COURIERS GO GREEN

Erasmus+

Cooperation partnerships in vocational education and training (KA220-VET)

PROJECT NUMBER: 2022-1-EL01-KA220-VET-000087645

Project acronym: **Couriers Go Green**

Project full title: **Underpin Courier and Transportation Companies to Green their Operations**

Deliverable No.		**3.1**	
Workpackage No.	**WP3**	Workpackage Title	**Development of the Green Courier Educational Package**
Activity No.	**A3.2**	Activity Title	**Creation of "Measure my Green Readiness" tool**
Date of preparation of this version:		**03.12.2024**	
Authors:		**DREVEN**	
Status (F: final; D: draft; RD: revised draft):		**F**	
File Name:		**FINAL Manual – "Measure my Green Readiness" tool.docx**	
Version:		**Final**	
Date		**03.12.2024**	

"Measure my Green Readiness" tool manual

DREVEN

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1. General Information

1.1 Introduction

This report is prepared for the "Couriers Go Green" project, and more specifically for WP3 and PR3.1. It constitutes the manual for the "Measure My Green Readiness" tool which aims to help courier and transportation companies to measure their carbon emissions across various operational categories. The content provides a presentation of the structure and functionality of the tool, as well as the provision of relevant instructions and information on how to utilize the tool effectively. The tool's design is complemented by visual aids, ensuring that users can easily input data and understand the emissions calculations and the results.

1.2 Access

In order to use the “Measure my Green Readiness” tool, you simply need:

- A PC/laptop with a web browser installed, e.g. Google Chrome, Edge, Mozilla Firefox etc.
- Access to the internet

You can access the tool through this link: https://measuregreenreadinesstoolv4-15082.bubbleapps.io/version-test

1.2 Users

The access to the tool does not require login credentials.

Users: Everyone is able to access and operate the tool, since its access is open.

Admin: DREVEN is the sole contributor and administrator of this tool.

1.3 Best Practices

For the optimum performance of the “Measure my Green Readiness” tool, the following simple best practices are recommended:

- Users should close the tab of the tool when not in use.
- Users are advised to keep their web browsers up to date with the latest version for better performance of the system.
- In order to have a smoother experience, the users are advised to use a monitor or a laptop with a screen bigger than 17”.
- When changing their inputs, users are advised to clear cells that would not apply after the changes.

1.4 Functions of the “Measure my Green Readiness” tool

The main purpose of this tool is to calculate the Carbon Footprint of courier companies, by using data input on Delivery Activity and Emission Categories. Therefore, we define the following main functions of the tool with their respective categories in order to receive a valid outcome:

1. Delivery Activity: The user is required to provide data on:

- Reference year
- Average weight per consignments processed within the reference year.
- Average number per consignments processed within the reference year.

2. Emissions Categories: The user is required to provide data in four main categories:

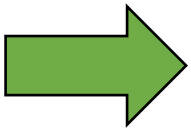
- Road Transportation
- Hubs and Offices
- Supply Chain Transportation
- Waste Management

3. Results:

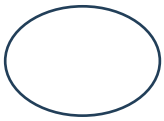
- The Carbon Footprint of the courier company.
- Ratings for the courier company’s activities.

1.5 User guidance

Aiming for a better understanding of the actions by the user, provided in this manual, some shapes (green arrows and circles) were used, as seen below.



Shape 1. Provides additional guidance to the user



Shape 2. Points the aspect of the tool that is being analysed

2. “Measure my Green Readiness” Tool

2.1 Main page (“Home”)

The main page of the tool that the user sees when accessing the tool is shown in *Figure 1*. In the main page, the user receives introductory information about the “Measure my Green Readiness” tool, and the Couriers Go Green Erasmus+ project.

The bar on the top of the page provides the navigation menu and, at this stage, is deactivated, since the user hasn’t started the tool yet. In order to initiate the tool, the user must click “Start”. At any given time, the user can click on “**Home**” and be transferred back to the main page of the tool.

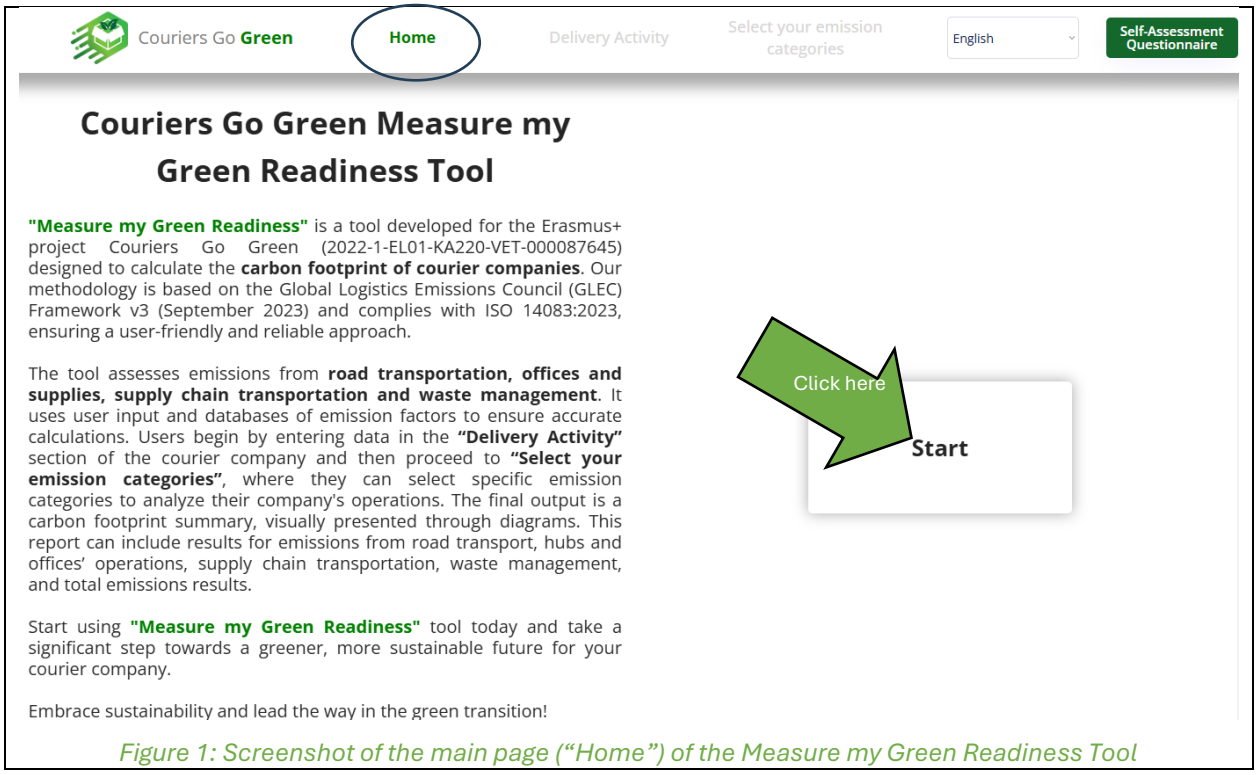


Figure 1: Screenshot of the main page (“Home”) of the Measure my Green Readiness Tool

2.2 “Delivery Activity”

“**Delivery Activity**” sets the start of the tool and is the first step of data entry from the user. In this tab the user provides data on a yearly basis. In more detail, as illustrated below in Figure 2, the user is asked to provide the reference year of the data they are going to provide. Then, the user is requested to enter data regarding the average weight (kg) per consignments processed within that year and the average number per consignments processed within that year. Those two entries are then multiplied, and they represent the average total weight of consignments processed within the reference year.

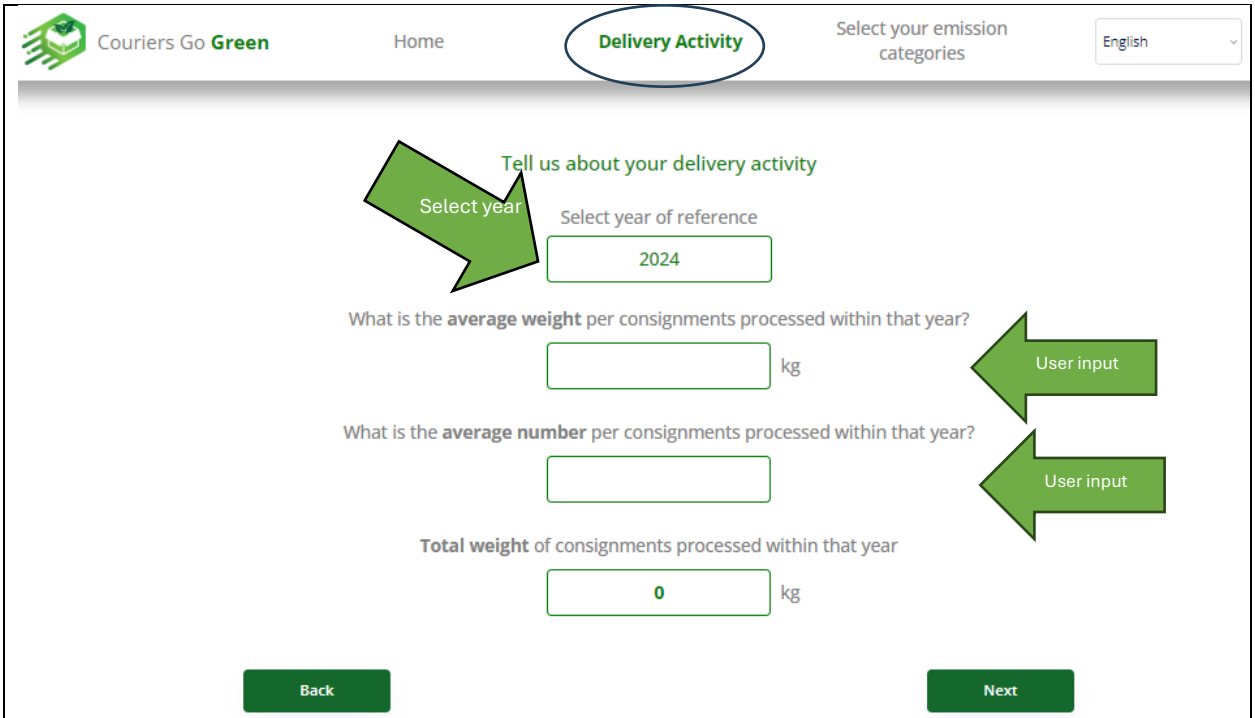


Figure 2: Screenshot of the "Delivery Activity" of the Measure my Green Readiness Tool

2.3 Emission categories

Moving on from the "Delivery Activity", the user is transferred to the "**Emission categories**" tab, where one "Emission Category" must be selected in order to proceed with the tool (Figure 3).

