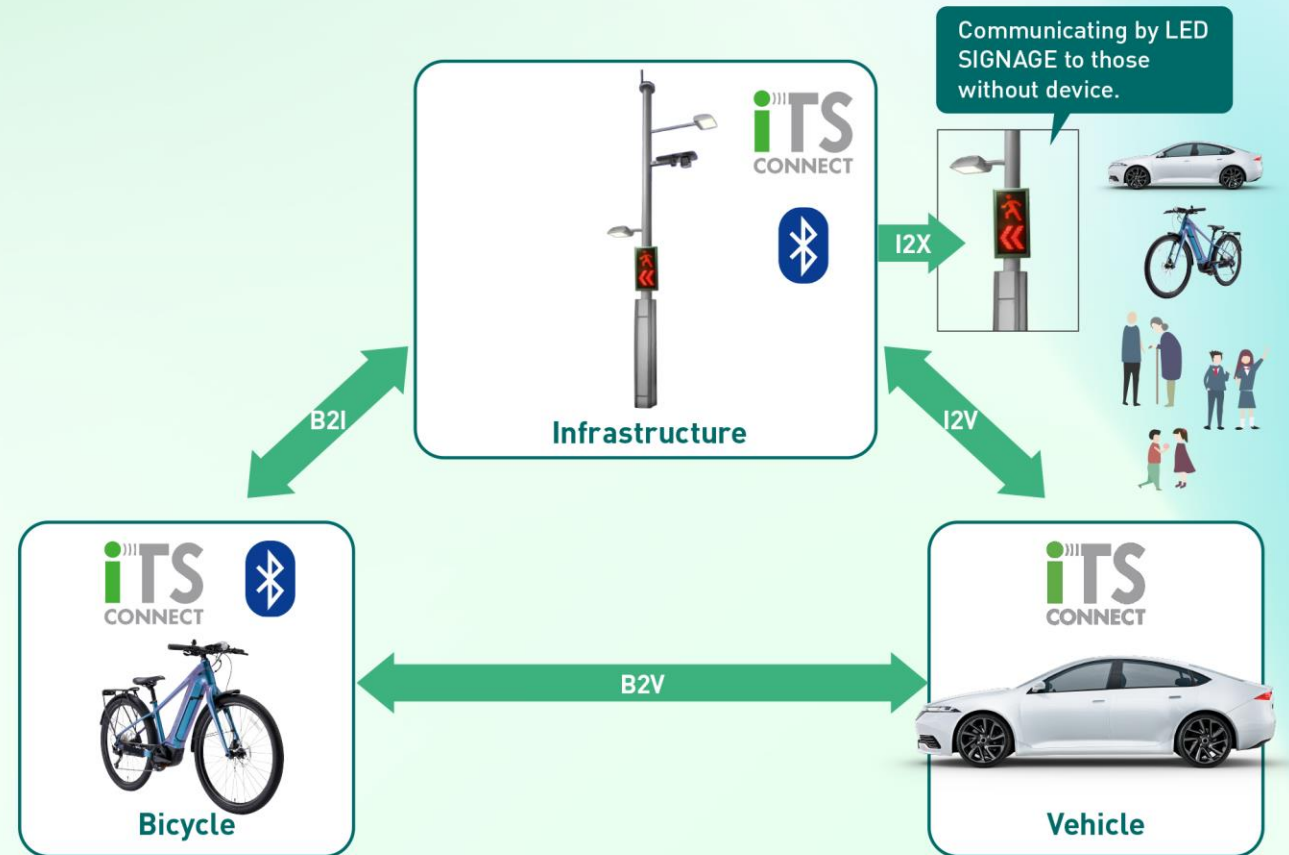


# Technologies aimed at reducing bicycle accidents

## Benefits

### Whole System Concept aimed using ITS techs.

- Investigation of the feasibility of E-bike equipped with ITS and other devices.
- Reduction of accidents on both sides through B2X communication.



# Technologies aimed at reducing bicycle accidents

## Technical Advantages

### Idea For ITS E-bike System

- E-bike with built-in 760MHz ITS communication device
- GNSS calculates vehicle position, speed and direction.
- ITS device transmits those information.
- Receives information from vehicles/infrastructures and alerts riders
- Power supply from the battery of e-bike, no additional power source required.
- As further improvement in next step, utilization of bicycle control by linking with driving unit.



# Technologies aimed at reducing bicycle accidents

## Applications

### B2V Direct Communication for Crash Avoidance

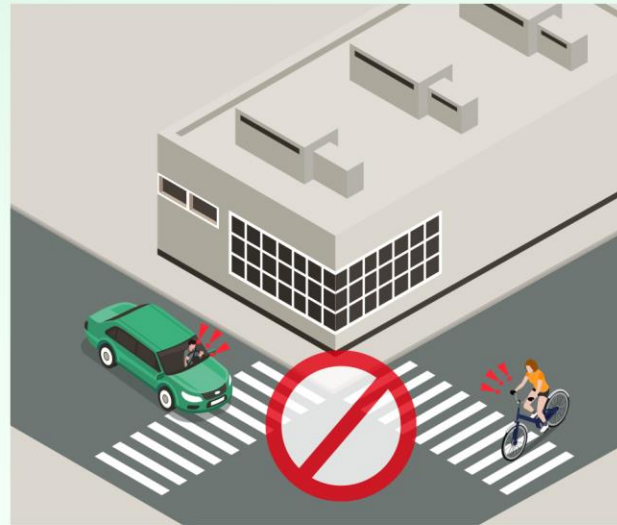
#### Your Experiences:

- Advance notification of approaching vehicle/Bicycle
- Kind communication using "THANK YOU" message

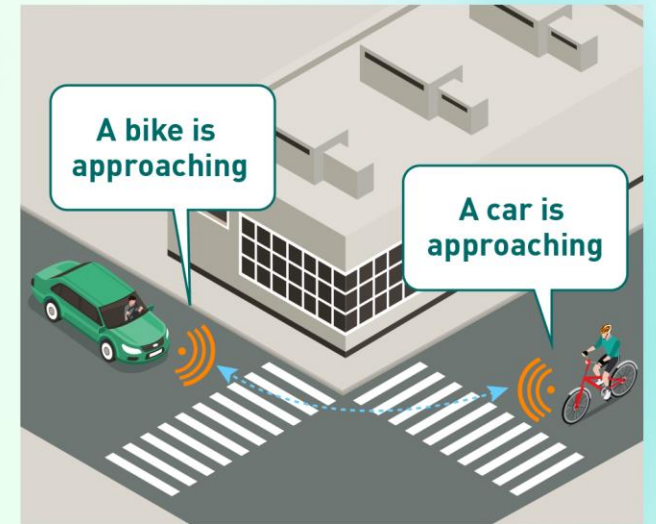
#### Technologies

- 760MHz dedicated communication band.
- Optimized human machine interface for B2V.

Before



After



# Technologies aimed at reducing bicycle accidents

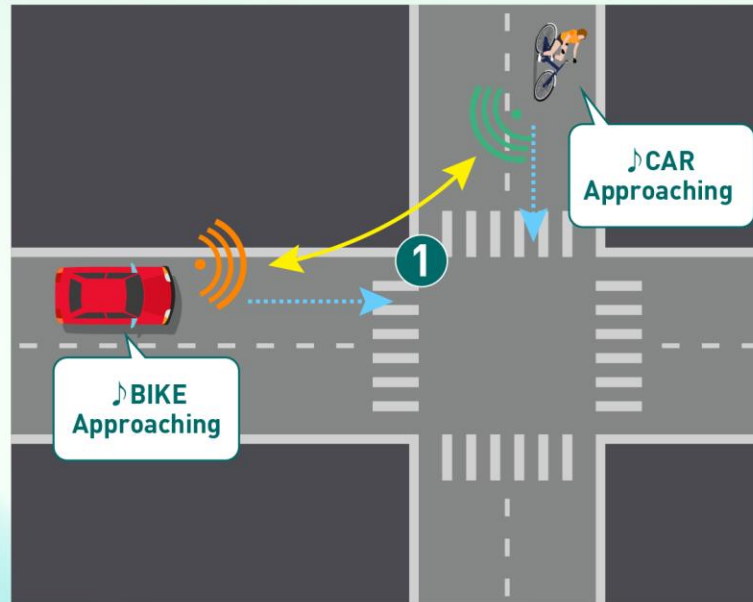
## Applications

### Use Case

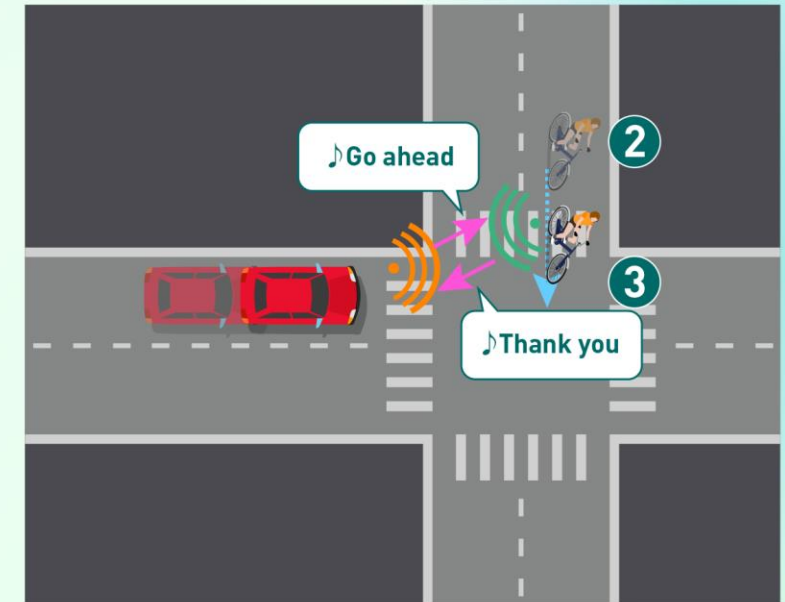
1 No notification → Near-miss accident



2 ① Approaching vehicle detected → Warning



3 ② Vehicle and bicycle slows down → Stops  
③ Thank you → Kind communication



**The society we aim for**

## *Our Mission*

**To create a clean future where everyone  
in the world can openly ride under the blue sky.**

**Deliver sustainable, safe and comfort transportation and excitement  
to people in the world.**

**Promote environmentally-friendly manufacturing. And,  
create clean future with full of smiles.**

**We will reduce bicycle accidents in order to realize the future we aim for.**

**ITS Bicycle Demonstration**  
~ “With Notification/Thank-you” (Car POV) ~

