

© 31 March 2022, 13:29 (CEST)

DATA IS KING: How swapfiets uses data for (your) good

Oh yes, we provide our members with a working Swapfiets for a fixed monthly fee. Besides that, we're obsessed with data and committed to using this as a force for good. We offer the ultimate bike membership and are a circular data driven tech company at the same time. The best of both worlds, right? Behind the scenes we process tons of data, algorithms and use machine learning. Our number crunching tech experts analyze the numbers and optimize our products, services and positive impact on a daily basis. How we use all gathered data as a force for (your) good? Let's dive in!



Improving what we can measure

Every week, our Swappers get over 10.000 service requests and carry out more than 7000 repairs, with 19.754 inner tubes replaced in 2021! To limit the number of repairs, and to make them run smoothly, we track how often, and which parts of the bike break down over time. This pushes us to redesign certain parts of the bike and to change their materials for better durability and recyclability. Hello circularity. For example, we are currently looking into a different way to change the rear wheel to make repair quicker and easier, and we have changed the material for certain parts from stainless steel to chrome to make them last longer while still looking good. These changes have already decreased our bike-breakdowns by 66%! And last but not least; to make sure you always have a smoothly running bike ASAP, we track how long our repairs take on average to optimize user experience.

About connectivity, since March this year, we track additional data on our e-bikes via our new [GPS security system](#). Don't worry, we aren't tracking your personal whereabouts or your daily bike rides around town. We gather overall data from all Swapfiets users and activities combined to continuously improve our bikes and services. The connectivity of e-bikes enables us to track the bikes in case of a reported stolen. An important new feature to decrease the amount of missing bikes. Also, to make sure there is always a Swap-shop close to your home, we use geographical user data to decide where to open the next retail location. Additionally, we can link parts performance to distance traveled.

Predicting your next move

Insights in user activities are not only helpful for improving our current products and services but also enable us to look ahead and predict future moves. This is where algorithms and machine learning come into play. Information on why our members are joining Swapfiets, and why they are leaving, combined with demographic data such as location, age, language, seasonality and product use help us understand and improve user experience and determine which new cities to enter. It also enables us to make membership lifetime predictions, that tell us what type of member in which city with what type of bike delivers what kind of value. Based on this input we can send extra bikes to certain locations, or we can improve the repair quality on specific types of bikes.

To stay true to our belief of 'Always a working Swapfiets', the demand of new bikes is – next to the demand for repairs - one of the most important predictions we need to make. By demand forecasting we predict the demand for new bikes, both for replacements in our current fleet, as for new users. A simple prediction could be made based on time of the year. For instance, in September many new students join our cities which creates a huge influx in new users every year. But we are also currently running a pilot on more enhanced predictions, based on machine learning, which enables us to always meet service needs per user, to automatically know where to deliver bikes when availability is running low and even to predict the risk of a bike getting stolen.

Being smart about how we use data helps us to solve complex challenges, now and in the future. It is our top priority to keep you happily moving from A to B. Behind the scenes we'll optimize Swapfiets as a circular data driven tech company, using the next generation of applications, analytics, AI and Machine Learning.

ABOUT SWAPFIETS

Swapfiets is 's werelds eerste 'bicycle as a service' bedrijf. Opgericht in 2014 in Nederland, groeide de scale-up snel uit tot een van de meest toonaangevende leveranciers van micromobiliteit in Europa, met inmiddels meer dan 250.000 leden in Nederland, Duitsland, België, Denemarken, Frankrijk, Italië en het Verenigd Koninkrijk. In het voorjaar van 2021 breidt Swapfiets uit naar Spanje (Barcelona), Oostenrijk (Wenen) en Lyon, Nantes, Straatsburg en Toulouse (Frankrijk).

Het concept van Swapfiets is vrij eenvoudig: voor een maandelijks vast bedrag hebben Swapfiets-leden altijd een werkende fiets. En zijn er onverhoopt problemen, dan wordt de tweewieler binnen 48 uur gerepareerd of direct vervangen zonder extra kosten. Swapfiets is in Nederland beschikbaar in meer dan 50 steden.



Swapfiets