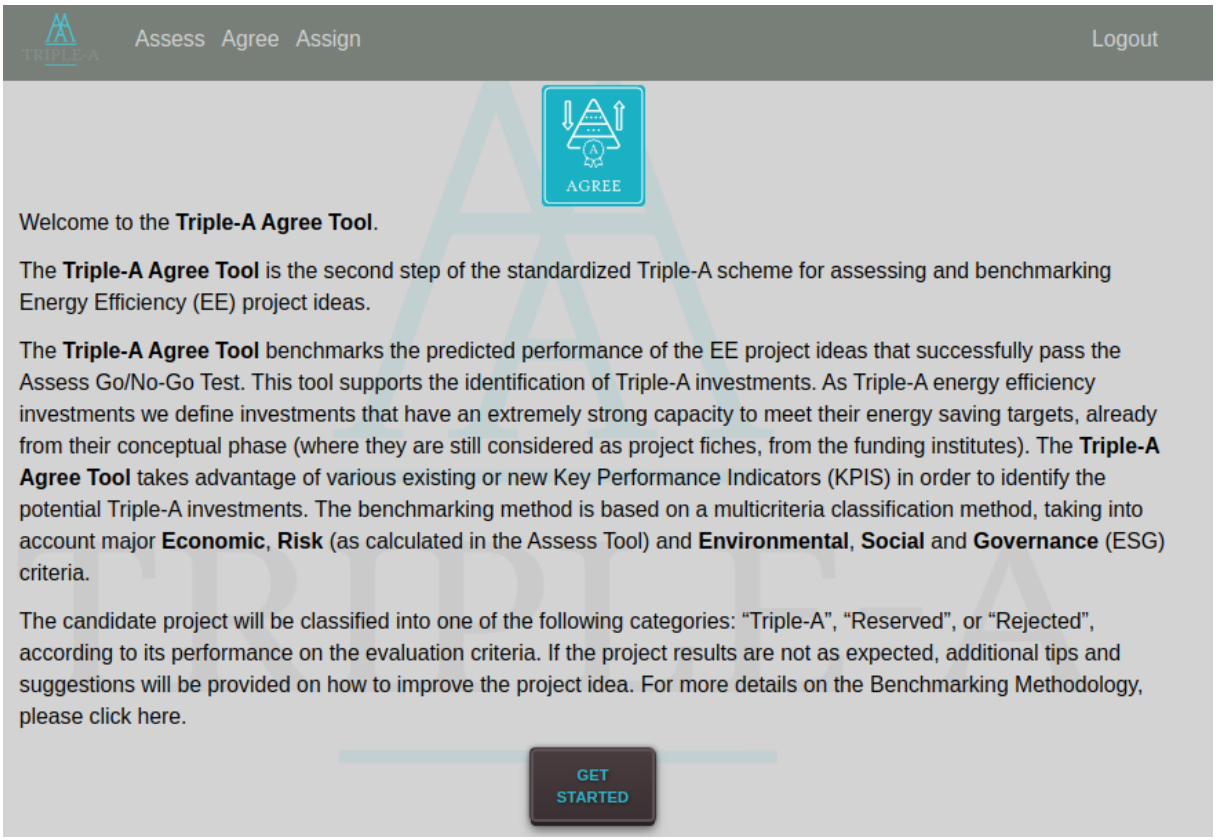

Figure 16: Triple-A Agree Tool homepage

5.2 Input Required

The user starts the Triple-A Agree Tool phase by clicking on the **Get Started** button. Then, the user is navigated to a screen, where all the necessary project-specific data should be filled in. The necessary information can be divided into three main categories:

- Project Costs
- Savings
- Lifetime of measures

In terms of cost, the user should provide the **total investment cost** of the project, as well as the **annual operating cost**.

In the savings category, there are three fields:

- electricity,
- natural gas, and
- other fuels.

If the investment results in savings in more than one category, the user should fill in all the corresponding fields. In case that **other fuels** option is selected, the user should also fill in the fuel price.

Finally, it is required for the user to provide the estimated average lifetime of EE measures.

