Supply Chain 2 Map

Documentation

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User Manual

1 Different parts

In this part we are going to show different part of application and show the functions to the user. Then we address some specifications and show how it works as general.

2 Metrics definition

The main contribution of SCOR was to provide enterprises with a structure to express their supply chains. However, the key motivation is that once enterprises accomplish this task, these supply chains become comparable. In an attempt to analyze, in a standardized way, certain aspects of a supply chain, SCOR further defined metrics. Therefore, we consider the usage of these metrics as our main motivation for building this vocabulary. There are 286 metrics in total, grouped together into five categories: Reliability, Responsiveness, Agility, Cost and Assets. The usage of these metrics allow supply chain managers to identify weak and strong links within the supply chain.

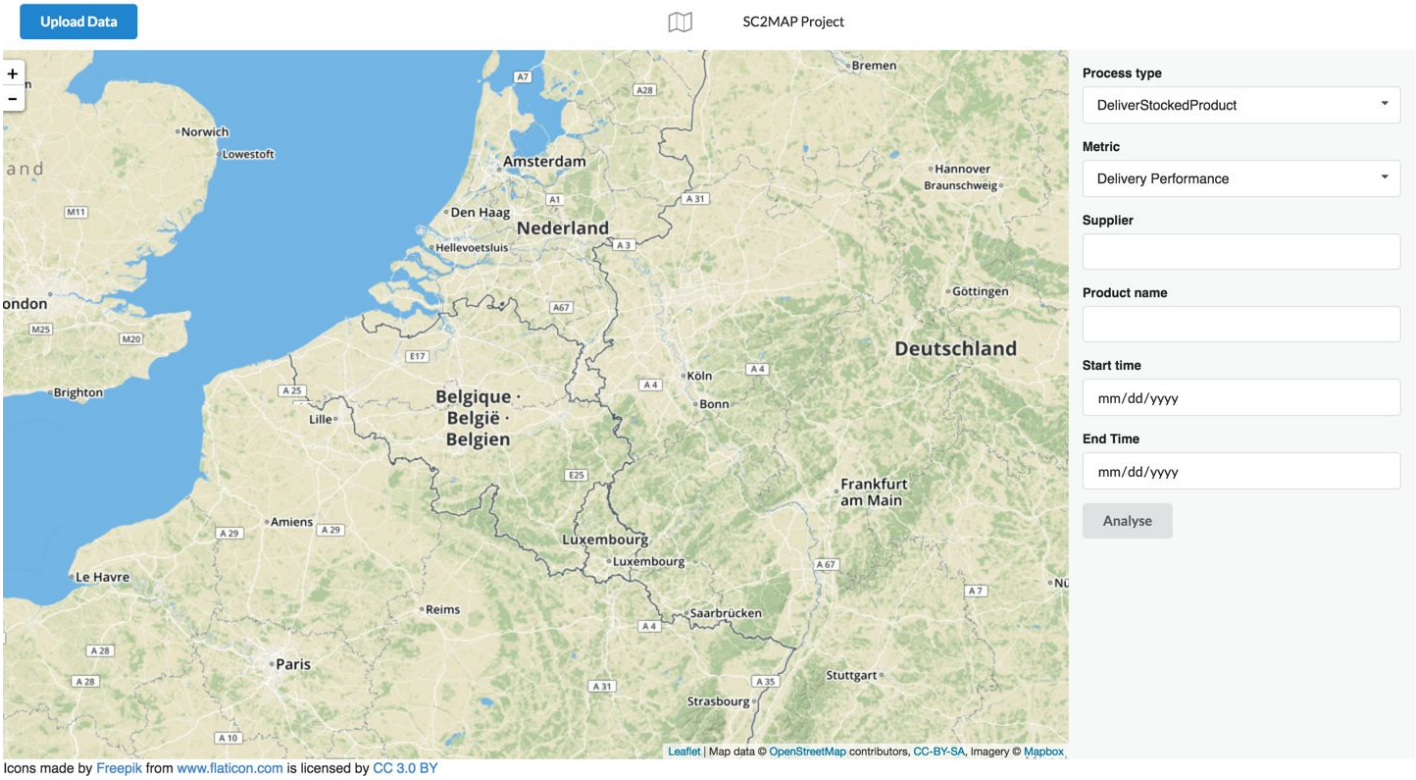
3 How it works

3.1 Overview

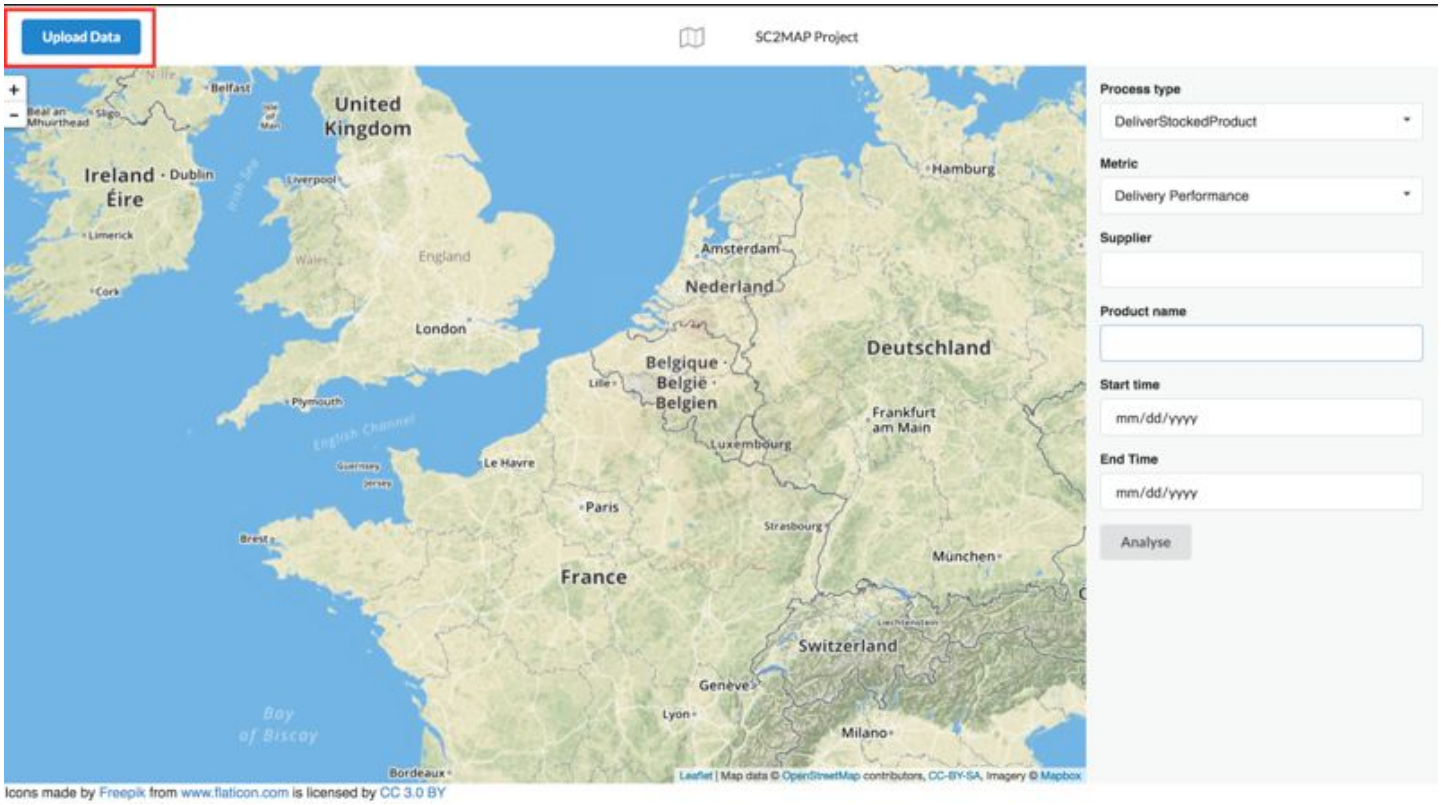
We assume the state that system is ready to use. Therefore, users' point of view should be considered in this manual description. The tutorial shows different parts of the application with related pictures to address each part to get familiar with the app.

