

GREENGAGE

ENGAGING CITIZENS - MOBILIZING TECHNOLOGY - DELIVERING GREEN DEAL



NORTH BRABANT

OBSERVATORY

EXAMPLE

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INTRODUCTION

A bump in the bike path can be an annoyance or a major safety hazard. As avid bikers, people in the Netherlands would like to see the infrastructural mishaps solved as soon as possible.

While local and regional authorities have protocols to assess the maintenance level of bike paths, it is the bikers that are actually experiencing the bikeability of these roads. To improve the appeal of biking in the area, relying on the contribution of the citizens to keep the maintenance focused and up to date was the focus of the North Brabant Pilot in the GREENGAGE project.

NORTH BRABANT – THE NETHERLANDS

The Province of North Brabant is in the South of the Netherlands with geographical coverage 5,081km² housing about 2.5 million citizens. Due to its job and education opportunities, and appealing natural environment, the province is rapidly growing, which comes with challenges. Chief amongst which is a rapid urbanisation, creating a demand for 12.000 dwellings in liveable and sustainable neighbourhoods per year.

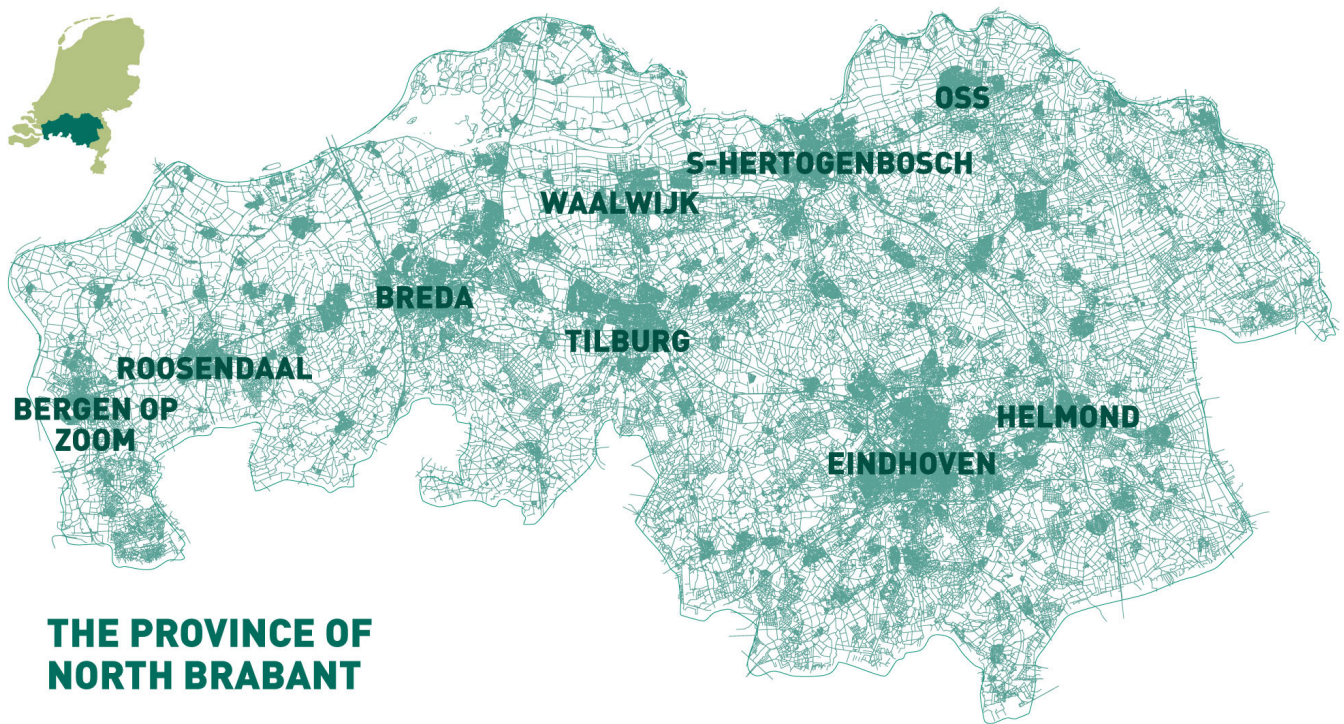
The policy aims at 20% more cycled kilometres by 2027 and 40% by 2040, achieved through stimulation of biking, but primarily through the provision of more space to use the bike in everyday movements, recreation, commute, and multimodal traffic.