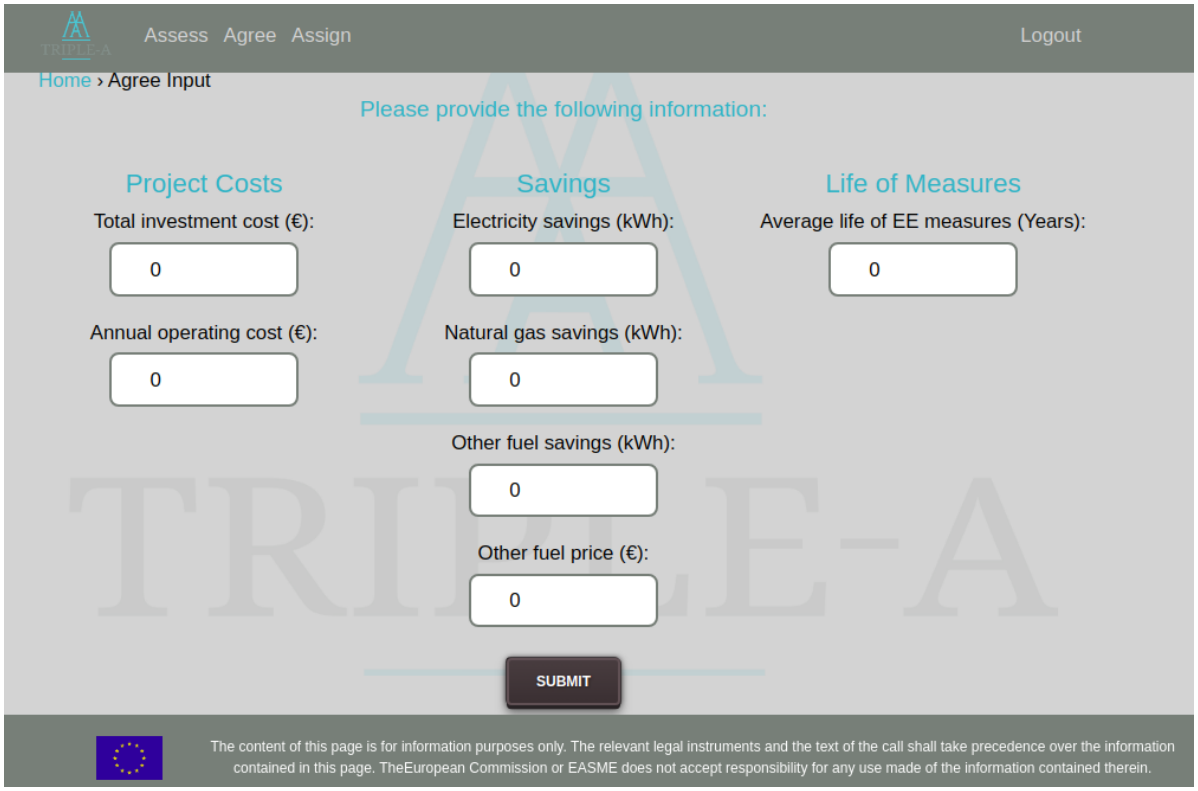

Figure 17: Triple-A Agree Tool Input page

5.3 Criteria and Weights Selection

Finally, the user must select which criteria will be used for the assessment of the investment. The classification of the project is made based on four criteria:

- Financial Indicator
- Cost Effectiveness
- Triple-A Aggregated Risk
- Environmental, Social and Governance (ESG) Criteria

The user can select which financial indicator will be used. He can select either the **Net Present Value,** the **Discounted Payback Period** or the **Internal Rate of Return**.

