

Envyron

Environmental App

The Current Situation

Throughout its long history, the earth has gone through many drastic changes in terms of climate. The last 10 000 years, however, have been relatively stable. Under these favorable environmental conditions, **human civilizations** have emerged and developed into the world that we know today, but these conditions now seem to be **threatened**.

Since the industrial revolution in the 18th century, variations in the climate have gone from being largely slow and natural to being **much faster and mainly driven by human activity**. Everything from our consumption of fossil fuels to industrial agriculture, while having had obvious benefits, has also put **the future of our species and our planet at stake**.


The **latest record in global warming** was set in 2016, with 1.1 degrees Celsius over the pre-industrialized period.

CO₂ in the atmosphere also reached a **record level** of 400 ppm.¹

Rockström et al in a study identified ten categories of human environmental impact, of which several, including **climate change and biodiversity loss**, are considered to be at a **very serious state**.

Rockström et al also identify threshold values **above which the impact runs a serious risk of becoming irreversible**. For CO₂ in the atmosphere, this limit is put at around 350 ppm, around 50 ppm **below the current level**.²

This very dangerous situation, combined with a seemingly emerging attitude towards the climate that puts it far below other issues in importance or even denies it, makes it imperative to bring attention, awareness and knowledge to the topic of human climate change, in **new and engaging ways**.



“I'm not a believer in man-made global warming. It could be warming, and it's going to start to cool at some point. And you know, in the early, in the 1920s, people talked about global cooling... They thought the Earth was cooling. Now, it's global warming... But the problem we have, and if you look at our energy costs, and all of the things that we're doing to solve a **problem that I don't think in any major fashion exists.**”

– Donald Trump, 2015-09-21

New User – Getting Started



This connects your bank card to the index, which allows for automatic estimates of your environmental impact.

The information is immediately confirmed through Mobile BankID.

The connection could be canceled at any time if you wanted to.

This survey will automatically request complementary info, e.g. about any consumption made with some other means of payment than your card and about recycling.

Depending on how often you do these things, you choose how often the app should ask about this information.

This allows for an element of competition and is strongly recommended.

You can choose to find friends automatically through Facebook.

You can also search manually for friends that use Envyron.



The Index



Central to the app is the index that is used to automatically calculate the environmental impact of the user. The inspiration for this comes from the **Baltic Sea Card**, developed by Ålandsbanken, and the methods behind it.

Each transaction made with the Baltic Sea Card is categorized based on the type of store it is made in, through a code provided by Mastercard. The environmental impact is calculated based on this code combined with leading financial market data in a process supervised by KPMG.

Our concept is based on that of Ålandsbanken, but aims to take it one step further by calculating CO₂-emissions based on the specific product rather than just the general category.

We consider it realistic to expect that the **market for data on individual products' environmental impact will grow stronger in the near future**, as this aspect is increasingly valued in the business world.

Improving & Compensating

The app also provides constructive feedback on how you can **improve** your consumption and recycling habits, as well as how you can **compensate** your environmental impact.

Climate compensation can be carried out directly from the app. You choose the number of days you want to compensate. The payment takes place immediately and is confirmed through Mobile BankID. You pick **one of the following methods** of compensation:

→ **UN Certified Carbon Credits:** This money goes towards projects around the world that aim to mitigate the impacts of climate change and is quantified based on the amount of CO₂ it compensates.

→ **One Tree Planted:** Vermont-based organization that works with tree-planting organizations around the world. 1 USD gives one tree, and this as well can be quantified based on the amount of CO₂ it compensates.

When you climate compensate, your CO₂ counter for the current day, month and year will decrease, thereby also improving your ranking among your friends.

Tips on how you can improve your consumption are provided regularly, based on which kinds of products you consume in large amounts. This in the form of concrete tips on how you can substitute with more environmentally friendly products estimated to fulfill many of the same needs. This (conceptual) system is based on machine learning.

Robert Cialdini's 6 Principles of Persuasion

...what human behaviour tends to be influenced by – 2 are relevant to our app:

- Commitment and Consistency:** The app will hopefully help you develop more positive habits, which you will then quite automatically begin to follow.
- Social Proof:** You and your friends show each other your (improving) emissions.



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



SDG:s

Our project targets Sustainable Development Goals number 12 and 13:

- **12, Responsible Consumption and Production:** Ensuring sustainable consumption & production patterns.
- **13, Climate action:** Taking urgent action to combat climate change and its impacts.



The App in Brief

Envyron calculates your environmental impact, in the form of CO₂-emissions, for various time frames. Most of this is done automatically – the app is connected to your bank card and uses an index to assess a CO₂-value to each transaction.

Complementary information about consumption made with other means of payment than your card will be requested at regular intervals. This short survey will also ask about your recycling. If done ambitiously, the latter will reduce your calculated environmental impact in the app.

The app regularly sends you notifications about whether the trend of your emissions is positive or negative, either encouraging further positive development or urging you to break a negative trend.

If you have connected to your friends, your ranking among these for the current month will be shown as well, which constitutes an element of competition. By interacting with the friend list, you can also challenge specific friends to reach a certain net emission goal for the current week, month or year.



¹ "World Meteorological Organization Statement on the State of the Global Climate in 2016."

² Rockström et al. A safe operating space for humanity. Nature, 461(9):472-475.