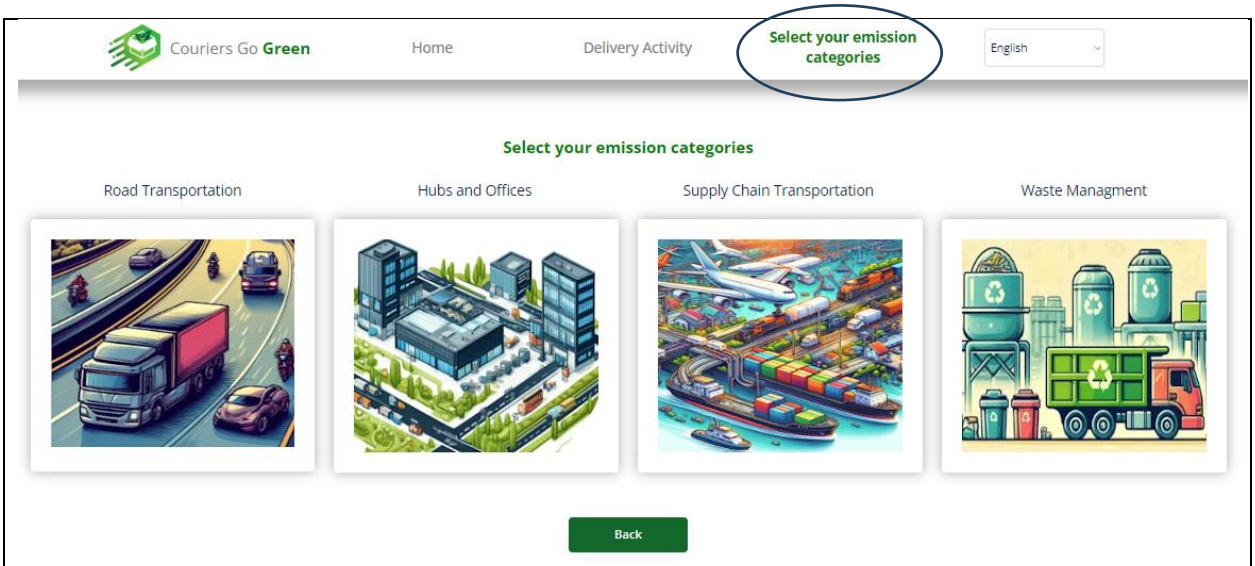


Figure 3: Screenshot for the selection of "Emission categories" feature

Here the user initiates the main aspect of the tool. Each time the user completes a category, he/she has the option to observe primary results, and one must complete all categories in order to receive the total Carbon Footprint of the company. The "Measure my Green Readiness" tool provides four different categories for the user to select from. The user can select between, "**Road Transportation**", "**Hubs and Offices**", "**Supply Chain Transportation**", and "**Waste Management**".

2.3.1 "Road transportation" category

The first category that the user can select is the "**Road Transportation**". This category includes the emissions from assets that result from the fuels consumed for road transportation of consignments.

As presented in Figure 4, when selecting the "Road transportation" button under the "Emission category" tab, the user needs to provide input data about the total distance (km) covered by the company-owned fleet. The two main categories here are a) Road transportation between hubs (long haul) and b) Road transportation last mile (short haul).

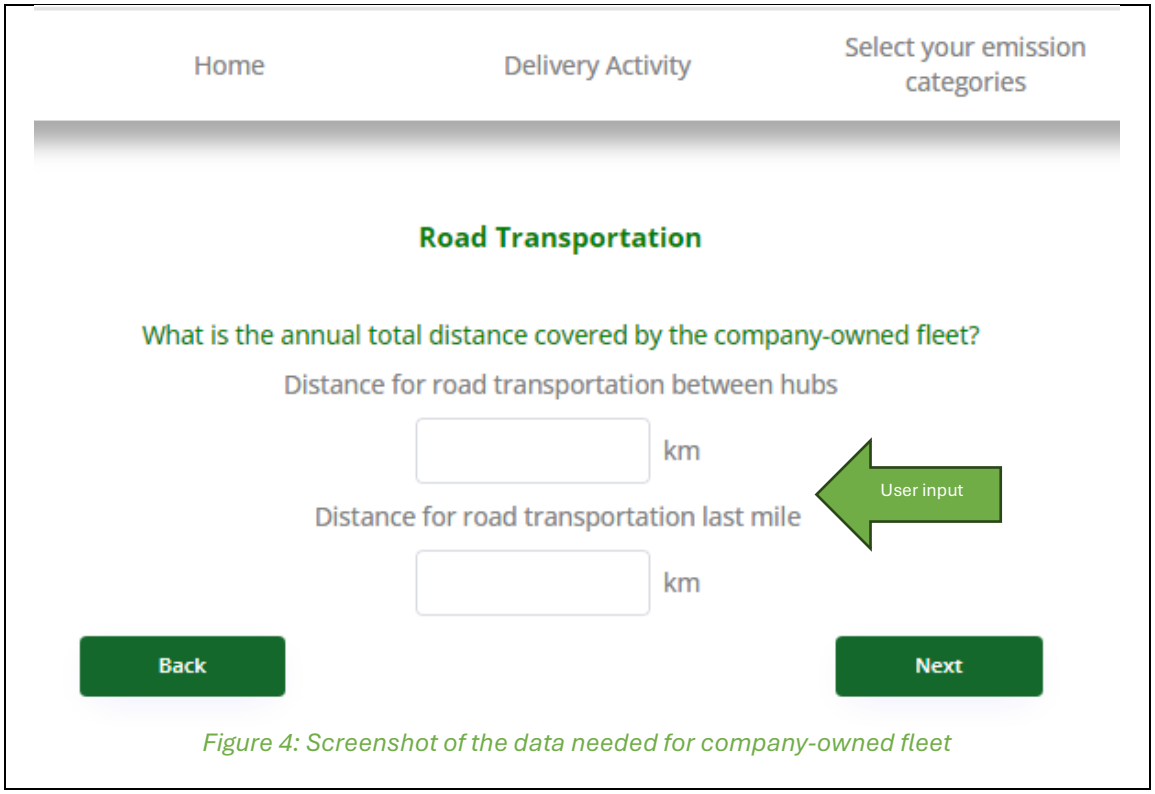


Figure 4: Screenshot of the data needed for company-owned fleet

Then the users proceed by clicking the green button "Next". They will then have the option to select between a variety of vehicles for long and short haul as illustrated in Figure 5. The user then inputs the number of vehicles used per selected type. The long-haul options are mainly trucks, that are divided in categories by the weight of the cargo they can carry and the type of fuel they need to operate. An extra option for the user is to indicate the percentage of trucks that need temperature control, while carrying sensitive cargo. The user can click on "Back" in case they want to change any input entered in previous steps.

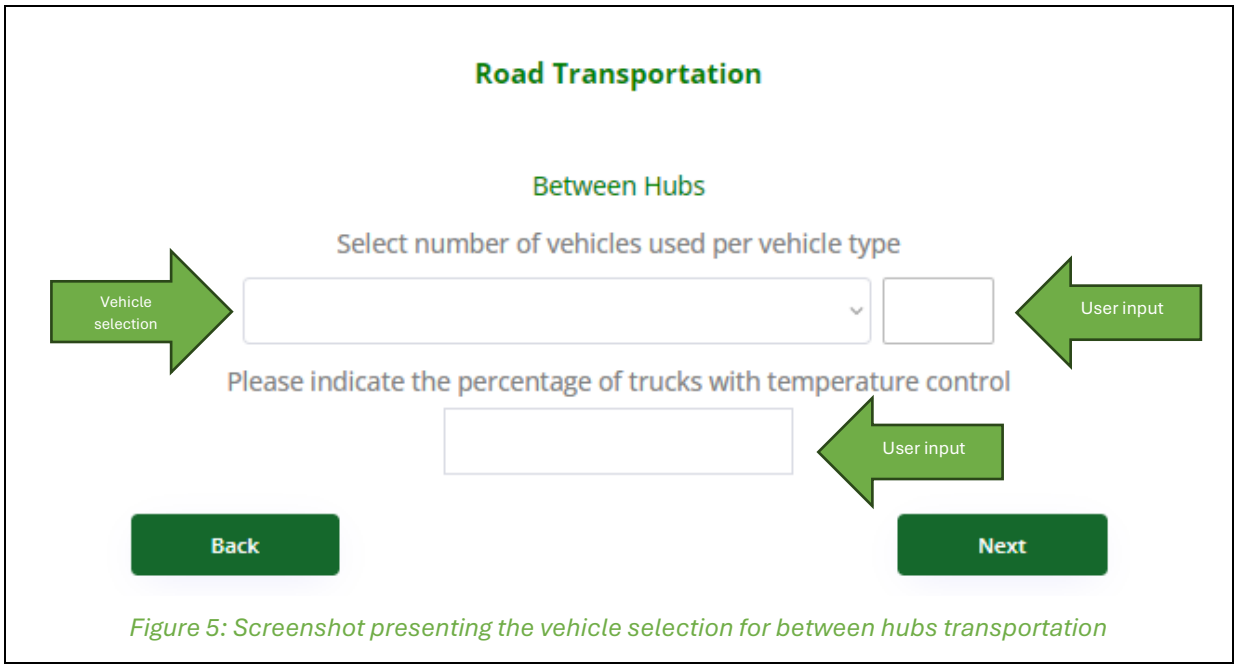


Figure 5: Screenshot presenting the vehicle selection for between hubs transportation

By clicking on "Next", the selections for short haul will appear (Figure 6) and the user can now choose between different types of motorcycles and vans, that are again categorized by the weight of the cargo they can carry and the type of fuel they need to operate. Like before, the user inputs the number of vehicles used per type next to each selected type.