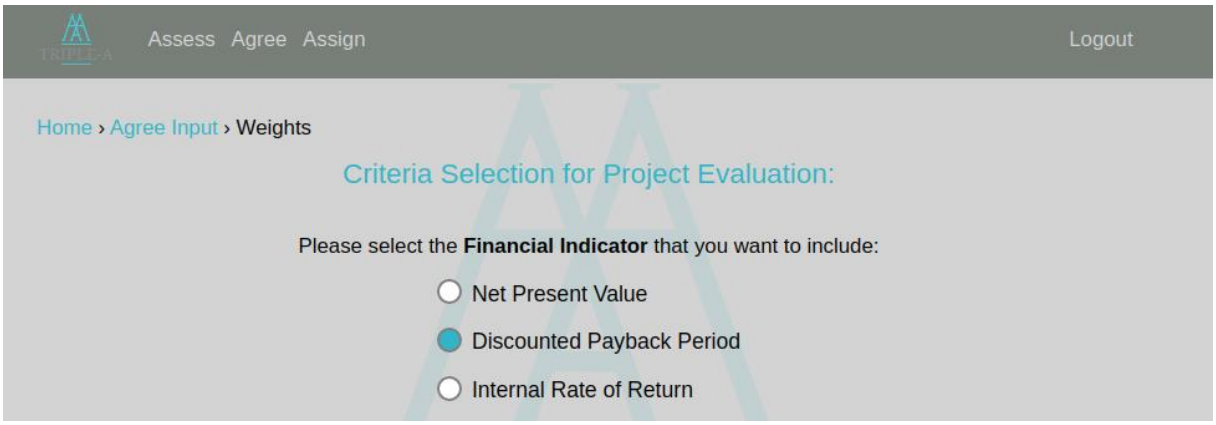

Figure 18: Triple-A Agree Financial Indicator selection

After the user has selected which financial indicator will be used as the fourth criterion in the Triple-A Agree classification process, the final step includes defining the weight for each criterion. Therefore, for each criterion there is a dropdown list and the user should select the importance of each factor in a 5-degree scale with the following options:

- Very High
- High
- Medium
- Low
- Very Low

The criteria which are considered more significant should be rated with higher importance in order to affect the result to a higher extent.

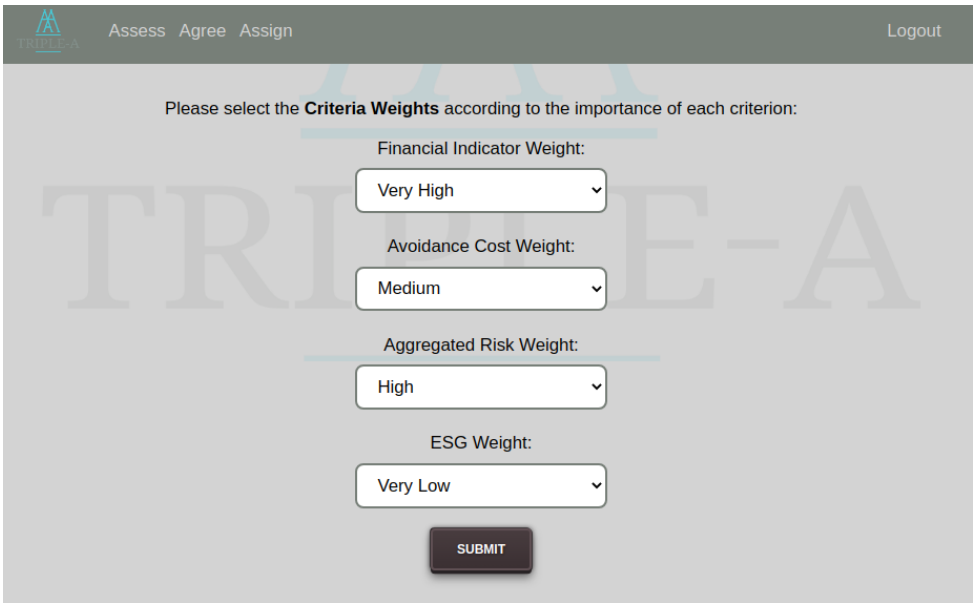

Figure 19: Triple-A Agree Weights selection

5.4 Agree Tool Results

After the procedure's completion, the user is notified with the emerged benchmarking class of the project, as shown in Figure 20.