3.2 General Information

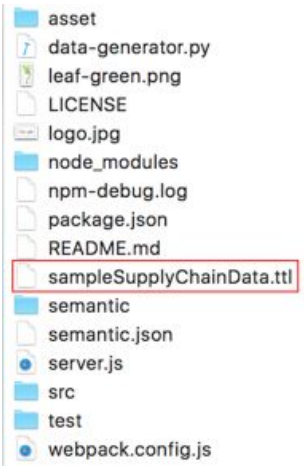
By opening the project in the browser (Chrome, Firefox, Safari and Microsoft edge browser) you will face with the starting point of the project:



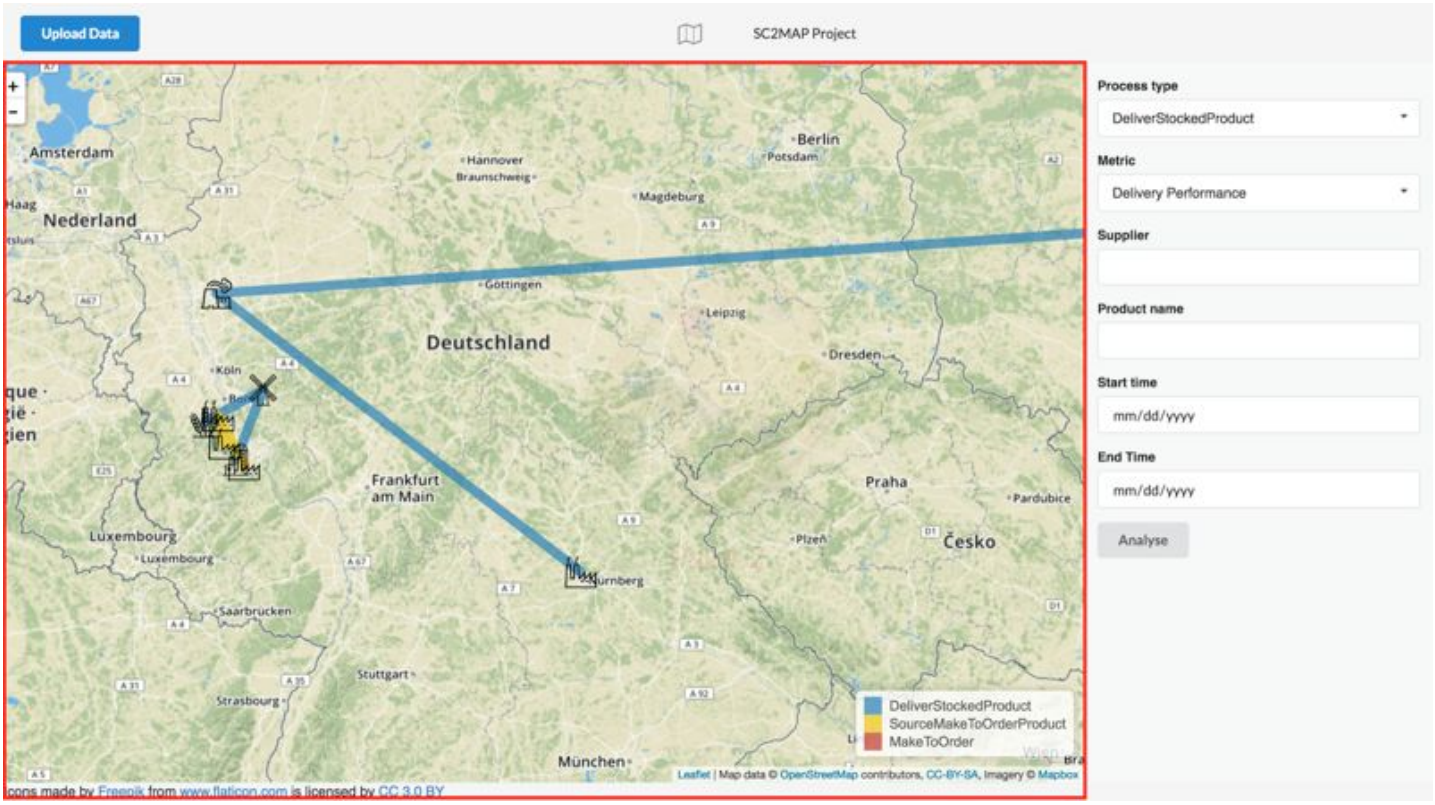
As it is shown in the picture, there is a map is powered by OpenStreetMap and in the right side there is a panel which user can define Metrics, Production Name, Supplier and Time span to filter the result. In the up-left corner there is a button which loads the Ontology which will be processed:



Then a file picker will be shown a to load the ontology file with *.ttl extension. In this case we used the sample ontology file:

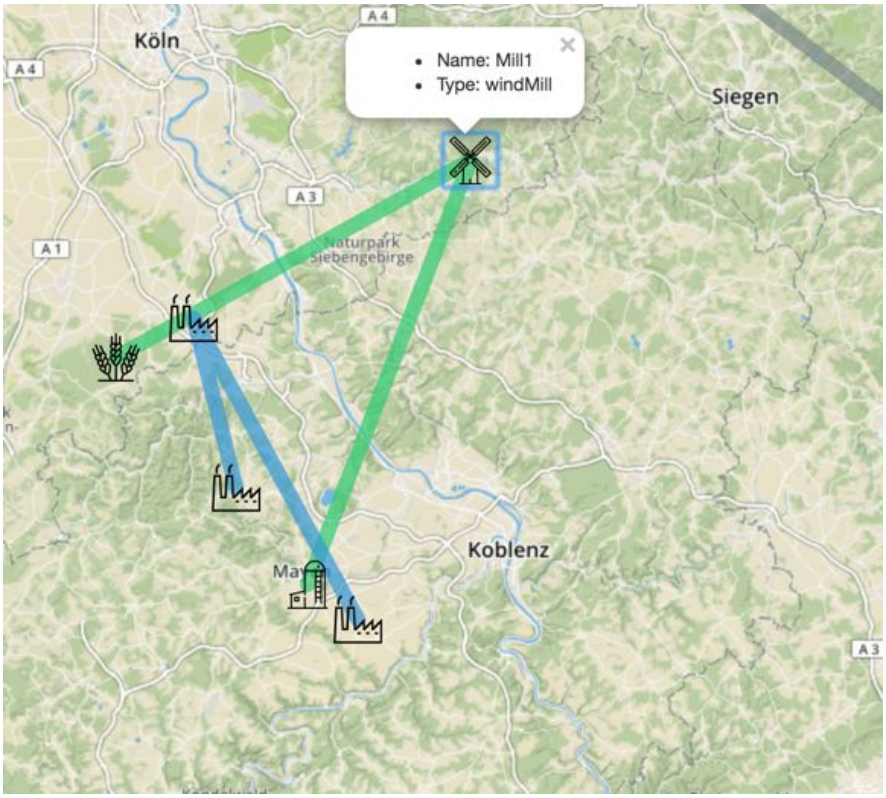


In case of uploading the file successfully, you can see the entities and their relations by links which show different type of information:

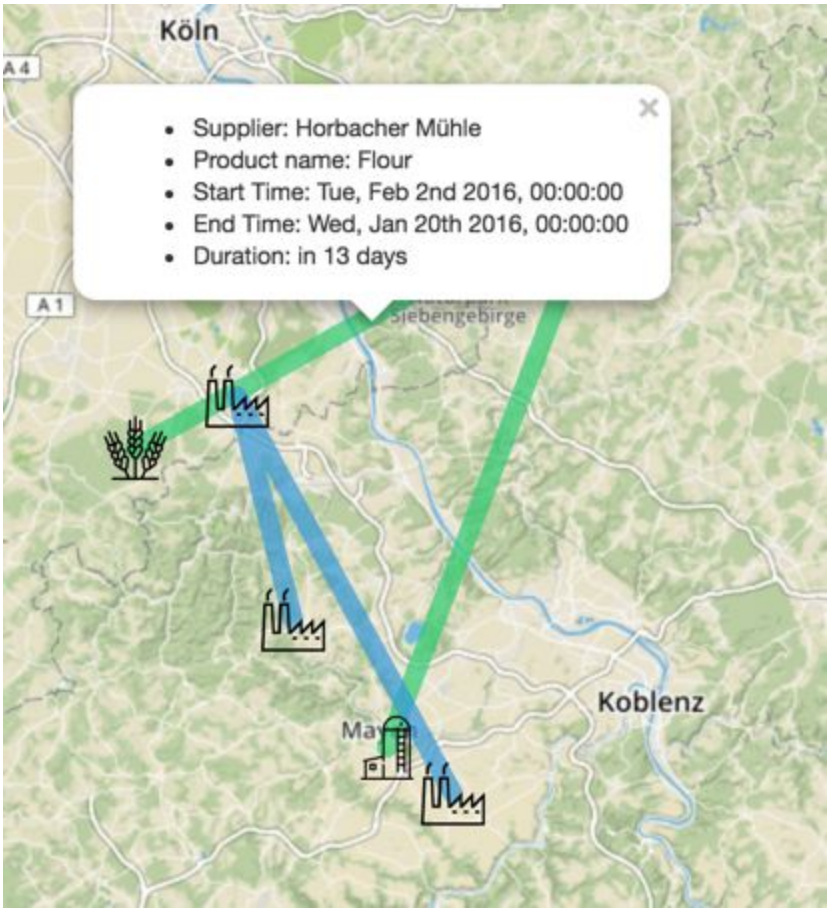


In this simplified example you can see the relationship between different type of entities like factory, power plant, silo etc.

By clicking on each node you can see node's detail like its name and also the type which is categorized in the ontology:



There is also possibility to show fully detailed information for supplier which is handling in current chain between two nodes. By clicking at lines you will get a pop-up panel which shows information like Supplier's name, Production, Start time, End time and duration:



3.3 Filters

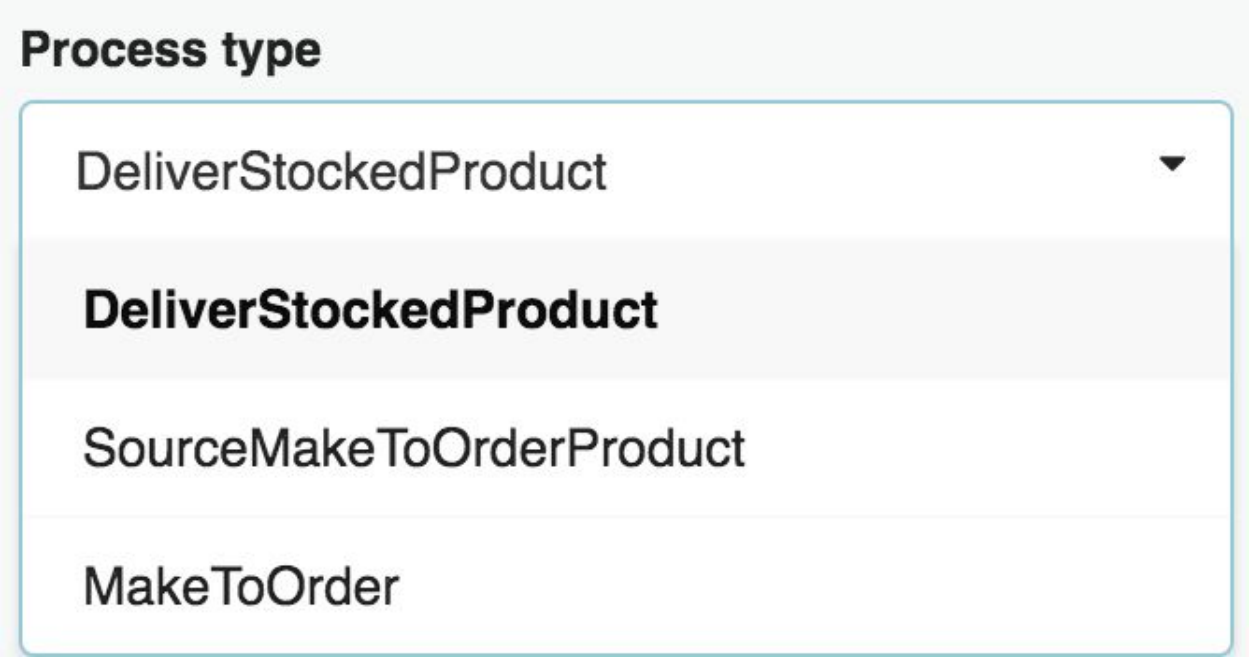
According different parameters the app is able to filter the result. For example by defining the time period which is desired from user, the map will show different result.