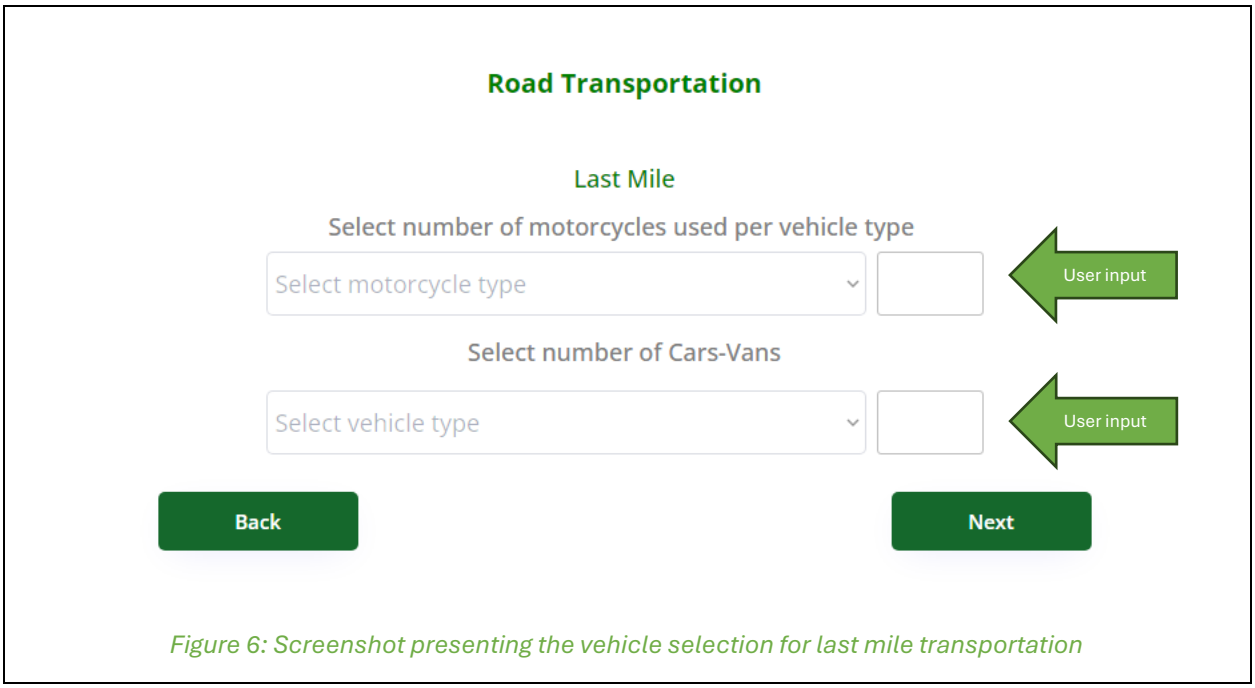


Figure 6: Screenshot presenting the vehicle selection for last mile transportation

After the completion of this stage, and by clicking “Next”, the data input to calculate the carbon footprint considering the road transportation is completed, and the user has the option to proceed to the “Hubs and Offices” category or jump to the “Results” as shown in Figure 7.

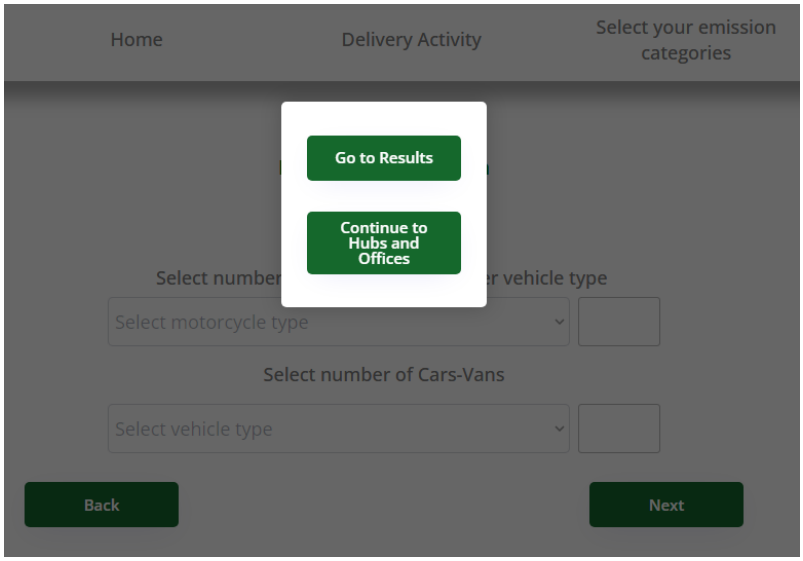


Figure 7: Screenshot presenting the buttons for” Go to results” or to “Continue to Hubs and Offices”

2.3.2 “Hubs and Offices” category

The second category that the user can select is the “**Hubs and Offices**”. This category includes emissions resulting from the generation and distribution of electricity and heat that the offices and hubs are using, and the user will also have the option to provide data regarding packaging and other office materials.

First, the user is asked to provide electricity and heating details regarding the Hubs that the company rents/uses/operates. The user needs to choose the location of the Hub (EU-27 countries), the number of Hubs that the company is using at this location and the TOTAL annual electricity consumption of those Hubs, according to electricity bills. In case the company operates Hubs in multiple countries, the users can proceed and enter data for those Hubs too, giving them the opportunity to measure the consumption from operations located in different countries. The user also has the option to provide data for the TOTAL annual energy consumption for heat, but for all Hubs of all countries combined. The user must also specify if heat is provided by natural gas or other sources (“Choose a fuel”), excluding heating through electricity, which is accounted in the electricity consumption. Lastly, the user can specify the percentage of electricity provided be privately owned renewable sources (e.g. photovoltaic panels). It is noted that the annual electricity consumption and the percentage of privately owned renewable sources are independent inputs, i.e, electricity consumption should be given as the consumption suggested by the electricity bills, WITHOUT any further calculations by the user (DO NOT add the electricity from privately owned renewable sources to the annual electricity consumption).

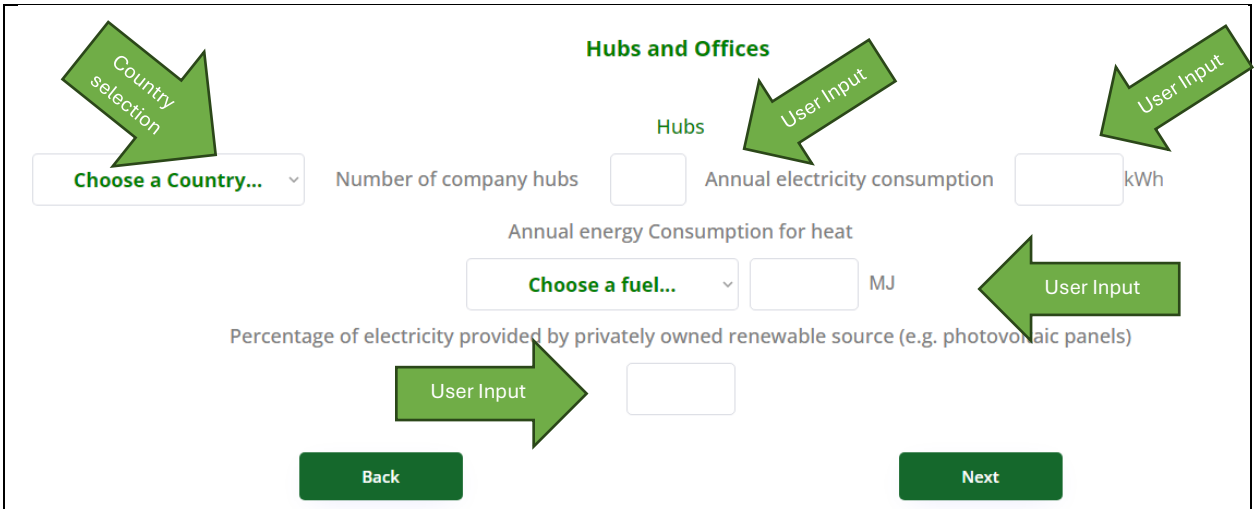


Figure 8: Screenshot presenting the Hubs operated by the company

After that, the Hubs tab is completed and by clicking on "Next", the user is transferred to the "**Offices**" tab.

The Offices tab is similar with the previous step (Hubs), asking the exact same information for offices.

