



Building a responsible future by anticipating long-term impacts of disruptive products

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► To cite this version:

Robin Lecomte, Bernard Yannou, Guillaume Thibaud, Roland Cahen. Building a responsible future by anticipating long-term impacts of disruptive products: The case of autonomous vehicles. ICED, Jul 2023, Bordeaux, France. hal-04205251

HAL Id: hal-04205251

<https://hal.science/hal-04205251>

Submitted on 12 Sep 2023

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Building a Responsible Future

By anticipating long-term impacts of disruptive products

The case of Autonomous Vehicle



AutoVision

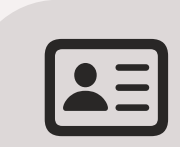
What is the problem?

When dealing with disruptive products such as **autonomous vehicles**, designers and decision-makers face a challenge in predicting their long-term impact, unlike with traditional products. This can result in an "open-loop" design process that may have irreversible consequences for people, the environment, and society in the long run.

Existing knowledge is available but dispersed



Scientific literature



Experts



Numeric simulations

How to use this knowledge to help designers and decision-makers?

AutoVision is a digital platform anticipating the long-term socio-economic and environmental impacts of autonomous vehicles concepts thanks to existing knowledge. It was designed to help users imagine future autonomous vehicles (stimulation) and test the impacts of their proposals (simulation).

Impact Guesser

The Impact Guesser mode enables the user to define a scenario for an autonomous vehicle and generates a weighted list of possible impacts.

1 Define a scenario

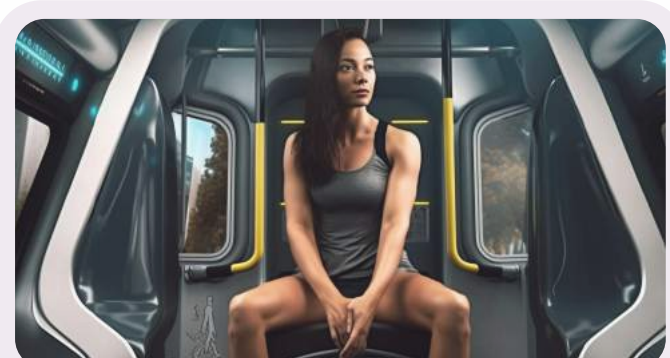
Mode of use

- ☒ Private
- ☐ Shared (car-sharing)
- ☐ Shared (ride-sharing)

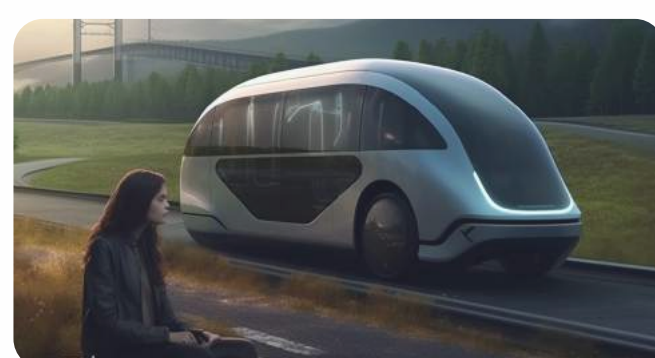
Deployment

- ☒ Europe
- ☐ North-America
- ☒ Oceania
- ☐ Asia

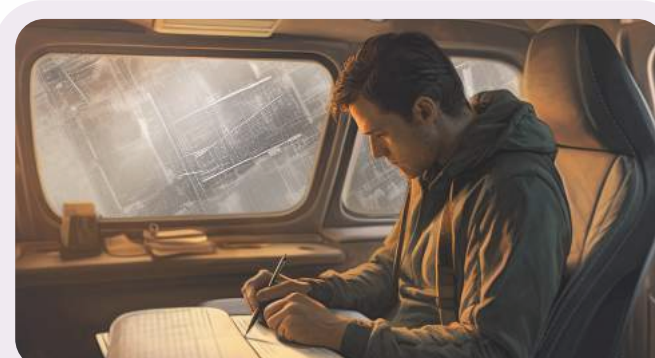
Usages



The passenger is doing sport



The vehicles is coming by itself



The passenger is working



The vehicle is picking up a passenger

2 Get a list of possible impacts categorized into 19 themes



Social impacts Health and wellbeing

- ☒ Health condition
- ☒ Stress
- ☒ Mental health

Socio-economic and environmental impacts Energy

- ☒ Fuel consumption -27%
- ☒ Energy consumption -55%

Level of confidence Intensity (low—high) Depth (few people—everyone) Occurrence (rare—systematic)

Advisor

The Advisor mode allows the user to choose which impacts are most important to avoid or prioritize and provides a list of suggestions accordingly.

1 Define a strategy

Socio-economic and environmental impacts

- ☒ Total number of vehicles
- ☐ Average speed
- ☒ Travel time
- ☐ Parking space needed
- ☐ Fuel consumption

Social impacts

- ☒ Employment
- ☐ Mobility access
- ☒ Number of accidents
- ☐ Quality of family relationships
- ☒ Wellbeing

2 Get suggestions to define your AV concept

Mode of use

☒ To promote ☐ To avoid

- ☒ Shared (car-sharing)
- ☒ Shared (ride-sharing)

Deployment

☐ To promote ☒ To avoid

- ☒ North America
- ☒ Asia

Usages

☒ To promote ☐ To avoid



The vehicles is coming by itself



Passengers are doing activities

Level of confidence