

Scientific publication of reviewed behaviour change techniques for sustainable logistics

All over the world, more and more things are being ordered online and this is causing environmental problems such as air pollution. The many delivery vans also produce a lot of CO₂, which warms the earth's climate. This problem is well known and needs to be solved.

The project SuCoLo looks for solutions to reduce this problem. We want to understand how to protect the environment when delivering goods in cities. We know that each of us can make a contribution by changing our behaviour.



That is the starting point for our research about behavior change techniques:

- Currently consumers have hardly options to buy things online delivered environmentally friendly.
- But environmentally friendly delivery options exist and should be utilised.
- That's why green delivery solutions have to be expanded and everyone must be informed about them.
- Informing people works better when you use good techniques.
- The right techniques can help people change their behaviour.
- If we change our behaviour, we can make a contribution to make delivery more environmentally friendly.

This document describes behavior change techniques that encourage consumers to choose more sustainable delivery options when shopping online. The goal is to identify effective strategies to protect the environment when shopping online.



How did we work?

1. **Literature Review:** we looked for 10 scientific studies on this topic.
2. **Website Analysis:** we looked at 65 big online shops to assess the implementation of these behavior change techniques in practice.



What did we find out about behavior change techniques?

To encourage behavior change there are techniques. These techniques encourage us consumers to change our behaviour. The abbreviation for **behavior change techniques** is **BCTs**:

- We find out, that there is just little research studies on behavior change techniques.
- The most common behavior change techniques identified in the studies were:
 - **Providing information:** Explaining consumers about the environmental impact of different delivery options.
 - **Default options:** Setting the default option to a more sustainable choice.
 - **Social proof:** Highlighting the popularity of sustainable choices. This can also be achieved by linking social media, for example.

- But most analyzed websites do not use behavior change techniques right now.



What have we learnt from the research we made?

- **Further Research:** More research is needed to explore the effectiveness of various behavior change techniques and to develop new strategies.
- **Industry Adoption:** E-commerce companies should adopt these techniques to promote sustainable practices and reduce their environmental footprint.
- **Consumer Awareness:** Consumers should be made aware of the impact of their delivery choices and encouraged to make more sustainable decisions.

Overall, our research shows that is worth encouraging sustainable consumer behaviour when shopping online. It is important to inform customers about the environmental consequences. Only if they know about it they can change their behaviour.



What can an online shop actually change?

In order to convince us consumers to have ordered goods delivered in an environmentally friendly way, an online shop can display the following things when ordering, for example:

- sustainability labels
- preselect basic setting for a green delivery option (that would “nudge” us consumers)
- estimated CO2 savings
- better working conditions for delivery drivers
- the number of trees saved
- increased safety



*Figure: Example of an implemented behaviour change technique used on the website Dm.de:
Translation: "Environmentally friendly delivery option by avoiding transport-related CO2 emissions."*

We can use the results of our research in the pilot project in Salzburg, where we are developing an online shop with such behavior change techniques that will be tested by users.

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