



# TN DATA BIKE

## QUALIFY AND SECURE YOUR CYCLING FACILITIES

Technologies Nouvelles has developed a solution which provides a full diagnostic of cycle lanes enabling managers to optimize the safety and comfort of users.

### An Innovation for active mobility

- A diagnosis performed in real-life situation with free access to all cycle lanes.
- Environment friendly equipment: auscultation system build-in an electrically assisted bicycle.
- A tool to help improve road assets in order to promote comfortable and safe cycling.



#### COLLECT DATA

Record an image bank, the exact position of the measuring system and the user's experience while riding.



#### EVALUATE THE CYCLE NETWORK

Analyse the condition of the path and its environment, qualify possible maintenance needs along with comfort and safety levels.



#### ADVISE & SUPPORT

Recommend maintenance and improvement solutions to enable users to move around easily and safely.

Scan me!



Discover in pictures the innovative data acquisition system in order to qualify the level of service offered to users of cycle lanes.



## HIGH-PERFORMANCE AUSCULTATION AND COMPREHENSIVE DIAGNOSIS OF THE STATE OF CYCLE LANES

- Better knowledge of existing cycling facilities.
- Facilitates decision-making: new developments or maintenance/modifications of cycling infrastructure.
- Optimises the maintenance budget.
- Maximum reliability and accuracy of the system:
  - real-time mapping display, sensor control and data acquisition quality check.
  - hybrid inertial measurement unit with two GPS antennas coupled to an odometer.



Tablet on stand



On-board camera



Inertial measurement unit

## DELIVERABLES

**1 / Records of lanes conditions, surface quality, longitudinal profile distortion and deterioration (potholes).**

### 2 / Data analysis:

- Comfort level: obstacles, slopes, parking, suitable street furniture, etc.
- Overall quality of marking and surfacing of the cycle network, visibility.
- Conformity of road equipment: horizontal and vertical signage, traffic light signals and cycle crossings.
- The environment of the cycle lane: traffic density, accident black spots.
- Focus: safety studies at intersection rights-of-way (on request).

**3 / Retrieval of geolocated data, publication of maps of the condition of the roadways and the ride comfort felt by the user via a link to a dynamic Open Source GIS solution and customised recommendations.**