Although the province already has a strong urban and even regional bike infrastructure (bicycle highways), the choice to shift to sustainable transport requires more than physical means. Some regional movements are too long for bike travel, so motorized vehicular travel plays a dominant role in the mobility of Brabant as well, with about 80% of the trips longer than 6km made by car.

The shift to sustainable transport has not occurred to its full capacity. Improving bikeability is then one of the green goals pursued by the Province.

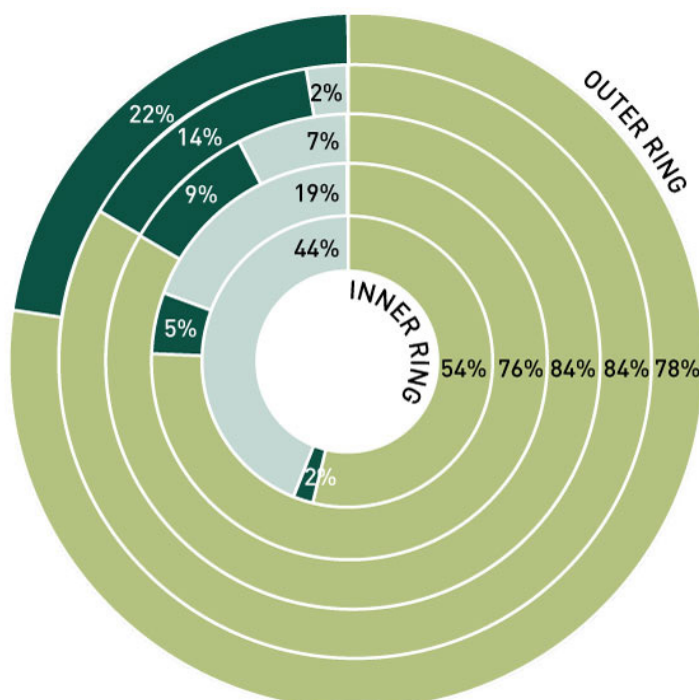


To tackle this and associated traffic safety, health, inclusivity, economic and energy challenges the province of North Brabant envisions a transition to sustainable traffic and transport as a key pursuit.



Next to that, the Netherlands recently adopted 'De Omgevingswet' which contains a section on participation. Each planning project in the Netherlands has to involve citizens in the process, yet the method as to how remains unspecified.

Both the requirement for citizen data on bike path to improve bikeability, and the need to involve the citizens laid the groundwork for the North Brabant Citizen Observatory – The Citizen Lab: Bicycle.



MODAL SPLIT OF NORTH BRABANT ON DIFFERENT DISTANCES

TRAVEL DISTANCE CATEGORY
LOW (INNER RING) TO HIGH (OUTER RING)

INNER RING: 0-5,5 km
SECOND RING: 5,5-12,5 km
THIRD RING: 12,5-27,5 km
FOURTH RING: 27,5-52,5 km
OUTER RING: > 52,5 km



STAGE 1

BUILDING

STRONG

FOUNDATIONS

The first step of building a Citizen Observatory is to familiarize the organizing parties with the base foundations of a citizen science campaign: *who should be involved to investigate what challenge through which methods?*

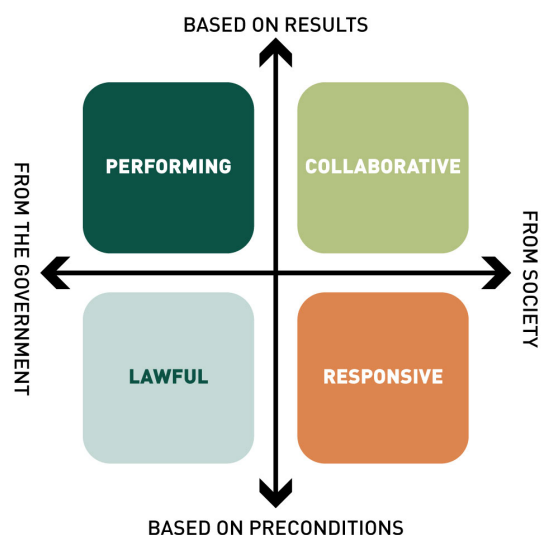
STEP 1: IDENTIFYING EXISTING PARTICIPATION PROCESSES

Within the Province, different forms of participation across various projects were explored, to identify what kind of expectations with regards to topics can be followed.