Then it is possible to use different parameters which is shown here:

There is two parameters which is customizing the filtering in a way. Supplier's name and product name are two key parameters.

3.4 Processes and Metrics

There are defined three different process type which analyze the data according of it:



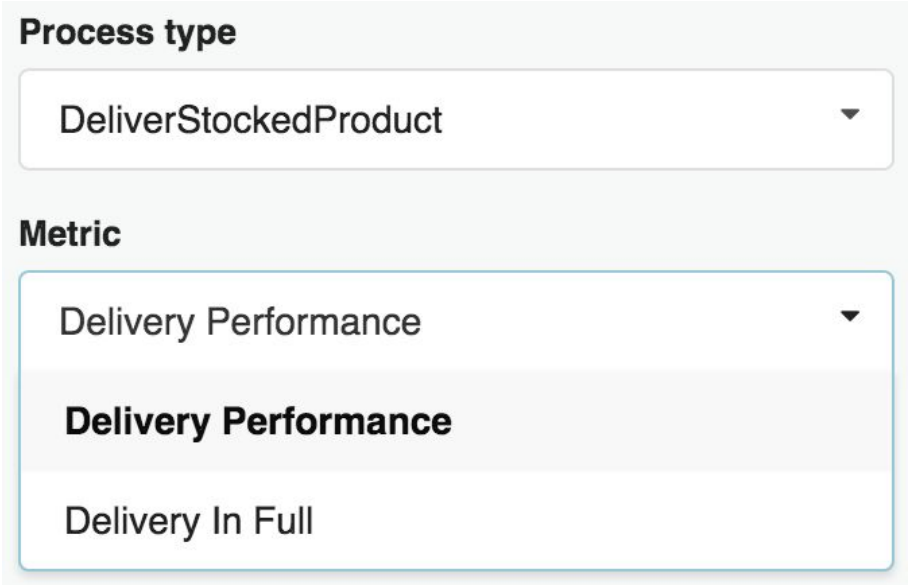
3.4.1 Processes

- **Delivery Stocked Product:** Delivers product that is sourced or made based on aggregated customer orders, projected orders/demand and inventory re-ordering parameters
- **Source Make To Order Product**: The processes of ordering and receiving product or material that is ordered (and may be configured) only when required by a specific customer order.

- **Make To Order**: The process of manufacturing in a make-to-order environment adds value to products through mixing, separating, forming, machining, and chemical processes for a specific customer order.

