



Kobla

The Kobla MaaS application



What is Kobla?

The core solution is a mobile phone MaaS application that influences its end-users to change their travel habits towards more sustainable travels. To achieve this, the solution uses different methods. Firstly, it keeps its users informed by showing statistics of their travel habits, including CO2 emissions, time and cost.

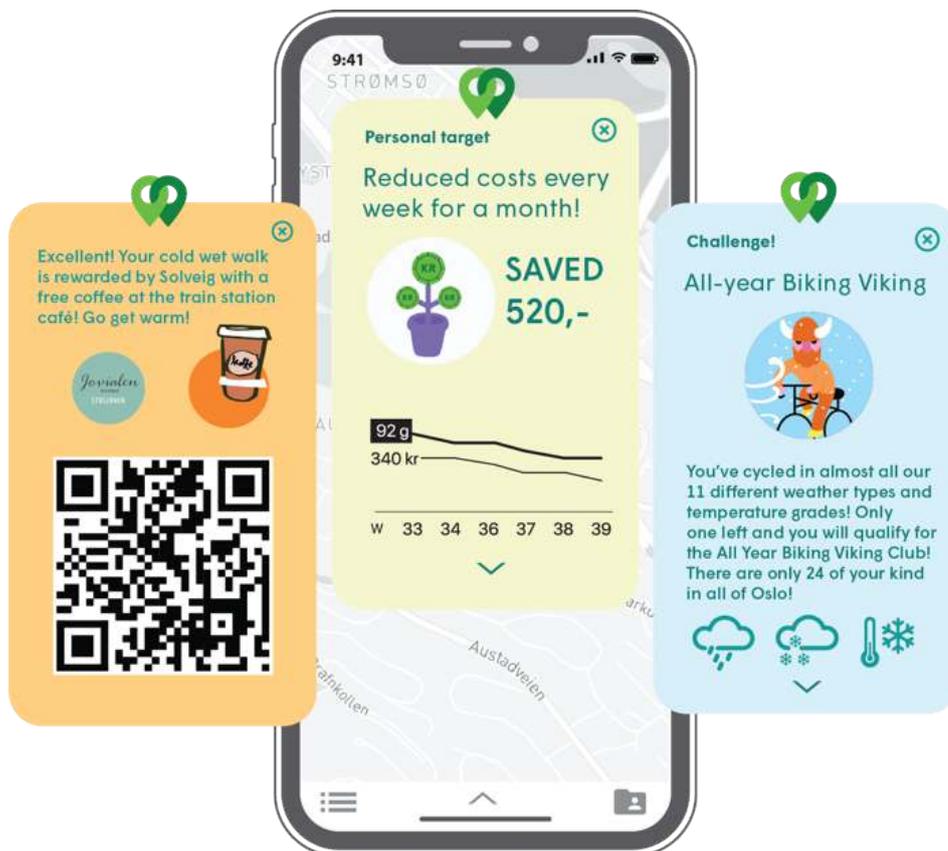
This allows the users to reflect on their current habits, increasing their consciousness regarding choosing how to travel, as a first step towards behavioural change.

The Kobla MaaS-app's approach to CO2 emissions reduction is that the sum of many marginal gains can be a strong contribution to short-term reductions and result in exponential impact over time.

MaaS functionality is achieved by integrating with 3rd party APIs, giving route information, service offerings, weather and road conditions etc. as an added to give the solution practical value and to add relevance to the statistics the solution presents.

The Kobla MaaS-app will not only help reduce CO2 and other GHG emissions but also help societies reach several of the United Nations Sustainable Development Goals (SDG's): Goal 3 – good health and well-being, goal 9 – Industry innovation and infrastructure, goal 11 – sustainable cities and communities, goal 13 – climate action as well as goal 17 – partnerships.

Employing gamification for sustainability



The Kobla MaaS-app uses elements from computer games, so called gamification, which urges users to compete with other users as well as letting them set personal goals. The solution also gives the user incentives in the form of a bonus system where points are awarded for choosing green travel modes. Doing so in the face of adversity – for example bad weather – results in a higher point score.

Bonus can be used to collect small prizes, discounts or a free coffee. For users that like to share their achievements, this can be done directly from the app to most SoMe platforms.

Taking these alternate approaches simultaneously ensures that the Kobla MaaS-app reaches a broad range of user groups. By adding focus to whichever mode the individual user responds to, the app increases its chances of staying interesting and effective for as many personality types as possible, for as long as possible. Research has proven “nudging” to be an effective way of respectfully pushing the end user towards small changes in their travel habits.