To this end, *Het Participatiekompas* – a tool to determine how to shape a participation project – was explored. This tool is illustrated on the right.

From this tool, it was decided that the observatory should be started from a citizen conviction on out and focus on getting results – *a collaborative initiative*.

THE PARTICIPATION COMPASS SHOWING TYPES OF PARTICIPATION PROCESSES



STEP 2: INVOLVE COMMUNITIES

To set out on a course to an environmental data gathering observatory that starts from a situated challenge, contact with involved citizens was required. This would initiate a process of mutual learning in which lived experience, local knowledge, and scientific inquiry could be aligned.

To this end, the Fietzersbond – the biking union, a volunteer organization that provides requested and unrequested feedback to local authorities on the quality of bike paths, connections, and facilities – was involved.



This organization, apart from being familiar and engaged with biking activities, could provide outreach to volunteers throughout the province to participate in the observatory.

Next to granting access to volunteers, the Fietzersbond had already inventoried amongst its members which topics they wanted to see addressed or have more agency in. In a member wide survey, which accounts for about 20.000 members, almost 50% indicated that they wanted to gather more data and have more agency on the topic of bike path maintenance. Exploring the inclusion of citizen observer data on bike path maintenance into biking policy would then become the topic of the North Brabant Observatory focused on increasing bikeability (better bike paths = better bikeability).

STEP 3: SILOLESS, TRANSPARENT, POLICY LINKS

Bike path maintenance is a topic already ingrained in mobility policy. To explore what contribution the observatory could make, two meetings were organized:

- *A meeting with Fietzersbond volunteers to see what they understand by maintenance and what they think they can add to the process*
- *A meeting with the Maintenance division of the municipality to see how the process is currently working, and where observatory data could land*

Both parties expressed their expectations. Volunteers expressed that they can highlight the actual experience in relation to standard maintenance categories (a road which has some cracks but still cycles fine is less important to fix than others). The authorities highlighted that their approach is quite strong in gauging the maintenance level, but that the subjective assessment of maintenance can offer as a calibration of the objective approach; does the

