

Case Study: D-Sight's solutions for environmental studies

CHALLENGE

ECOREM is an engineering and consultancy company specializing in the environmental sector, meeting the needs of public and private industries both regionally, nationally, and internationally. Ecorem is licensed in the three regions of Belgium to perform different types of studies (soil, environment, water, waste, energy, etc.). In addition, ECOREM's engineering department has completed numerous international projects successfully. This case study shows how D-Sight's multi-criteria analysis software was used on the "Strategic Environmental Assessment of the broad gauge waterway linking Seine-Scheldt East on the territory of the Walloon Region."

ACTIONS

Due to the large number of criteria involved in the environmental assessment, ECOREM decided to use D-Sight solutions to carry out the evaluation and comparison of various project alternatives.

RESULTS

The D-Sight solution allowed ECOREM to automate the process of assessing project alternatives and conducting a thorough analysis. Despite the large number of criteria, ECOREM was able to highlight the benefits of the best alternatives and provide the Walloon Region with clear and simple results.

CHALLENGE

ECOREM S.A. is an independent, multidisciplinary consultancy and engineering company specialized in various environmental aspects. ECOREM S.A. was founded and developed around an integrated multidisciplinary approach and is always looking for tailor-made solutions to various environmental problems.

The Strategic Environmental Assessment of the Seine-Scheldt East broad-gauge waterway is a European project that aims to connect the Seine and the Oise to the Northern European river network, by a broad gauge waterway. This project includes the creation of a new 106 km channel, called the "Seine - Nord Europe Canal." Additionally, it requires the adaptation of existing waterways in France and Belgium in order to link the new canal with the main ports in Northern Europe. Eventually, a new high-capacity waterway hub will be accessible between the Paris region, the Seine estuary, Northern France, Belgium and the Netherlands. The Walloon part, called Seine-Scheldt East (SSE), aims to modernize the access points to the French network and to identify and explore potential improvements of certain major channels in the region. The potential work that might be carried out in this context has been called the "PLAN."

ACTIONS

ECOREM has been managing the strategic environmental assessment of the PLAN. In this context, several base PLAN alternatives have been identified by the Walloon public authorities and were then evaluated to determine the most suitable option considering the development strategy of the region. The base PLAN was to carry out the work on all the channels involved in the Seine-Scheldt East project. The alternatives considered were differentiated by the fact that the work would only be carried out on variable subsets of channel sections or on none at all. Finally, a last alternative was to generate an improved PLAN involving all segments, but allowing stronger economic progress through a broader channel gauge to allow passage of larger loads. Any options that were not feasible from a technical and / or financial point of view had been excluded from the outset. In total, six alternatives were considered in the assessment.

The aim of the ECOREM study was to try to identify the most suitable alternative and determine management measures. The issues of implementing the PLAN (or its alternatives) that could have significant impacts on the environment were also analyzed. The time frame considered was until 2020 or 2050 depending on the environmental domain. Two major phases were considered in the impact assessment: the work necessary at an infrastructure level and operations of the proposed PLAN as such. Of course, many aspects have been taken into account, such as soil, water, flora and fauna, protected sites, landscape, noise and vibration, air, human mobility and environment.

ECOREM is conducting strategic environmental assessments and environmental impact studies on a regular basis. In cases requiring complex multi-criteria analyses, ECOREM uses the D-Sight Desktop software regularly. The engineering firm thus used the solution to support its decision when comparing and assessing the different PLAN alternatives in order to facilitate the choice of the best option.

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By using D-Sight for the environmental assessment of project alternatives, we were able to follow an automated process, thus significantly reducing the duration of the analysis. In addition, visual tools allowed us to easily interact with decision makers and therefore help them understand and accept the results. D-Sight provides real support for decision making allowing us to objectively choose the best option.

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Amandine d'Haese
Business Unit Manager
Coordinator and Team
Leader of the SEE projet
at Ecorem

RESULTS

Using D-Sight solutions has enabled a more automated process, compared to more traditional tools such as Excel. As a result, a considerable amount of time has been saved during the evaluation phase.

In addition, the tool has been the main means of communication to support the decision making process thanks to its many visual aspects that facilitate interaction with and understanding of the different stakeholders. Indeed, for decision makers who do not necessarily master the technical aspects of the tool - given that they are not at the core of the assessment - there is a real gain in understanding the options. The findings of the analysis had to be submitted to several stakeholders. It was therefore necessary to present the results in an appropriate manner, to enable them to easily understand the results. The multitude of visual tools offered by D-Sight has made a real gain in interaction with policy makers. They were able to measure the pros and cons of different alternatives with respect to the various criteria, despite the complex nature of the underlying project.

As for ECOREM, D-Sight software helped identify the ranking of the choices and refine the assessment via a more automated method. In addition, the tool gave them the opportunity to easily consider quantitative as well as qualitative aspects. Integrated simulation tools have also helped to present different scenarios to stakeholders, providing a solid basis for discussion. Finally, the D-Sight solution helped build credibility and reassurance for the decision makers.

ABOUT D-SIGHT

D-Sight develops collaborative decision-making software solutions to help businesses and organizations make better and faster decisions. D-Sight solutions are used for Vendor Selection, Projects Prioritization, Environmental Impact Assessment and other kind of complex decision-making problems, in more than 25 countries.