

# Next Generation Cycling

## Using Technology to Improve Cycling

As part of CityVerve, cyclists were recruited to use sensor-enabled bike lights which collect data. The data feeds in to the CityVerve BT Transport Data Hub and can be used to inform how cycling infrastructure and facilities could be improved. The bike light is designed to be daylight visible, enhancing cyclist safety in all lighting conditions, flashing brighter and faster in riskier situations such as at road junctions and roundabouts.

### Aim

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The aim is to collect data to better understand the experiences of cyclists. This offers participating cyclists the opportunity to contribute to future planning and policies. It is hoped that this in turn will encourage an increase in the number of people cycling.

### Process

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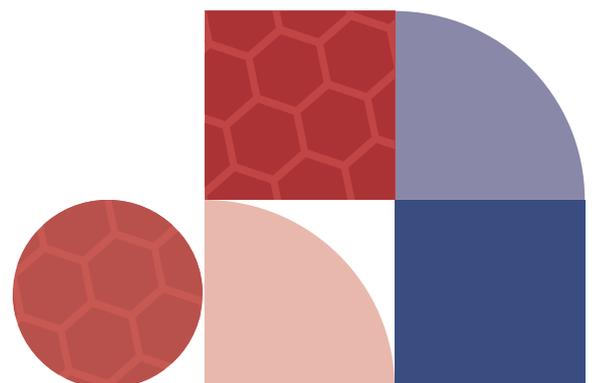
See.Sense is an innovative cycling technology company who have designed sensor-enabled bike lights, based in Northern Ireland. They partnered with British Telecom (BT) to enable 180 cyclists across Manchester to use the lights. The See.Sense light sensors, known as ICONs, connect via Bluetooth to an Android app. The app transmits anonymised data on the cyclist's environment e.g. quality of the road surface, as well as cycling routes, collisions and near-miss events. This data is passed to CityVerve BT Transport Data Hub.

The IoT data feeds are collated by the data hub. The information is available for innovators and city planners. The hub will also share data with the CityVerve Platform of Platforms (POP), currently at a concept stage. The intention is that the data will help developers turn innovative ideas into applications to support the improvement of cycling infrastructure, and help create policies to promote cycling in the city.

### Success factors

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- Engagement with the cycling community as participants; a successful marketing campaign helped raise the profile of the opportunity. By working through partners, no marketing spend was needed.
- Engagement was supported by the project providing subsidised bike lights (the purchase of the bike lights was aided by funds from CityVerve and See.Sense).
- See.Sense are an innovative organisation and embracing the opportunity to share their product was crucial.
- As with any data project, access to data analytics expertise has been essential.
- Support for the wider project, in particular Manchester City Council, including baseline information on existing cycling infrastructure provided a good basis on which to build.



## Stakeholders

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See.Sense were winners of a BT competition. This included funding to help develop their product in partnership with BT. See.Sense have a good profile (e.g. voted 'Best Bike Gadget' by readers of road.cc, the UK's biggest online cycling website). Manchester City Council is a key stakeholder via the CityVerve project.

## Challenges & solutions

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The main challenges were:

- recruiting cyclists and maintaining engagement;
- data protection and privacy;
- analysis of the data and translating the findings into policy and actions to implement change.

Recruiting cyclists was facilitated by providing the ICON lights to cyclists (these were already known to and popular with the cycling community). The lights were subsidised as part of the trial and were made available to participants for £10 instead of the market price of £80. Participating cyclists can keep the lights at the end of the trial. Over 400 applications to participate in the trial were received. The over-subscription meant that a short survey was used to help select participants and to be reflective of the demographic profile of the typical commuter cyclist. For example a gender balance and a broad age range of participants.

To address the issues around data privacy protection, all data is aggregated in the hub and not linked to a specific person. Participants are able to select privacy options. Training was provided for participants on how to keep their data safe.

An on-going engagement strategy was used to ensure that cyclists had the right ratio of interaction.

It was important that participants did not lose interest due to information overload or by not being kept up to date. Access to expertise and analytics capabilities via the CityVerve BT Transport Data Hub gave the ability to process the data.

Implementation of actions based on the data will be at a later stage of the project.

## Achievements

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- The initial learning was how to engage with the cycling community and to sustain these relationships.
- Achieving a representative pool of cyclists who reflected the average commuter profile.
- An understanding of the value of real-time data and how to use this to improve cycling infrastructure and inform policies, particularly in relation to cycling safety. This should help to identify ways of reducing the barriers to cycling.
- A potential outcome of the project is collaboration with Dublin City Council and their See.Sense pilot. This offers scope to increase the data set being held and an opportunity to share and replicate learning. For more information. [www.smartdublin.ie/see-sense](http://www.smartdublin.ie/see-sense)
- Offering an SME the opportunity to have a closed trial for data collection at scale, and showing how their unique crowd sourced data can be used to reduce barriers to cycling, particularly around safety.

## More information

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Further information on SmartImpact network visit:

<http://urbact.eu/smartimpact>

[www.smartimpact-project.eu](http://www.smartimpact-project.eu)