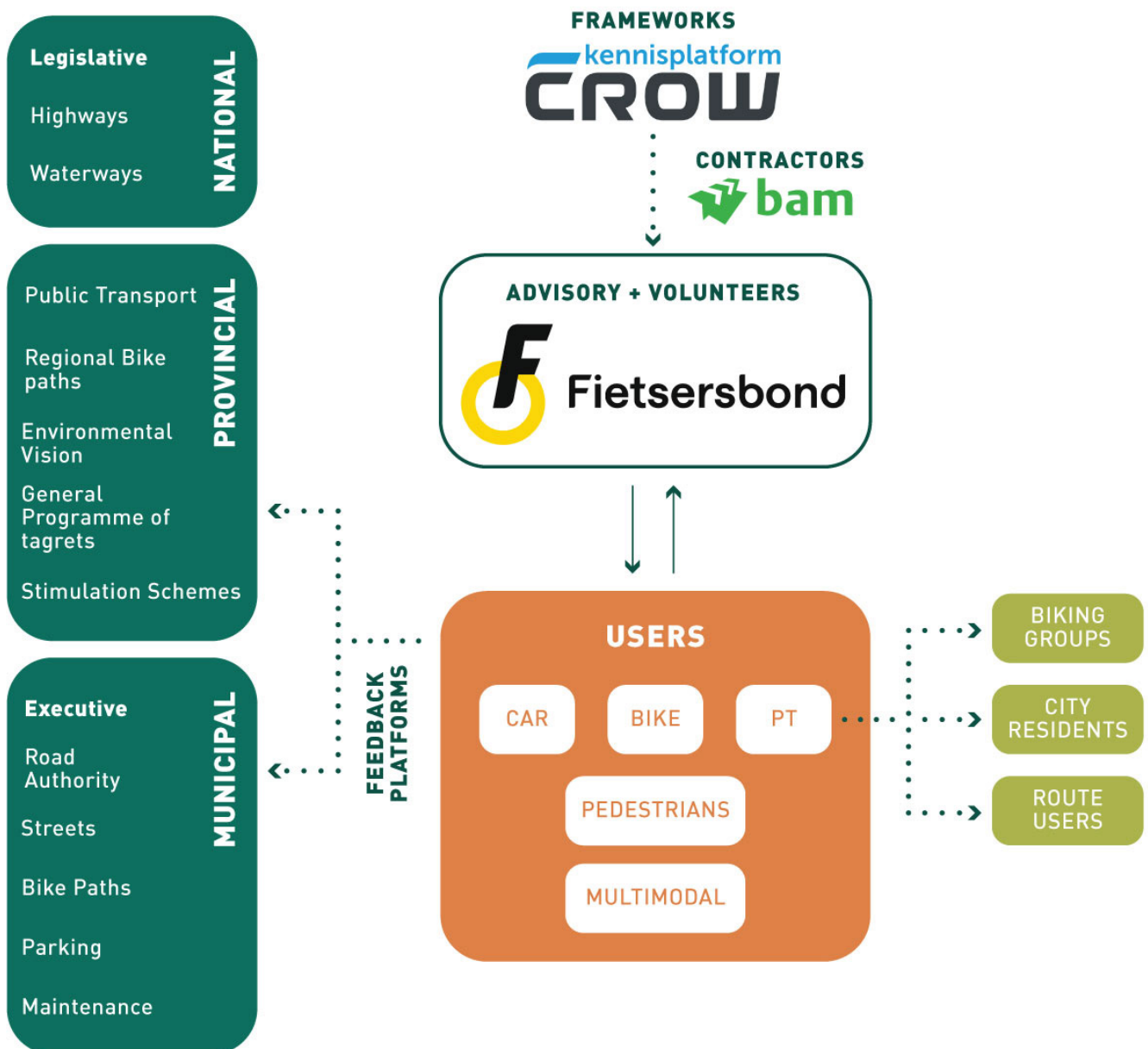
current approach actually correspond to how people experience the bike path.

This step of expression of expectations at the start highlighted three main foundational findings:

- **Maintenance is not just a physical thing.** *The experience of maintenance by observers should be discussed with the maintenance, traffic safety, and environmental departments (responsible for overgrown grass and lighting for instance).*
- **Many Observers currently didn't know who to report findings to.** *Creating transparency regarding citizen contribution already helped a lot.*
- **Participation does not mean immediate alteration.** *The local authorities were hesitant in making promises based on observer data. Giving insight into the process helped observers understand how their data contributed but also that their data would not immediately mean action (due to budget and planning).*

These discussions led to a clear indication of the goal of observatory, what was expected, and what data was required. With these foundational elements clear, the Citizen Observatory could be set up.

THE COMPLICATED NETWORK OF RESPONSIBILITIES WHEN ADDRESSING MAINTENANCE CHALLENGES



STAGE 2

DEVELOPING

THE EMERGING

CITIZEN

OBSERVATORY

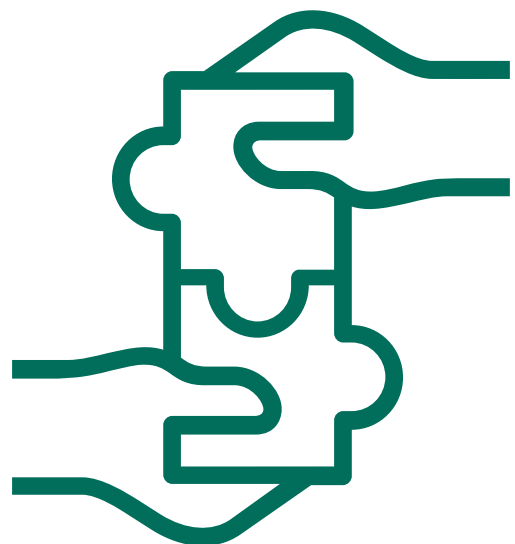
STEP 1: CREATING A SUPPORT STRUCTURE

The North Brabant Observatory was supported by the Innovation Action Board from the GREENGAGE project which provided comparative insights from other observatories, and helped provide general frameworks along which to design the burgeoning observatory.