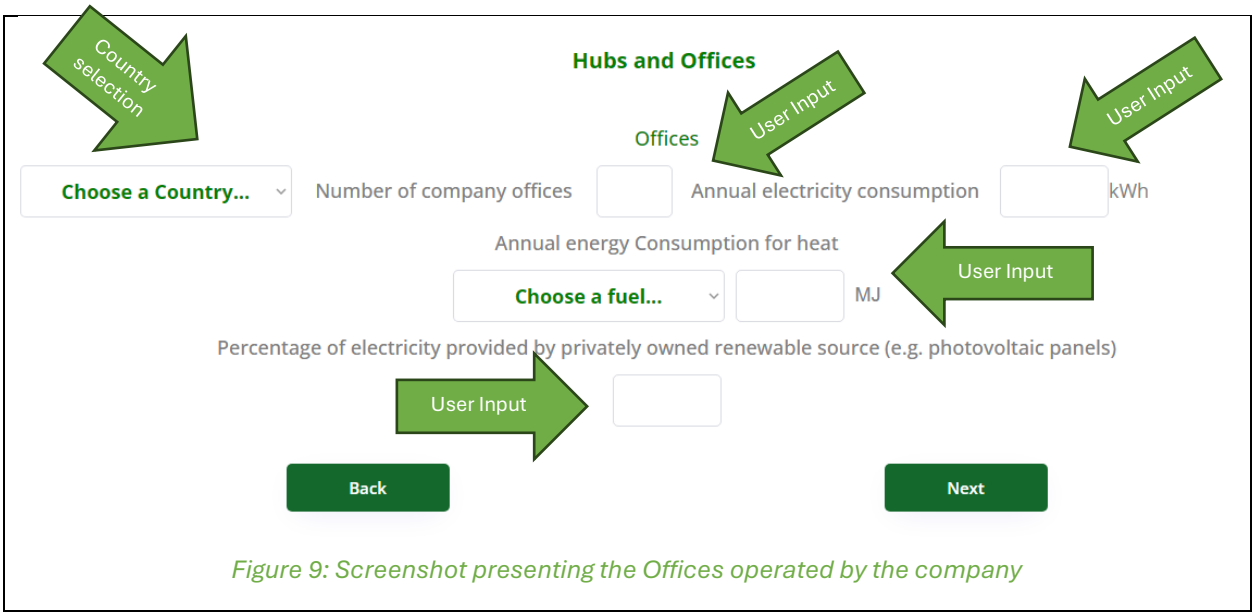


Figure 9: Screenshot presenting the Offices operated by the company

After the completion of the Offices data entry, the last section of the "Hubs and Offices" category is the "**Consumables for reference year**", and the user needs to provide input regarding packaging materials and Office paper as illustrated below (example for year 2024).

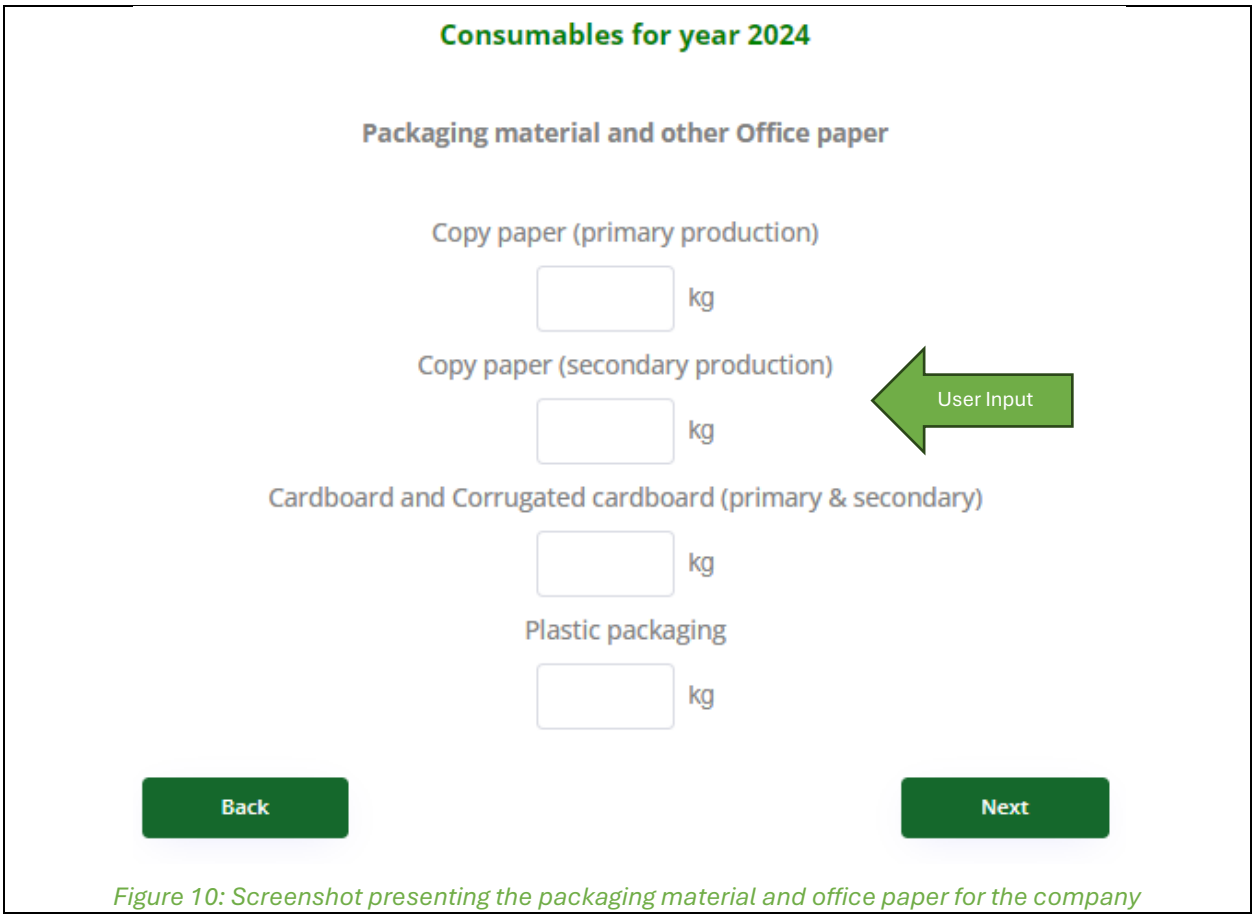


Figure 10: Screenshot presenting the packaging material and office paper for the company

As illustrated above, first the user has to provide data about office supplies that are used on a daily basis in the company. There is a selection between a variety of packaging materials, and more specifically, copy paper (primary production), copy paper (secondary production), cardboard and corrugated cardboard (primary and secondary) and plastic packaging. The user has the option to add only the categories that apply to his/her company.

When this step is completed, the "Hubs and Offices" category is completed and the user will have the option to proceed to the Final results, or continue to the third category, which is the "Supply Chain Transportation".

2.3.3 "Supply Chain Transportation" category

The third category of "Measure my Green Readiness" tool is the "Supply Chain Transportation" category, which includes emissions originating from the company's supply chain, notably including those emissions produced from the necessary transportation of goods from suppliers to the company, before delivered to the final customer.

The first aspect of the "**Supply Chain Transportation**" category is the annual total distance covered related to the supply chain transportation of goods for all the transportation means that were used. In other words, this inputs here represent the complete transportation data for air, sea, waterways and rail. The total distance travelled is multiplied by the total weight of consignments of the company, giving the total tonne-kilometres of the supply chain for the reference year. Then the users

must provide the percentage of total tonne-kilometres covered by air, sea, waterways and rail, respectively. These percentages give the “air tonne-kilometres”, “sea tonne-kilometres”, waterway tonne-kilometres” and “rail tonne-kilometres”, which are the tonne-kilometres covered by air, sea, waterways and rail, respectively. These quantities will be used in later steps for the supply chain transportations.

After the completion of this step, the user is asked to provide details regarding the percentage of total consignment weight for the reference year transported by each mean of transportation (air, sea, waterways, rail). The users will receive a notification that the total percentage has to be 100% in order to proceed to the next step (Figure 11).

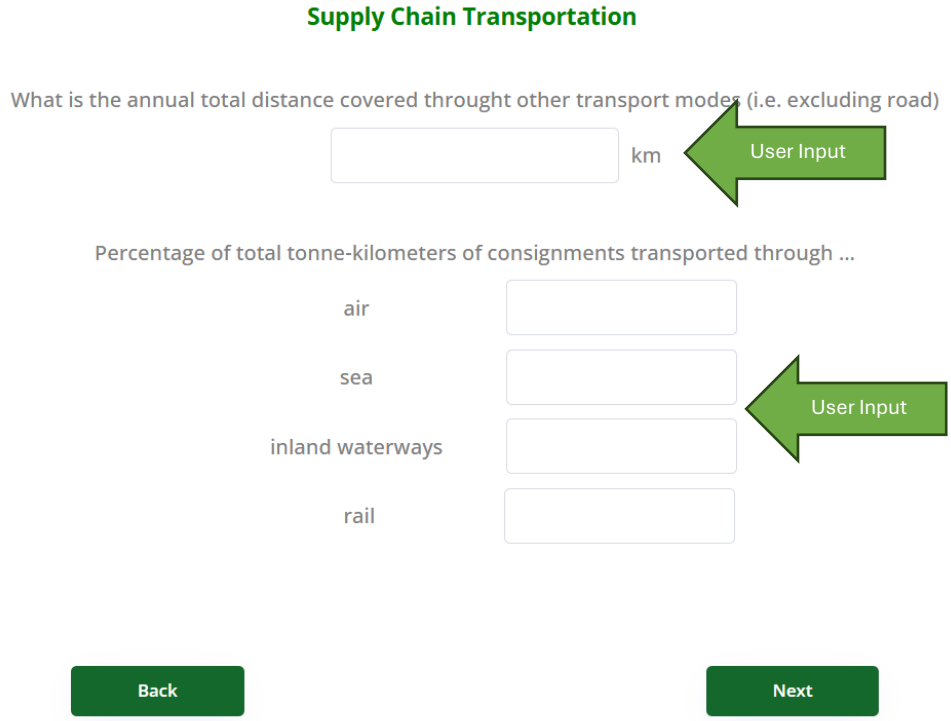


Figure 11: Screenshot representing the total annual distance covered for supply chain transportations

When that entry is completed, the users can now click on “Next” and proceed to the Air transportation category, where they are asked to provide the types of aircrafts used and the percentage of total air tonne-kilometres covered by each. The sum of all percentages should be again 100%. If it is not 100%, the user won’t have the ability to proceed, as the “Next” button would be deactivated.

