



## The issue

- **70% of non-cyclists in Britain feel that it is too dangerous for them to cycle on the road.<sup>1</sup>**
- **Fear is one of the greatest barriers to getting more people cycling for everyday journeys.<sup>2</sup>**

Cyclists have played a large and unrecognised role in the development of modern roadways, but the domination of the motor vehicle has transformed the way in which we share our roads. Research on drivers' attitudes towards cyclists has shown that people in car-centric countries such as the UK sometimes do not view those on bicycles as "proper" road users, and at times treat them as if they shouldn't be on the road at all. Unfortunately, this has resulted in stigma that associates cycling within cities as a dangerous way of getting around; one of the greenest and cheapest ways of travel is now seen as one of the most dangerous.

Around 60% of the UK population are 'Interested but Concerned' when it comes to cycling as a means of transport - it's something many would like to reap the benefits of, but the emotional fear barrier of existing and interacting with motorised traffic prevents people from doing so. By tackling this perceived fear barrier, cycling as a greener and more sustainable method of transport might become more accessible, appealing and encouraging.

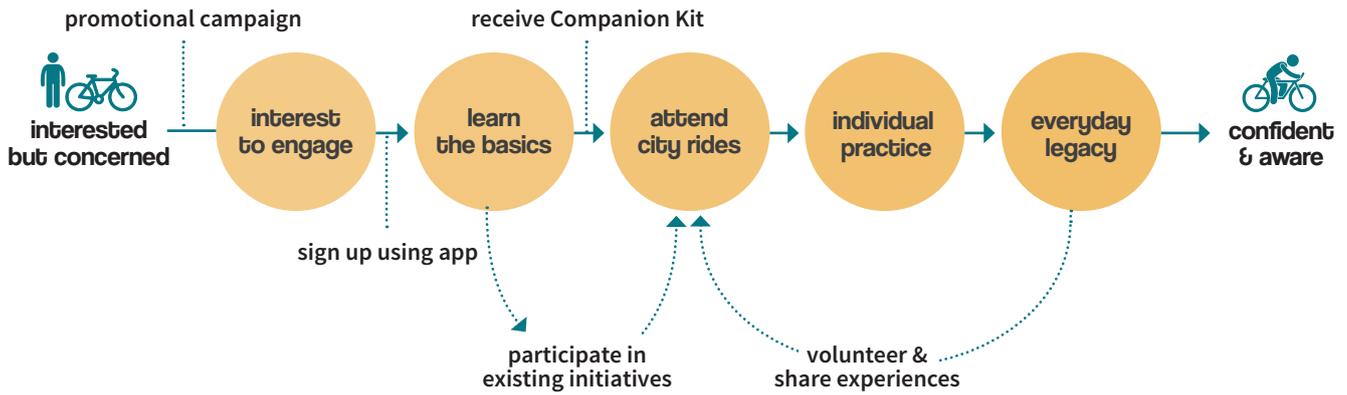


## The proposal

- **Glasgow by Bike is a community sustained initiative which helps people overcome their fears of cycling on the road through gradual and tailored paces of confidence building.**

The initiative will be launched by a promotional campaign that captures the attention of everyday people. Those wanting to join the initiative can do so by downloading the Glasgow by Bike app. The app allows members to learn the basics of cycling on the road and tailors the journey to becoming 'Confident and Aware' based on each user's experience and motivations to cycle. Members will then be offered a choice of kit to start practising their skills. The Companion Kit utilises the sense of sound and vision with an assistive tool that mounts to the handlebars of a bike. It provides navigation and tunable prompts with the use of simplified visuals and audio beeps. The Companion+ Kit also includes haptic clips that pulsate the handlebars to let the user know when they need to turn without having to glance down. With this kit, those 'Interested but Concerned' can attend social city rides and learn from the 'Confident and Aware'. By attending a number of city rides, the user can build confidence to begin cycling alone. The app lets the user choose how to get from A to B based on their level of confidence. Those just starting out can choose 'beginner' routes which avoid the more challenging areas and use more cycling infrastructure, but are less direct. Over time, the user may build confidence to progress to the more 'challenging' routes, using busier roads and one-way systems, for example. By asking members to reflect on everyday journeys on the mobile app, a map of constantly evolving data is created to provide information on route planning. A levelling system in the app also provides virtual badges to collect for everyday cycling, designed to encourage and motivate the user. These badges translate into real perks, such as discounts at local bike shops and free maintenance check-ups. Once the user feels 'Confident and Aware', they can volunteer at social city rides and share their experiences with those 'Interested but Concerned'.

## System diagram



Companion Kits



Companion (assistive device)



Haptic clips (assistive device)

## Sustainability of the system

Glasgow by Bike is a self-sustaining community initiative that's powered by those a part of it. The more people involved, the more effective the system is, and the greater the push for cycling as a mode of sustainable transport.

Companion Kits are a central artefact to the learning experience and include assistive devices that facilitate individual and group cycling. These kits use minimal paper-based packaging for sustainable production at a low cost. The Companion is a 'low-tech' device which uses a colour e-paper display for anti-glare whilst providing extra-long battery life. Members of Glasgow by Bike are actively encouraged to invite their friends into the initiative, and the Companion Kit can be passed on if the owner feels they no longer require it. New members also have the option to 'try-before-you-buy' through affiliation with Nextbike, providing the opportunity to join along in social rides and to try a Companion before investing in the kit. Whilst Companion Kits train and help to build confidence for those 'Interested but Concerned', those not requiring them can be as equally involved with the initiative.

## How does Glasgow by Bike influence new thinking?

Glasgow by Bike aims to encourage everyday people to reap the rewards of cycling as a means of transport. By being invitational, the system inspires people throughout Glasgow to give urban cycling a try. The system aims to highlight the positives of cycling as being beneficial to both the individual and wider society, whilst providing training experiences to overcome fears of cycling on roads. By providing virtual achievements that translate in real rewards, members can visualise their progress in building confidence and skills, and feel more achieved from urban cycling. As an initiative that intends to appeal to an everyday audience of users, Glasgow by Bike aims to create a cycling culture of 'people who cycle', rather than 'cyclists'; members can feel part of a social community where there are less barriers to urban cycling, with a strong support network and opportunities for positive reinforcement.

## How and when will Glasgow by Bike happen?

The Glasgow by Bike initiative is operated as an individual body which is affiliated with other local cycling initiatives and funded by beneficiaries, such as Glasgow City Council and Sustrans. Whilst it's designed to be powered by the community, the initiative does have managerial qualities, where regular volunteers can help with maintenance and running of the system. The initiative will be free for people to be involved in, but donations are welcomed. The Companion Kits will be manufactured in small batches by Glasgow by Bike and will be subsidised through funding, meaning members will have to pay as minimal cost as possible for the kit. The initiative is designed to be piloted in Glasgow, and if successful, can spread to other cities in the UK under the same branding; for example, Manchester by Bike. With appropriate funding, Glasgow by Bike might create an 'alternative now' in just a few years time, where cycling for short journeys is more fun, social and rewarding.