Next to that the Pilot Support Team, consisting of different GREENGAGE partners directly involved in designing different activities of the observatory, kept track of the concrete events of the observatory and supported them with extra trainings, resources such as templates for ethical protocols e.g., consent forms, or context.

This way the observatory was well embedded and strongly hooked to the GREENGAGE framework, providing a stable basis for the local adaptation.

Further local on the ground activities e.g., workshops, were supported by the core team, consisting of local organisations.



STEP 2: IDENTIFYING WHO SHOULD BE INVOLVED

The North Brabant observatory was characterized by a close collaboration between cyclists and the provincial government. Its main target was after all to compare subjective maintenance scores to the objective maintenance assessments by the local authorities.

That meant that there was a need for cyclists who wish to share their experiences, but also of governments to share their assessment scores. Multiple municipalities were contacted to join in the observatory, yet many expressed a preferred reliance on objective measurements or expressed hesitation regarding the making of promises

to the participating observers. Ultimately only the Municipality of Heusden joined, next to the department of Provincial Bike Roads from the Province.

A distinction was made between the core team and other observers. The core team was tasked with setting up the bike paths to be assessed, determine the assessment criteria (both through volunteer and authority perspectives), and plan the observatory campaigns. The observers had to do the actual cycling, gathering, and were optionally invited to discuss their findings.

DIVISION OF CORE TEAM AND OBSERVERS

CORE TEAM	FUNCTION	OBSERVERS
PROVINCE – TEAM FIETS	BIKE STIMULATION	FIETSESBOND VOLUNTEERS
BREDA UNIVERSITY OF APPLIED SCIENCES	SETTING UP THE CO AND ANALYSIS	LOCAL VOLUNTEERS
PROVINCE – PROVINCIAL ROADS	LOCAL AUTHORITY IN CHARGE OF MAINTENANCE	STUDENTS
MUNICIPALITY OF HEUSDEN	LOCAL AUTHORITY IN CHARGE OF MAINTENANCE & SAFETY	CYCLING CLUBS
FIETSESBOND	REPRESENTATIVE OF VOLUNTEERS	EVENT CYCLISTS

STEP 3: ONBOARDING

The onboarding process appealed to the situated awareness of the bikeability. It did so by referring to three principles:

- **Proximity:** *If people were already using one of the indicated bike paths, would they consider sharing their opinions?*
- **Agency:** *Do you want to share your opinion about the general state of bike paths in your neighbourhood?*
- **Technology:** *Through two possible apps cycling experiences can easily be shared with the maintenance department at any time.*

For the onboarding, anyone who was aware of some cycling paths in Brabant was contacted.

Specifically people around Heusden were contacted through provincial networks, but in general, anyone who wanted to share their assessment was valid.

The following specifics, outlined on the next page, were part of the onboarding.

DESCRIPTION OF THE ONBOARDING REQUIREMENTS & SPECIFICATIONS

ONBOARDING ELEMENT	EXPLANATION
FORMAL PROCEDURE	Ethical protocols such as sharing participant information sheets and signing consent forms, and observatory context sharing
TASKS	Participants would be asked to cycle over specific paths, log photographic evidence of certain indicators, and give their opinion
SKILLS	Need to be able to bike and need minor digital skills
TRAINING	The indicators to look for were explained in a one-off email while the technology training was provided on-site or through videos from the GREENGAGE Academy
COMMUNICATION CHANNELS	Most communications went through the Fietzersbond Network or the Provincial Channels
ROLES	Observers could choose whether they wanted to participate solely once as a data gatherer, whether they wanted to negotiate about the indicators, or whether they even wanted to discuss the findings & explore uses for policy