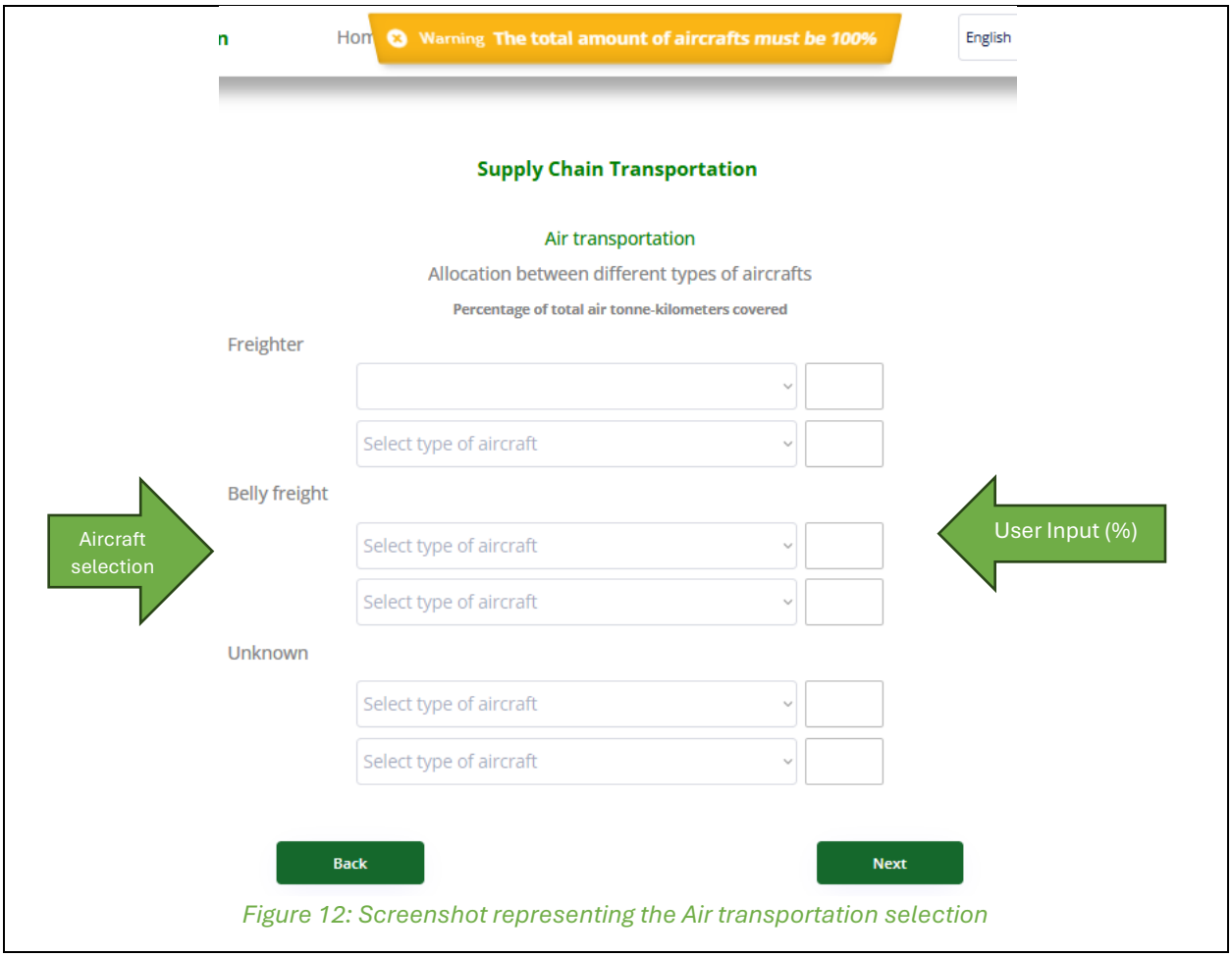


Figure 12: Screenshot representing the Air transportation selection

After the completion of Air transportation, the user clicks on “Next”, and the Sea transportation category follows. As a lot of cargo is being transferred by sea globally, the sea transportation category includes many types of vessels that are also divided into subcategories for a more precise approach.

In the figures below you can see all the available categories in Sea transportation. The users need to fill the categories that apply to them and move on to the next one. In case a category isn’t needed for the company’s calculations, they can skip that category and move forward.

The first category is the **Bulk carrier** for non-container vessels. The user needs to select the types of vessels that apply to the company operations and fill the percentage of total sea tonne-kilometres covered by each type, the same way as explained on the example above.

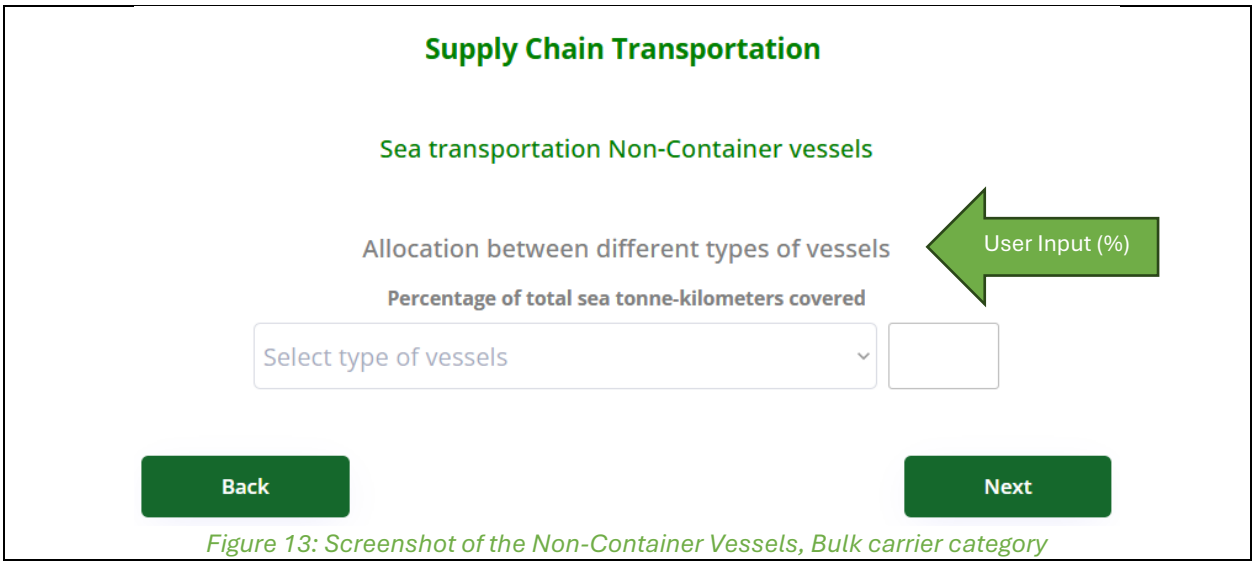


Figure 13: Screenshot of the Non-Container Vessels, Bulk carrier category

When the user completes/skips the Bulk carrier category, they then click on "Next", and the **General cargo** category appears. Same as before the user has to provide the type of vessels used and the percentage of sea transportation covered by each type.

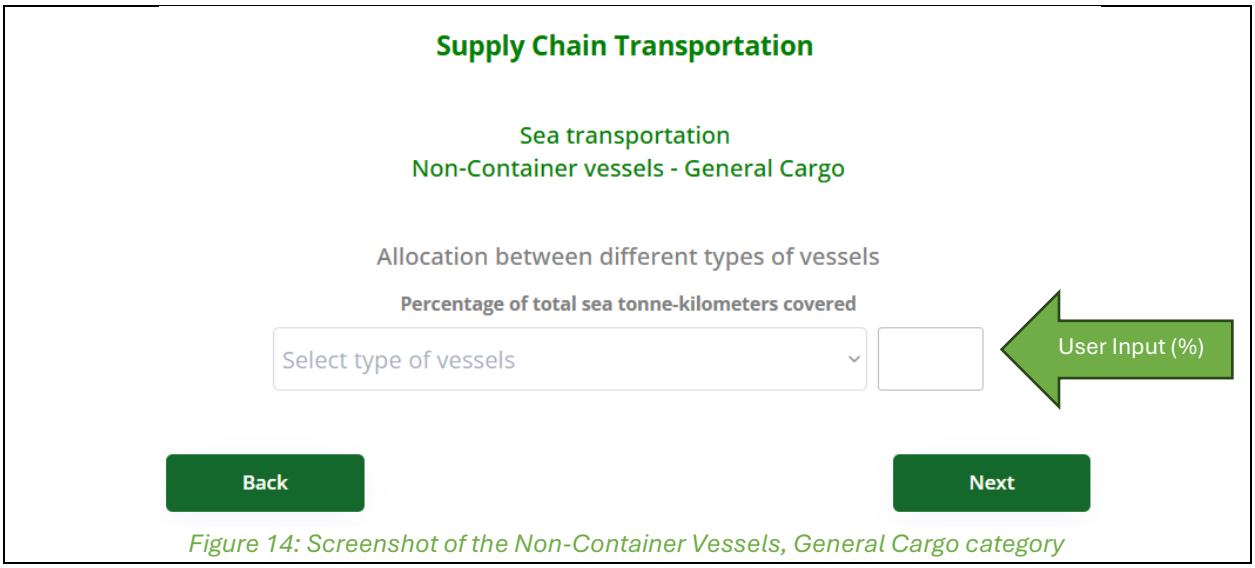


Figure 14: Screenshot of the Non-Container Vessels, General Cargo category

When the user completes/skips the General Cargo category, they then click on "Next", and the **Ferry Ro-Pax** category appears. Same as before the user has to provide the type of vessels used and the percentage of total sea tonne-kilometres covered by each type.