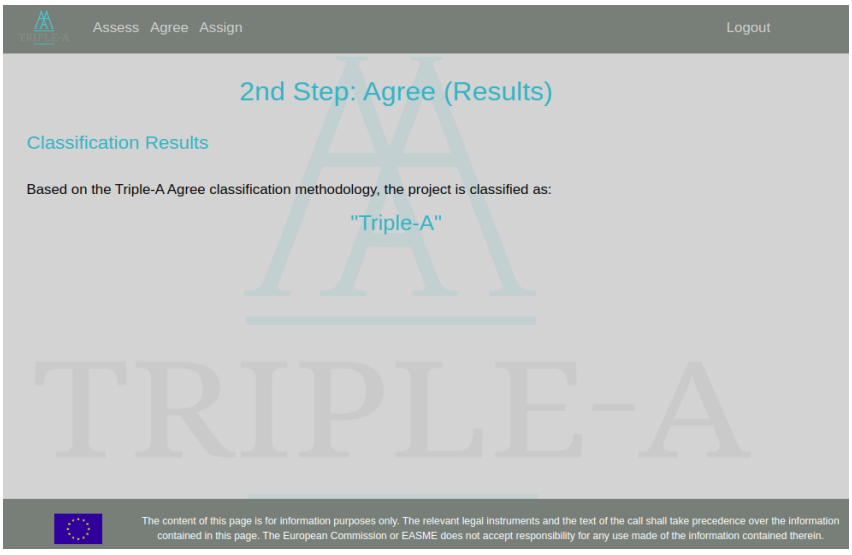

Figure 20 Agree Tool Results

6 The Triple-A Assign Tool

The **Triple-A Assign** phase of the methodology includes the assignment of the identified investment ideas with possible financing schemes. The **Triple-A Assign Tool** is yet under construction. However, a series of steps are being finalized and will be imported on the Tool.

The **Triple-A Assign Tool** will take as input the **Triple-A** and the **Reserved** Projects from the **Triple-A Agree Tool.** The user will have access to this information, being able to see all the projects that have resulted from the Triple-A Assess and the Triple-A Agree Tools. The Assign Tool will also provide the opportunity for various filtering processes of the selected investments, such as Project per Country, Projects per Sector, etc.

Finally, the Triple-A Assign Tool is planned to include two different interfaces (Figure 16). The first interface will address to the project investor, including a personalized investment portfolio. The project investor will be able to filter and select projects according to a series of properties, such as benchmarking rating, country, sector or other criteria. The second interface will address to the project developer, including notifications about the various stages of the project selection process. More specifically, the project developer will be notified in case the project has been selected for financing through a specific financing scheme.

The Triple-A Assign Tool will be thoroughly explained and described in the next version of this Deliverable, namely the D4.4 User Manuals (final version) due in M16.

