

## 1. Target

- ▶ Operator of logistics areas (warehouse, airport hubs, urban logistic area ...)
- ▶ Professionals of logistics real estate, local authorities

## 2. Objective

A logistics site generates negative externalities due to its own activities and generated freight transport. Even if externalities should be taken into account in the geographical location of logistical areas, estate prices lead to a remoteness of these areas from dense areas where estate is less expensive. The consequence is an increase in the need for transport. To take into account this phenomenon and to estimate its impact, the objective of this study is to quantify the cost of negative externalities in function of the logistics area location and / or the corresponding available mode of transport. The comparison between two geographical locations makes it possible to integrate these costs into the selection criteria. This type of study involves a precise identification of the location concerned and the available transport supply.

When the aforementioned parameters have been identified, Quantification of the societal footprint takes place through the monetization of the different negative externalities generated by the logistics area itself and associated transport offer.

The monetization approach makes it possible to calculate an overall footprint including all externalities and to compare several locations and / or several associated logistic schemes.

## 3. Methodology, Pre-requisites and Organisation

This study requires that the applicant define upstream of the study the relevant land areas, accessible transport offers and associated flows.

The representative transport flows associated to the logistic area are determined in cooperation with the applicant to establish an equivalence between location (in tonnage and final destination). When scenarios and their possible variants have been identified, rating of one or more of the following 6 externalities is established using a recognized methodology:



Noise



Accidents



GHG emissions



Congestion



Pollutants and Particles



Upstream Impact

## 4. Study organisation

**Step 1:** Identification of the logistic area location (s) and the associated transport offer, identification of equivalent representative flows for identical tonnage and final deliveries, establishment of flows for the different locations and / or transport supply.

**Step 2:** Calculation in monetary value (€ /t.km) of the cost of externalities for each configuration. Comparison of the full societal cost, partial cost or per type of externality. Quantification of the robustness of the assumption and improvement if necessary.

**Step 3:** Oral presentation to the applicant of the study report

## 5. Deliverables

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The deliverable consists in a study report describing scenarios, reference data, calculation, assumptions and the detailed results (by externalities, by scenarios and possible variants).

Recommendations can be established to facilitate the deployment of a solution. The robustness of the assumptions is also evaluated.

## 6. Our Resources

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The study is conducted by TK Blue experts who participate to International and European working groups (GLEC, ...). The TK'Blue methodology for quantifying externalities is based on internationally recognized methods and the most recent reference data (Ricardo AEA report, ...). Calculations are carried out in accordance with the applicable standards and regulations: The GHG/CO<sub>2e</sub> calculator complies with French regulations and the European standard NF EN 16258.

## 7. References

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They trust us :



Projet  
Olympic  
Energy



NANTES  
SAINT-NAZAIRE  
PORT



## 8. For more information :

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