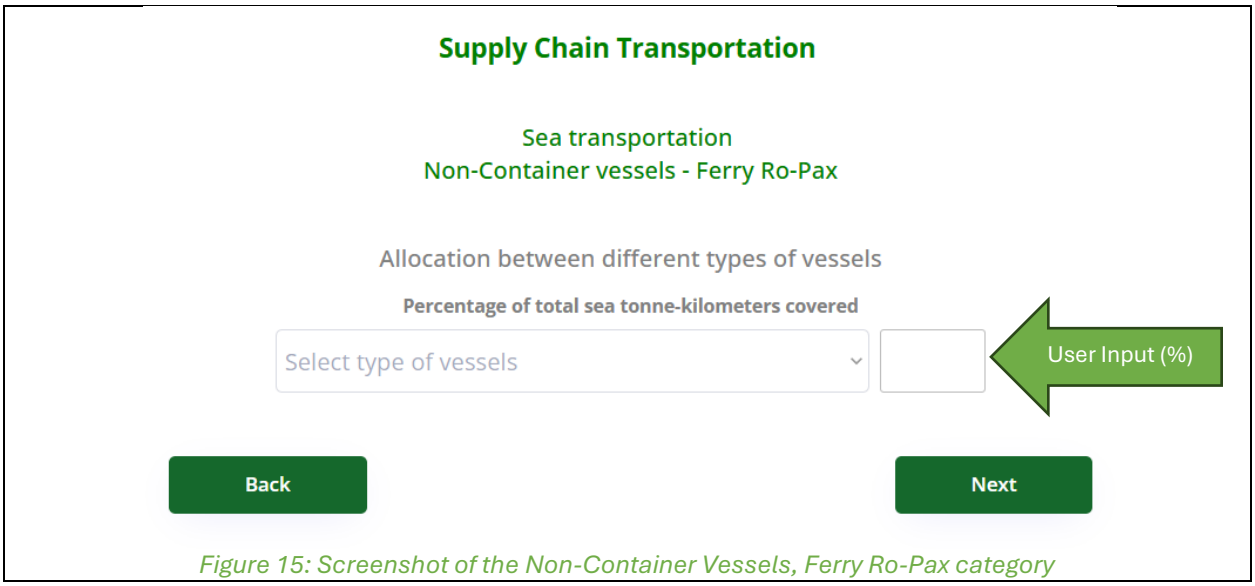


Figure 15: Screenshot of the Non-Container Vessels, Ferry Ro-Pax category

When the user completes/skips the Ferry Ro-Pax category, they then click on "Next", and the **Refrigerated bulk** category appears. Same as before the user has to provide the type of vessels used and the percentage of total sea tonne-kilometres covered by each type.

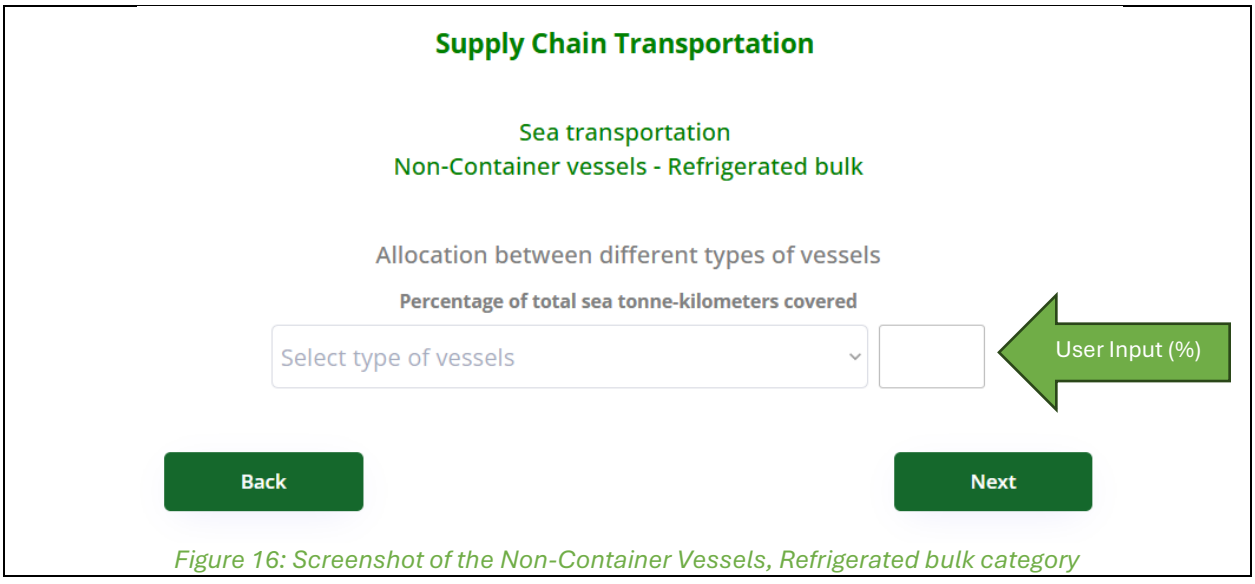


Figure 16: Screenshot of the Non-Container Vessels, Refrigerated bulk category

The final entry of sea transportation vessels is the **Ro-Ro** category. As explained before, the user has to provide the type of vessels used and the percentage of total sea tonne-kilometres covered by each type.

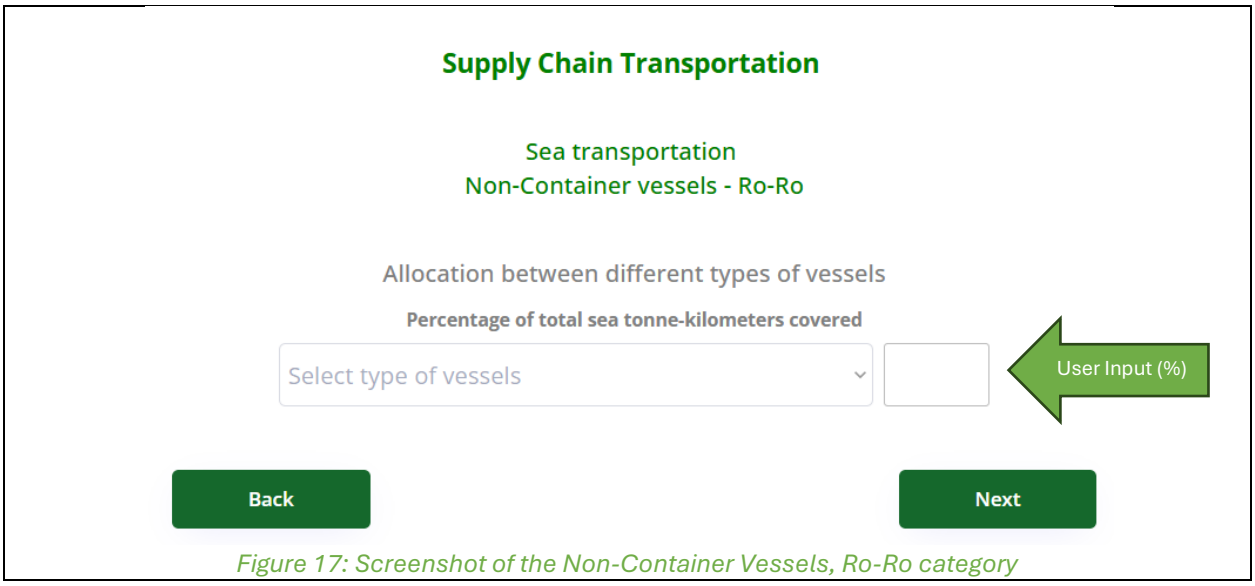


Figure 17: Screenshot of the Non-Container Vessels, Ro-Ro category

After clicking on “Next”, the final **sea transportation** category will appear.