A MaaS solution integrating societal goals



The Kobla MaaS application addresses the following problem areas:

- The usage of private (fossil fuel) vehicles within city boundaries is too high, while existing road infrastructure is used sub-optimally.
- Citizens have poor understanding of the relationship between time, cost, emissions and health impact of different travel alternatives for the same journey.
- Citizens have poor understanding of the actual cost of not just driving, but also owning private fossil fuel cars.
- Citizens have lack of accurate information relating to their travel patterns. Existing solutions either flood the users with irrelevant information or is poorly accessible.
- The abovementioned poor awareness results in a lack of motivation to change habits.
- Citizens privacy is not well protected. Which information that is collected, how it is shared and to what degree it is protected is not well communicated by suppliers or understood by the citizens.
- Planning authorities lack understanding of the potential demand (predictive usage) for new modes of travel (e.g. e-scooters, e-bikes, personal vehicle sharing etc).

Many current travel applications flood the user with information. In contrast to this, the BDM goal is to only show the user the information he or she needs. By knowing what modes of transportation and destinations are most interesting to the user, the MaaS-app will use information from the BDM module to only present information that is relevant for the user.

Examples: a) Only display bus-stops with departures that connects with the users' travels. B) A user that commutes by bike every day is not interested in information about car-traffic jams. Similar C) a user that drives by car is not interested in bike lanes snow clearance status.

Just-in-time: Present the correct information when the user needs it: "Next bus home leaves in 10 minutes" or "Your bike lane will not be cleared for snow at your usual departure time tomorrow morning; advice is to postpone departure for 25 minutes if possible".

Payment services are either integrated in the app itself or are covered by an app-jump to the service providers' app depending on integration level. By including MaaS functionality, the app increases its precision and practicality for the end user and increases its efficacy as a changemaker.

Behaviour Detection Module

The smartness of the Kobla MaaS-app relies on its Behaviour Detection Module (BDM) module. The BDM is an AI-driven module continuously learning about each user's travel habits, and based on this, performing two essential tasks: predicting their next journey, predicting their mid-term transportation needs, and respectfully proposing alternative forms of travel tailored to their lifestyle, yet more sustainable. Suggestions are given, not only on a per trip-basis, but all the way up to aiding the user in decisions such as whether or not to participate in car-sharing schemes or if they can safely switch to an EV.

Core to the BDM is a best-in-class approach to privacy. Users' travel patterns and travel methods are automatically detected, but all journey data is encrypted and stored on the user's phone with no travel data being uploaded to servers or processed with 3rd party webservice APIs. Only aggregated score values are shared with servers, in order to let users participate in competitions.

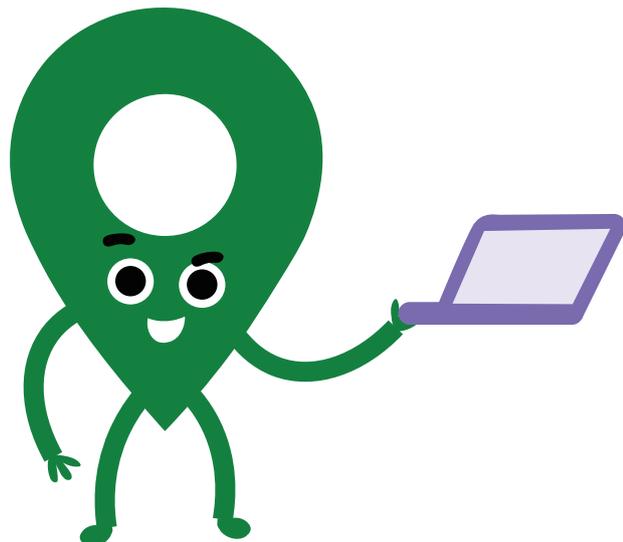
Recent advances in mobile phone hardware make this approach possible. Smartphones now have advanced AI processing capabilities that enable edge computing AI without battery drain. The result is that the Kobla MaaS-app exceeds GDPR-level privacy.

The current Kobla MaaS-app is at present sold to municipalities in Norway and is in pilot stage in the Swedish town of Östersund.

Knowing the user's behaviour is key to influencing it. By using the BDM, the MaaS-app will influence the user by presenting messages like: "If you switch from car to bike on your daily commute, you will spend 10 more minutes, but you will burn an extra 450 calories and save 8€ per journey" or "Tomorrow morning the weather forecast is clear skies, perfect for bicycling."

The sum of all these AI-enabled functional improvements is a disruptive and truly unique MaaS solution and behavioural change package, that motivates and stimulates lasting change. The goal is to reach MaaS level 4 (as described by the Dutch Ministry of Infrastructure and Water Management), **the integration of societal goals.**

For more information, please visit our website kobla.no



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