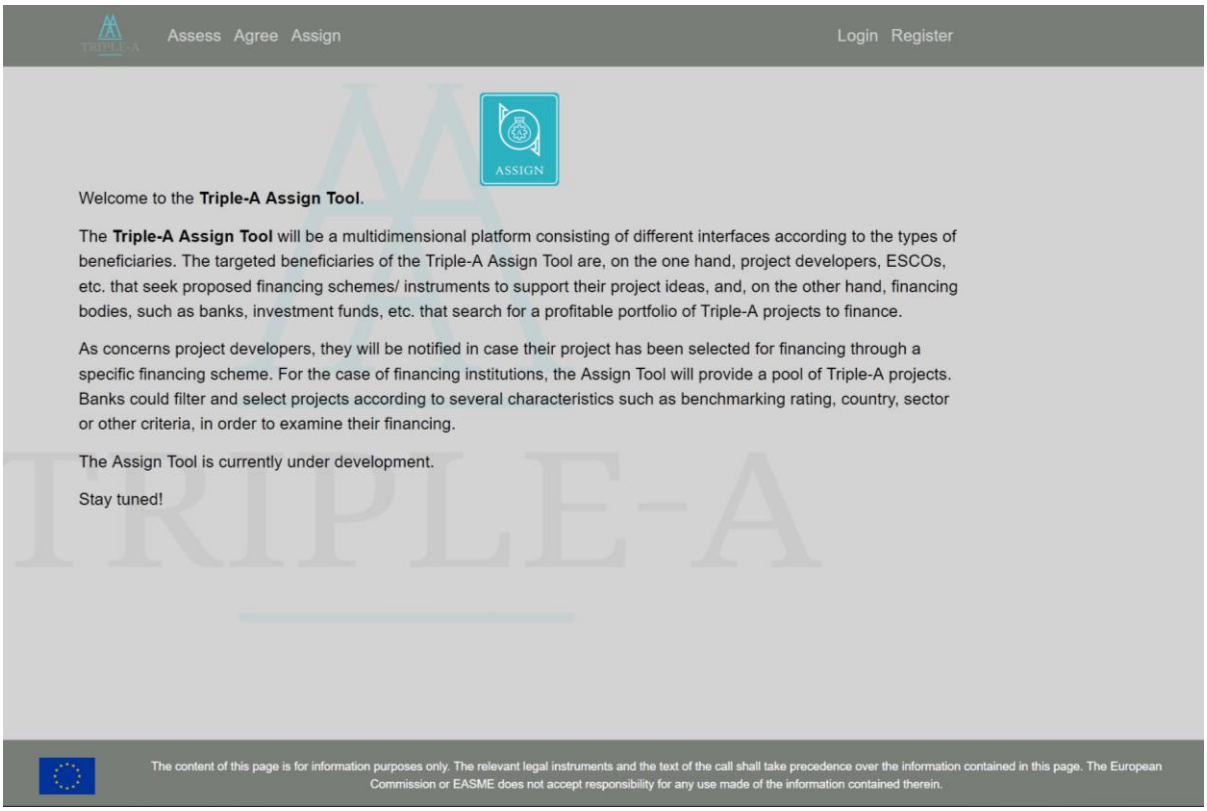

Figure 21 Triple-A Assign Tool Homepage

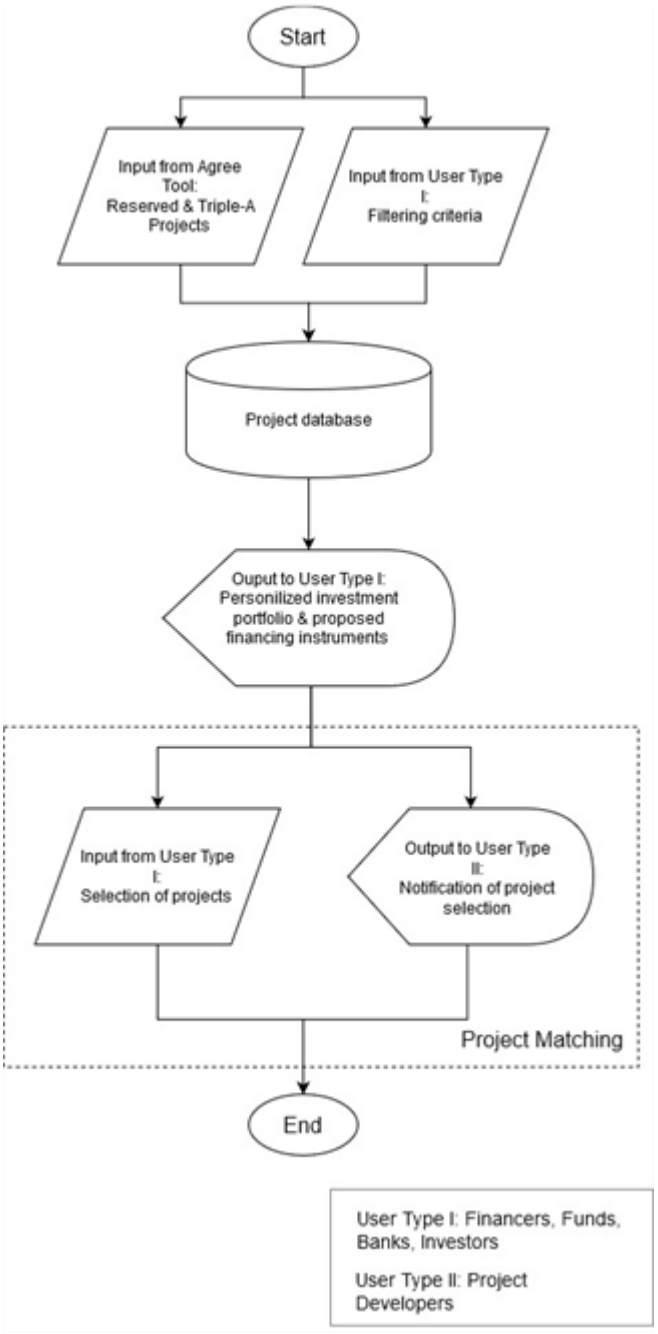

Figure 22: Triple-A Assign Flowchart