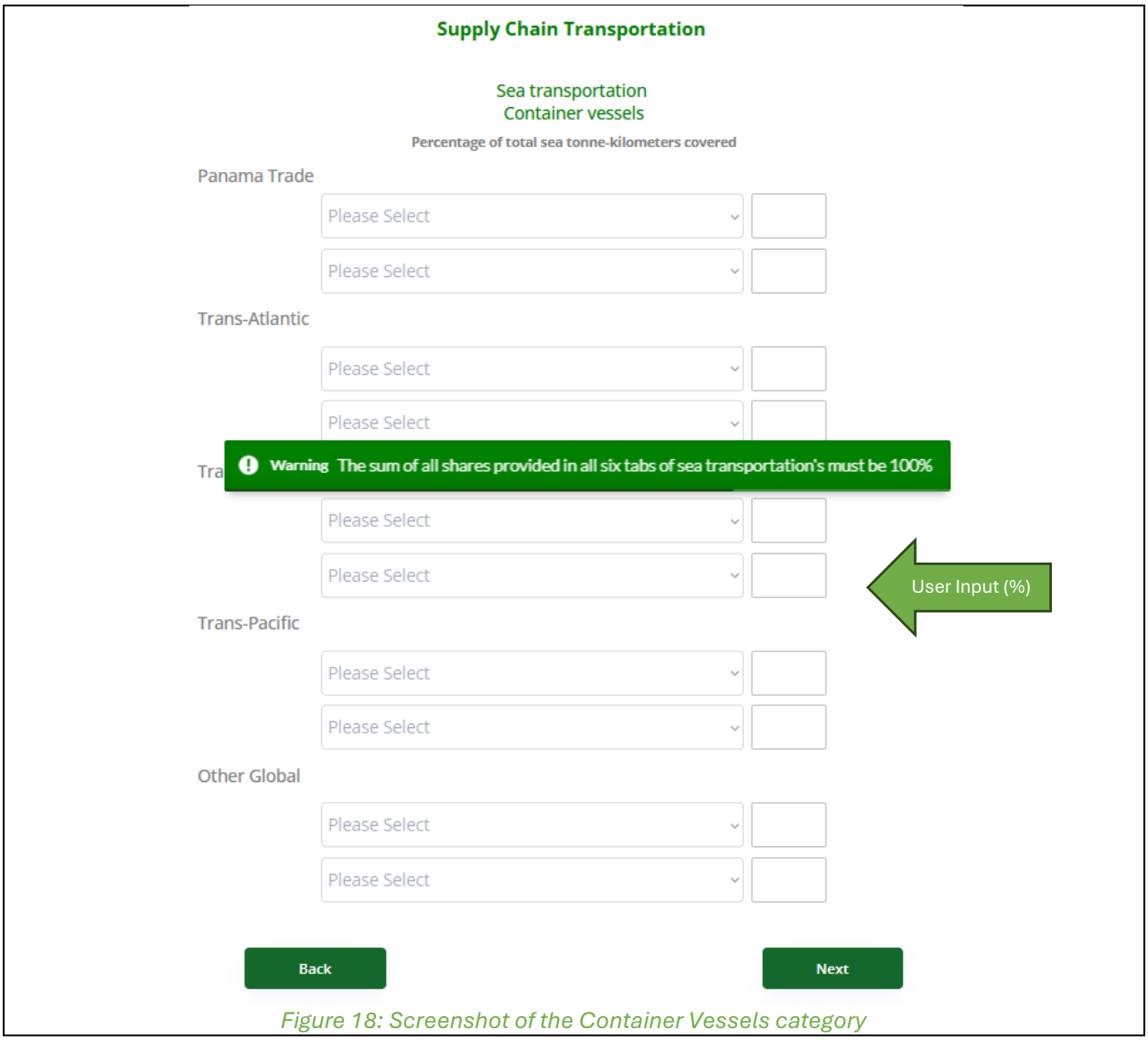


Figure 18: Screenshot of the Container Vessels category

IMPORTANT NOTE: The sum of percentages of total sea tonne-kilometres must amount to 100% for ALL used types of ALL categories, not for each category separately. For example, if half of sea transportations is done by 0-9999, HFO (Non-container vessels category) and the other half by 0-4999, HFO (General Cargo category), correct input would be 50%, next to 0-9999, HFO in the first category and 50%, next to 0-4999, HFO in the second category. A relative message pops up when the user moves to a category, for all categories, as shown in the figure above.

After the user completes the final category of Sea transportation the next available Supply chain transportation category is the **Waterways transportation**. Here the user needs to consider the percentage of total waterways tonne-kilometers for each type of vessel. Waterways include water bodies (besides seas and oceans), streams and rivers. The sum of all percentages should be again 100%. In case the user doesn't need to fill this, they can move forward by clicking on "Next".

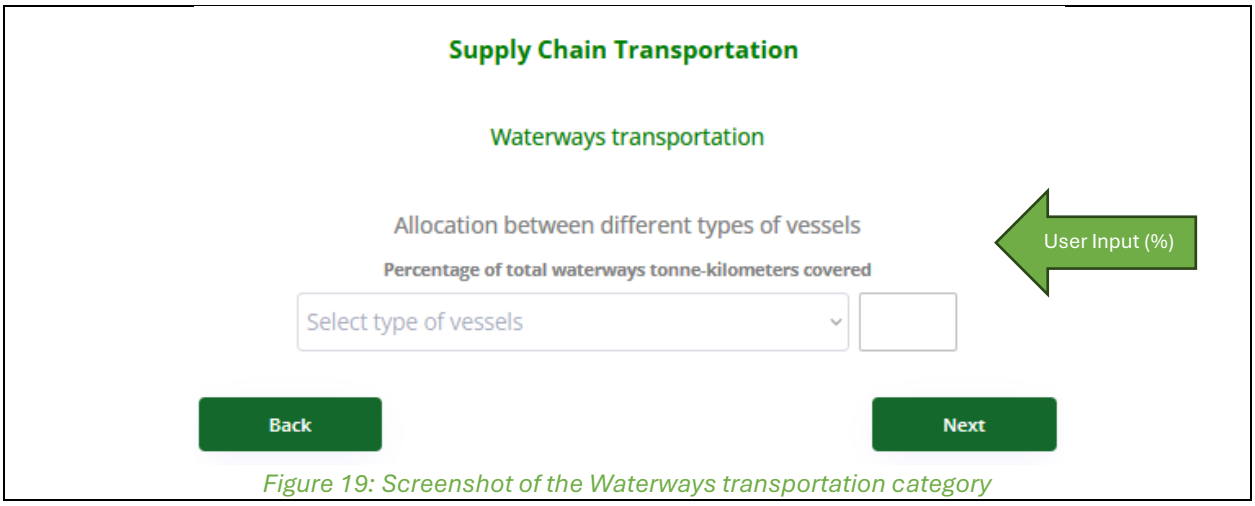


Figure 19: Screenshot of the Waterways transportation category

The final category of the "Supply Chain transportation" category is **Rail transportation**. Same as before, the user needs to select the types of rails and the percentage of total rail tonne-kilometers covered by each, or they can skip that part if not applicable by clicking on "Next" and proceed. If applicable, the sum of all percentages should be again 100%.

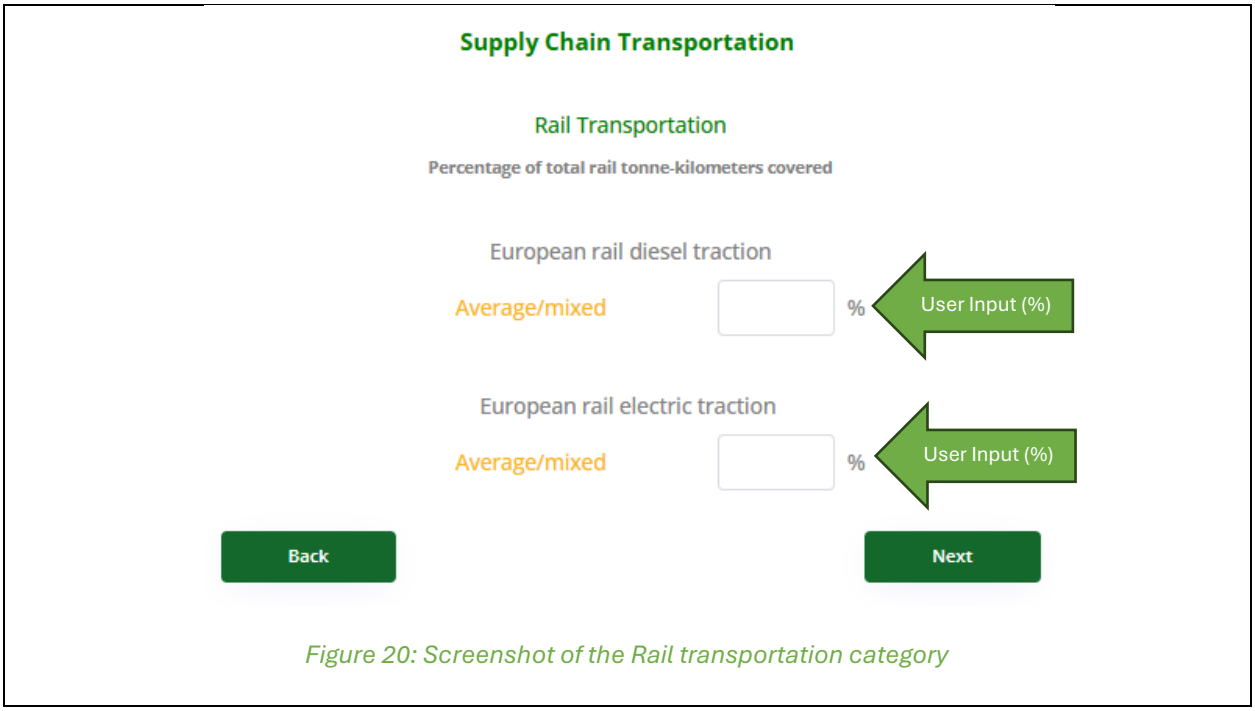


Figure 20: Screenshot of the Rail transportation category

After the completion of **Rail transportation**, the user has the option to visit the category results or proceed to the final category of the tool.

2.3.4 "Waste Management" category

The final category of the "Measure my Green Readiness" tool is the "**Waste Management**", as seen on Figure 21. The user will provide details regarding the end-of-life procedure of office supplies, as given in the "Hubs and Offices" category. The tool will calculate the emissions based on the country

selections the user has already filled in the “Hubs and Offices” category, stating the countries that company offices operate.

In this category, the user is asked to provide 2 percentages regarding the waste management of packaging material and office paper. In particular, the user needs to provide a percentage regarding the office supplies that become waste within the company premises, and another percentage representing the separate collection of waste for recycling, as shown below.

Figure 21: Screenshot of Waste Management category

After the completion of Waste management, the user completes all the aspects of the “Measure my Green Readiness” tool and the final step would be to review the Carbon Footprint of the company.

