

Sustainability Assessment of Mobility Projects (STAR)

Methodological tool in the form of a piece of software that produces a sustainability rating for mobility projects, plans and policies.



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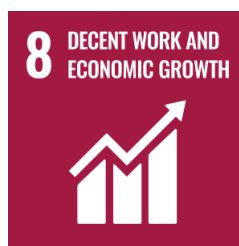
Technological Offers type

Technological solutions

Research and innovation areas

- Climate, Energy and Mobility
- Industry, Materials and Circular Economy

ODS





Available from: 2015

Where?

[Transport Planning](#) [Transport Research Centre](#)

Files

[Download additional documentation \(pdf\)](#)

Keywords: | [assessment](#) | [Infrastructure](#) | [mobility](#) | [sustainability](#)

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Brief description of the solution and the added value it delivers

Methodological tool in the form of a piece of software that produces a sustainability rating for mobility projects, plans and policies.

Description of the technological basis

The model is structured into three steps:

- The first step involves identifying and quantifying the criteria necessary to characterise sustainability in the context of the project or intervention to be assessed.
- The second step determines appropriate and logical weightings for each previously identified sustainability criterion. The weighting process, published by Bueno and Vassallo (2015), uses the REMBRANDT technique, a pairwise comparison method for determining the relative importance of different criteria, and also incorporates the opinions of decision-makers.
- The third step quantifies the sustainability performance of the alternatives in order to select the option with the best overall score.

The model is available as an R software package with a Shiny graphics output. It requires calibration for each specific case.

Business needs / application

Having a tool for assessing the sustainability of mobility solutions is important for the following reasons:

- Currently used assessment methods, such as cost-benefit analyses, do not adequately incorporate environmental and social impacts.
 - To be awarded European funds, in particular through the NextGenerationEU recovery and resilience facility, it is necessary to assess the sustainability of the solutions requiring funding.
 - Most sustainability assessment instruments are focused on specific kinds of infrastructure and cannot easily be extended to other mobility solutions.
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Competitive advantages

The principal competitive advantages of this tool are as follows:

- It allows companies to accompany their innovative mobility solutions with an assessment demonstrating their sustainability.
 - There is currently no flexible tool for assessing the sustainability of mobility projects.
 - It makes it easier for companies to justify the environmental and social interest of the mobility solutions they are proposing.
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Past performance references

- The mechanism was applied in a pilot project under the supervision of experts from the European Investment Bank (EIB), with the aim of assessing the sustainability impact of a road project in Spain. The pilot showed that the tool works correctly when it comes to prioritising alternatives.
 - The methodology and tool were developed at UPM's Transport Research Centre(TRANSyT) <http://www.transyt.upm.es/>, whose mission is to carry out research for more efficient, connected and sustainable mobility.
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Stage of development

CONCEPT

RESEARCH

LAB PROTOTYPE

INDUSTRIAL
PROTOTYPE

PRODUCTION