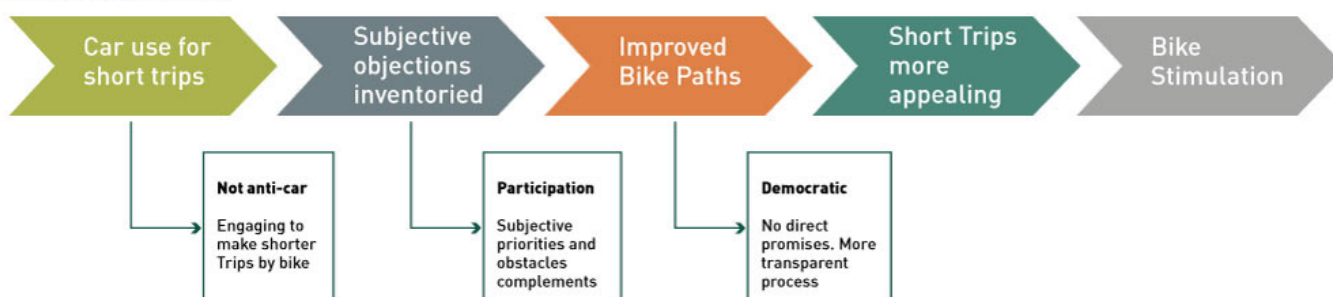
STEP 4: PILOTING

There were two use cases identified for the Observatory:

- *Tracing and understanding where main bike movements take place*
- *Investigating motivators and deterrents for increased bike use*

These use cases were instigated by the local authorities but were later expanded with a reflection on how to use subjective data in policy making. The focus shifted to both the data gathering and to the policy interaction. The pilot then became an experiment in contrasting citizen data to governmental data.

OVERVIEW OF THE MAIN USE CASE MANIFESTATION IN THE OBSERVATORY GENERAL PLAN



STEP 5: PROTOCOLS AND CAMPAIGNS

Observers were tasked with both objectively scoring the maintenance level of the bike paths and giving their subjective judgment.

This was arranged through the variables shown in the table on the following page.

OVERVIEW OF RESEARCH BASED PROTOCOLS TO MEASURE

MEASUREMENTS	SURVEY
OBSTACLES (POLES) – ARE THEY IN THE WAY	APPRAISAL
MARKING – IS IT VISIBLE	RAIN
LIGHTING	LIGHTING QUALITY
QUALITY OF SURFACE	WEATHER
ROADSIDES – ARE THERE OVERGROWN PLANTS	OBSTACLES

Observers were advised to use either the **Fietzersbond Editor App** to log there categories, or the **GREENGAGE App**.

Brief explanations on how to work with these apps was provided through video links. The surveys were furthermore provided through simple QR codes, to be shared at different moments.

CAMPAIGNS

There were three main events organised to instigate the data gathering:

- *General call on Fietzersbond to bike over indicated provincial bike paths (of which the maintenance level was already known).*
- *Organised bike tour with international students from the Breda University of Applied Sciences to score the bike paths in Heusden*

- *Organised bike tour with Fietzersbond volunteers, provincial employees, and local residents to score the bike paths in Heusden*

These three campaigns provided both local knowledge, and insights from usually unheard actors in biking (expats). The bike paths were selected based on their level of maintenance as logged according to governmental objective measures.

STEP 6: DESIGNING HIGH QUALITY EXPERIMENTS

To make sure the campaigns provided valid insights, the indicators were discussed in concurrence with provincial maintenance experts, safety experts, as well as Fietzersbond expert volunteers. This way the indicators are clear indicators of subjective quality.

Next to that, the campaigns were set up with the help of the Fietzersbond, who has a long experience in organizing joint bike events.

The clear expectation management at the start of the observatory ensured that the campaigns contributed to the experiment of complementing maintenance data with subjective data. The North Brabant Observatory then functioned as an experiment with a solid research basis.

STAGE 3

IMPLEMENTING

THE CITIZEN

OBSERVATORY

To make the observatory function, the Observatory tasks and paths were implemented in the **GREENGAGE app** and made available for citizen observers to gather data.

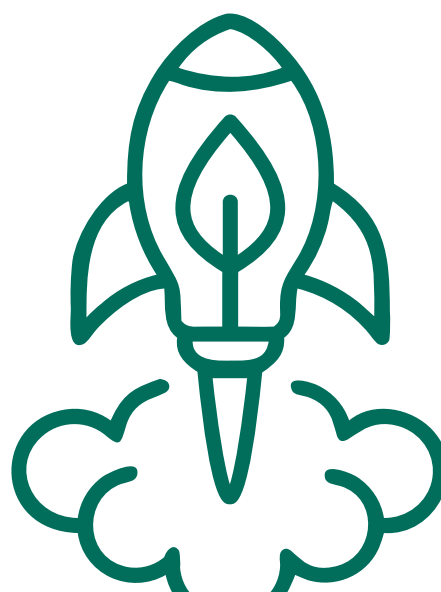
Next to that, several events were organized to recruit observers:

- *Online session for drafting Fietzersbond volunteers*
- *Newsletter and Webpage from the Province introducing the Observatory and project*
- *Physical session in Heusden to draft local volunteers (through Fietzersbond)*
- *Breda University of Applied Sciences class drive for volunteers*
- *Breda University of Applied Sciences organized bike tour for data gathering*
- *Provincial organized bike tour for data gathering.*

This resulted in the following pilot data:

KEY NUMBERS OF THE OBSERVATORY

DATA	AMOUNT
PARTICIPANTS	150
DISADVANTAGED POPULATIONS INCLUDED	40
DATA ENTRIES	142



STAGE 4

LEARNING AND EVALUATING

Key findings are highlighted with a quantitative value. Lessons learned are highlighted on a lower level with a letter.

DATA QUALITY

- 1. Citizen Observers scored maintenance equal or more positive than expert judgments.**
 - a. *This shows that objective measurements are in line with what citizens experience. Although the sample was small, this does add validity to the professional judgement.*
- 2. The addition of a subjective scoring to the maintenance assessment brings in qualitative information which the road authority did not think of before, or is related to maintenance despite being handled by a different department, such as safety or environmental considerations.**
 - a. *On Municipal Scale: Subjective information can serve as a search light to highlight specific dimensions of paths that ameliorate the experience.*
 - i. These qualitative interpretations that can shape the communication strategy about the improvements (lobbying or feedback)
 - ii. These qualitative interpretations can give an extra dimension to the planning of improvements.
- 3. Subjective and local knowledge provided by observers provides immediate context to the objective scoring data.**
 - a. *To streamline the research process, an observatory offers a simultaneous analysis, immediately adding signification to objective measurements, such as the data labelling (maintenance, safety, or environmental data).*

PARTICIPATION CAMPAIGNS

- 1. A large subjective data gathering campaign is expensive and complex. Gathering plenty of participants for subjective campaigns requires a clear vision from the start and a strong hook for people to participate.**
 - a. Since subjective assessment of maintenance overlaps with objective judgment, such campaigns might not be strictly necessary all of the time.*
- 2. Municipalities were rather hesitant regarding participation in the subjective pilots. The hesitation to include citizens rises out of fear of consequences (immediate expectations). This is a major hurdle to general participation.**
 - a. Expectation Management remains a key tool to overcome the barrier to participation.*
 - b. Municipalities should be involved from the beginning in the process and the use of subjective or citizen data should be clearer from the get go.*
 - c. Since the subjective and objective stories are similar, there is no need for such fear. As long as expectation management is included in the process, the involvement of citizens does not lead to unnecessary conflicts.*
 - d. Including an intermediary party, such as the Fietzersbond, ensured that municipalities and citizens were connected through a facilitating organisation. This resulted in a layer of distance which allowed for clearer expectation management and discursive distance.*

TECHNOLOGY USE

- 1. Some apps (Fietzersbond editor) were really focused on objective data gathering, but they were experienced as being too steep a barrier to add data to from initiates (feared disrupting the present system).**
- 2. Other apps (REENGAGE app) were more personal where you can add information without fearing interference with the existing system.**
 - a. Asking too specific a task (e.g. go to a rural path, score it on category X, Y, and Z, and take pictures) makes the app more a nuisance than a useful data gathering tool.*
 - b. Non-technical subjective data gathering techniques, such as surveys, proved just as valuable, but were only gathered more systematically in an app.*

BIKE MOTIVATORS

- 1. Motivators and Demotivators for bike use mostly consist of external factors (e.g. weather, distance, or carrying capacity).**
- 2. Specific motivators for bike use were found on the level of biking as an already accepted activity – like leisure bike rides.**
 - a. Increasing the appeal of biking can then indirectly be done by focusing on making the act of biking more appealing in any activity (e.g. facilitating leisure biking, improving maintenance skills, making sure you have a decent bike).*
 - b. The focus is not so much on getting people out of the car completely, but to be satisfied with the use of the bike for some activities, sometimes. (Soms Wel...Niet Altijd).*

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