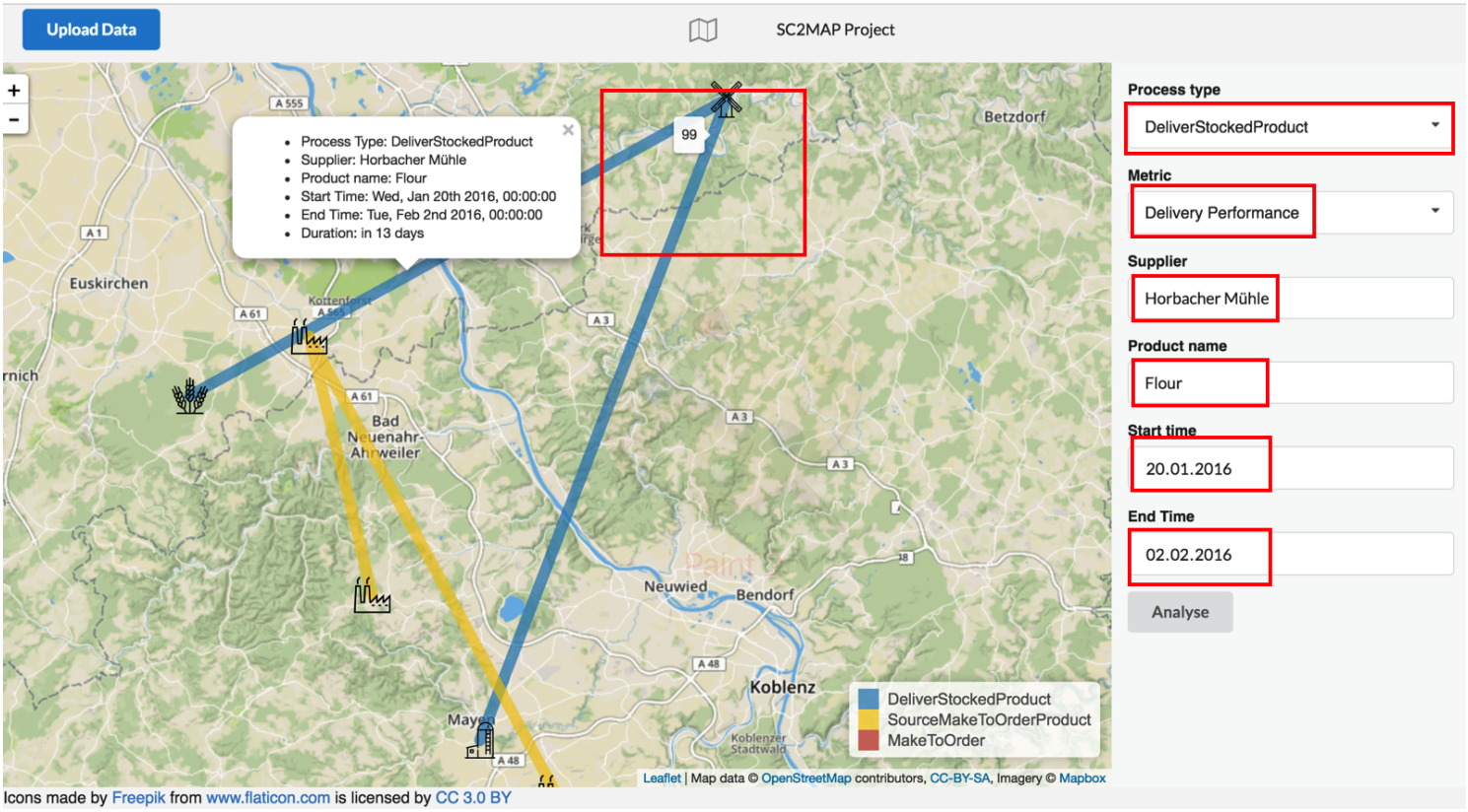
3.4.2 Metrics

Then according the process type which is selected related Metrics are listed in the Metrics Dropdown Box. For example: by selecting DeliveryStockedProduct, related Metrics are listed which are:



3.4.2 Full example

Here is an example which shows how the app works with multiple filters:



References

1. http://eis.iai.uni-bonn.de/upload/paper/ISWC2015dataonto_submission_7.pdf