2.4 Results

The Carbon Footprint of the courier or transportation company is calculated and graphically presented. The carbon footprint is expressed in tones of CO_2 equivalent (CO_2e). The user is able to go back and forth to his/her input by selecting the relevant navigation item from the navigation menu. The results are presented in the form of graphs (bar charts) in which the user can see the exact amount of CO_2e emissions. Separate results tabs are generated for each emission category by clicking "Go to Results", where the carbon footprint of the category is presented. In addition, ratings (1-5 stars) are presented below the results of each emission category. Separate ratings are presented for each examined aspect of each emission category, accompanied by a message and suggestion for the user, and an average rating for the emission category. The figure below presents an example for the road transportation category.

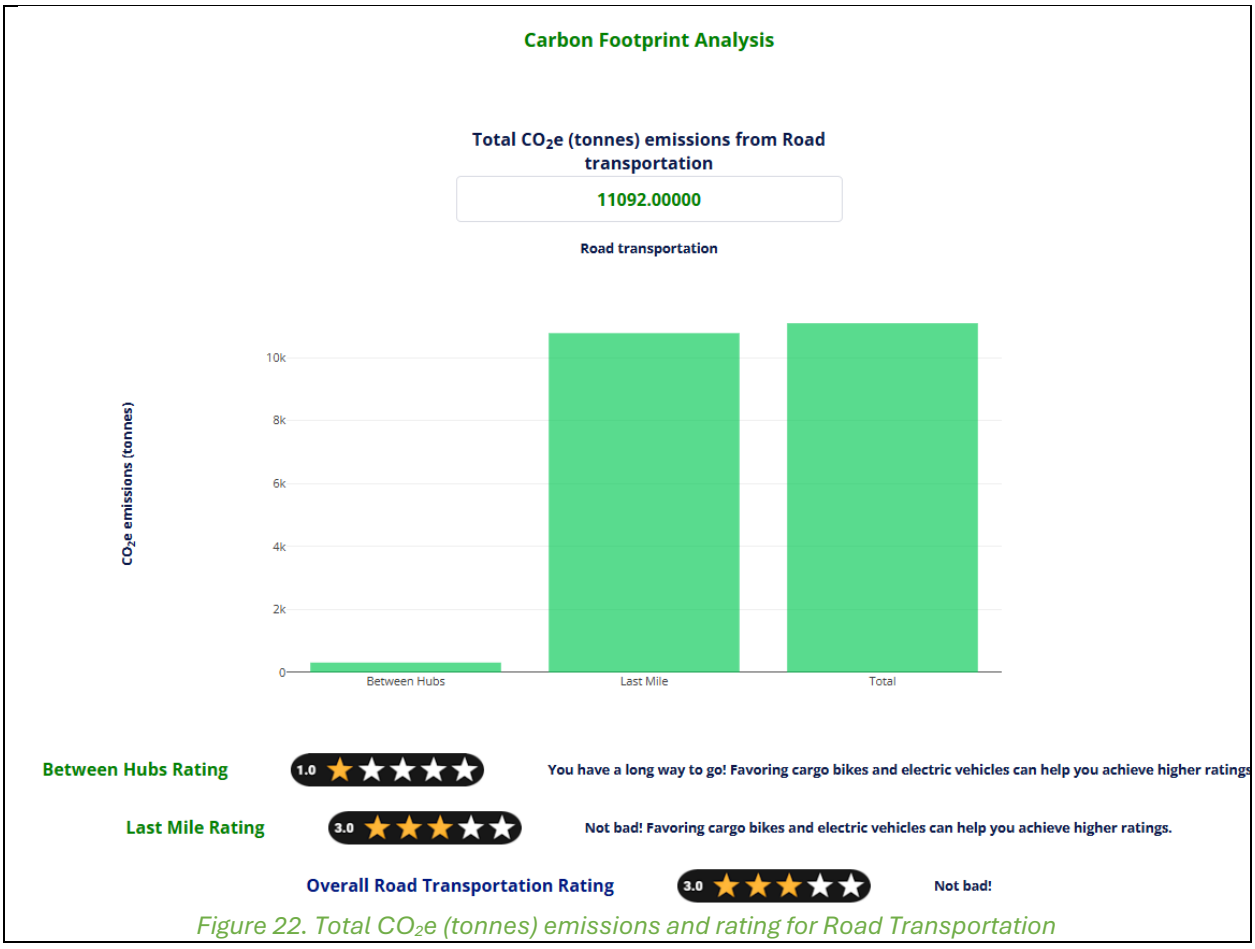


Figure 22. Total CO_2e (tonnes) emissions and rating for Road Transportation

Lastly, when clicking "Go to Results" at the bottom right of the last emission category (Waste management), the user is transferred to the overall carbon footprint analysis of the company, where the total CO_2e is presented separately for each category, along with the grand total of the company (in the same graph).

The ratings of all categories and an overall company rating are presented below the chart, along with a message for the user. An example of the overall carbon footprint analysis of a company is presented in the figure below.

Figure 23 Overall carbon footprint analysis

While reviewing the final results, the user has the option to export them for his/her own use.

2.5 Self-assessment questionnaire

A questionnaire was designed in the scope of “Measure my Green Readiness” tool, allowing for organizations to self-assess their performance and readiness on environmentally sustainable operations and carbon footprint reduction. The questionnaire consists of two main sections: organizational details and self-assessment.

The questionnaire can be accessed by clicking the “Self-Assessment Questionnaire” button on the top-right of the tool’s homepage, next to language selection.

In the first section, respondents are asked for basic information, starting with the name and location (country/city) of their organization. They then select the type of organization from a list that includes courier services, postal services, delivery services, public authorities, consultants (logistics, environmental strategy), and research institutions, with the option to specify other types if needed. Finally, the size of the organization is classified based on the number of employees, from micro to large enterprises, according to Eurostat glossary on enterprise size.

The second section is a series of self-assessment questions with a 1-5 scale system, 1 being the lowest and 5 being the highest. The section begins with a general question on the importance of carbon footprint reduction for the organization. Question 2 asks for the self-assessment on the degree to which the environmental goals set in previous years were achieved.

Questions 3 to 6 are targeted to the four main emission categories examined by the “Measure my Green Readiness Tool”, road transportation, hubs and offices, supply chain transportation and waste management. A summary of what best practises include is provided for each category, before organizations are asked to rate how optimal their operations are in terms of carbon footprint for each category.

Question 7 asks for organizations to score their overall environmental performance according to the answers given before. Question 8 asks organizations to introspect on their willingness to commit on decarbonisation activities that would require significant changes in their operations.

The final question concerns the overall conclusion of the self-assessment process, where organizations are asked to introspect on how ready they are to adopt new green strategies, considering resources, technical and financial barriers, mindset and overall challenges.

1. Organization identity

1.1 Name of organization

1.2 Country/city of organization’s headquarters

1.3 Type of organization

Type of organization:	**Please select**
1. Courier service	

2. Postal service	
3. Delivery service	
4. Public authority (policy, management)	
5. Transport & logistics consultant	
6. Climate and environmental strategy consultant	
7. Research institution	
8. Other (please specify)	

1.4 Size of organization

Size of organization *(Eurostat Glossary: Enterprise size)*	**Please select**
1. Micro enterprise (<10 persons employed)	
2. Small enterprise (10-49 persons employed)	
3. Medium-sized enterprise (50-249 persons employed)	
4. Large enterprise (≥250 persons employed)	

2. Self-Assessment

2.1 On a scale of 1-5, 1 being the lowest and 5 being the highest, how important would you say carbon footprint minimization is for your company?

1	2	3	4	5

2.2 On a scale of 1-5, 1 being the lowest and 5 being the highest, to what extent do you believe that your company achieved the goals set in previous years regarding the environmental impact?

1	2	3	4	5

2.3 Efficient routing, mileage reduction and consequent congestion alleviation and use of eco-friendlier road vehicles (such as electric vans) can significantly reduce the carbon footprint of road transportation. On a scale of 1-5, 1 being the lowest and 5 being the highest, how optimal do you think are your road transportations in terms of carbon footprint?

1	2	3	4	5

2.4 Energy economy and efficiency and use of private renewable energy sources can significantly reduce the carbon footprint of the hubs and offices operations. On a scale of 1-5, 1 being the lowest and 5 being the highest, how optimal do you think are your hubs and offices operations in terms of carbon footprint?

1	2	3	4	5

2.5 Efficient routing and use of eco-friendlier means of transportation (such as electric trains) can significantly reduce the carbon footprint of supply chain transportations. On a 1-5 scale, 1 being the lowest and 5 being the highest, how optimal do you think your supply chain transportation is in terms of carbon footprint?

1	2	3	4	5

2.6 Minimizing waste and maximizing recycling significantly reduces the impact of companies. On a 1-5 scale, 1 being the lowest and 5 being the highest, how optimal do you think your waste management policies and activities are in terms of carbon footprint?

1	2	3	4	5

2.7 Considering your answers on all previous questions, on a 1-5 scale, 1 being the lowest and 5 being the highest, how optimal is your organization's performance in terms of carbon footprint?

1	2	3	4	5

2.8 Carbon footprint minimization may require revised strategies and policies demanding effort, time and resources. On a scale of 1-5, 1 being the lowest and 5 being the highest, how willing would you characterize your company to make these significant changes to reduce its carbon footprint?

1	2	3	4	5

2.9 Considering your answers to all previous questions, on a 1-5 scale, 1 being the lowest and 5 being the highest, how ready (in terms of resources, technical and financial barriers, mindset and overall challenges) would you characterize your organization to adopt new green strategies?

1	2	3	4	5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