



13th ITS EUROPEAN CONGRESS

FULFILLING ITS PROMISES

Brainport Eindhoven, the Netherlands | 3-6 June 2019

**Evoluon Congress Center
Helmond Automotive Campus**

BITS - Bicycles and ITS

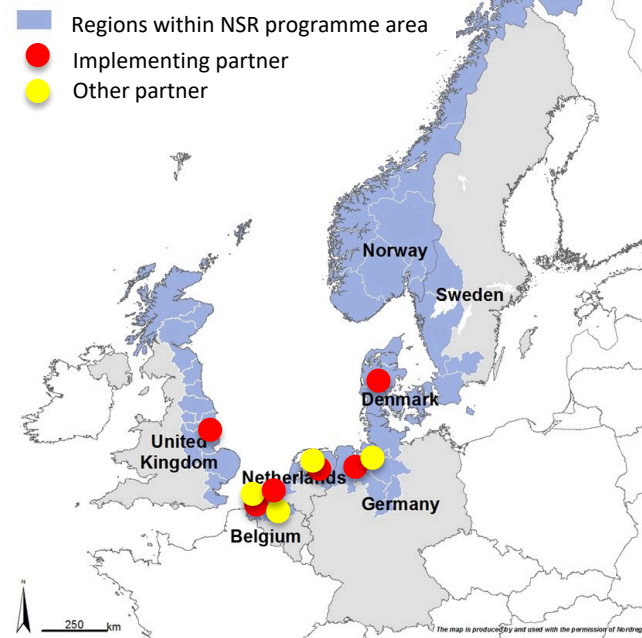
Ronald Jorna – Province of Overijssel/Mobycon

BITS objectives

- Make cycling more attractive through ITS:
 - Increase cycling uptake
 - Decrease CO2 emissions
- Collect and use cycling data:
 - Direct use (e.g. feedback cyclist, communication with ITS)
 - Cycling policy

Start: 01 January 2019
End: 31 March 2022
Budget: 4,9 mio Euro

Interreg VB North Sea Region
Programme Area 2014-2020



Closing the loop

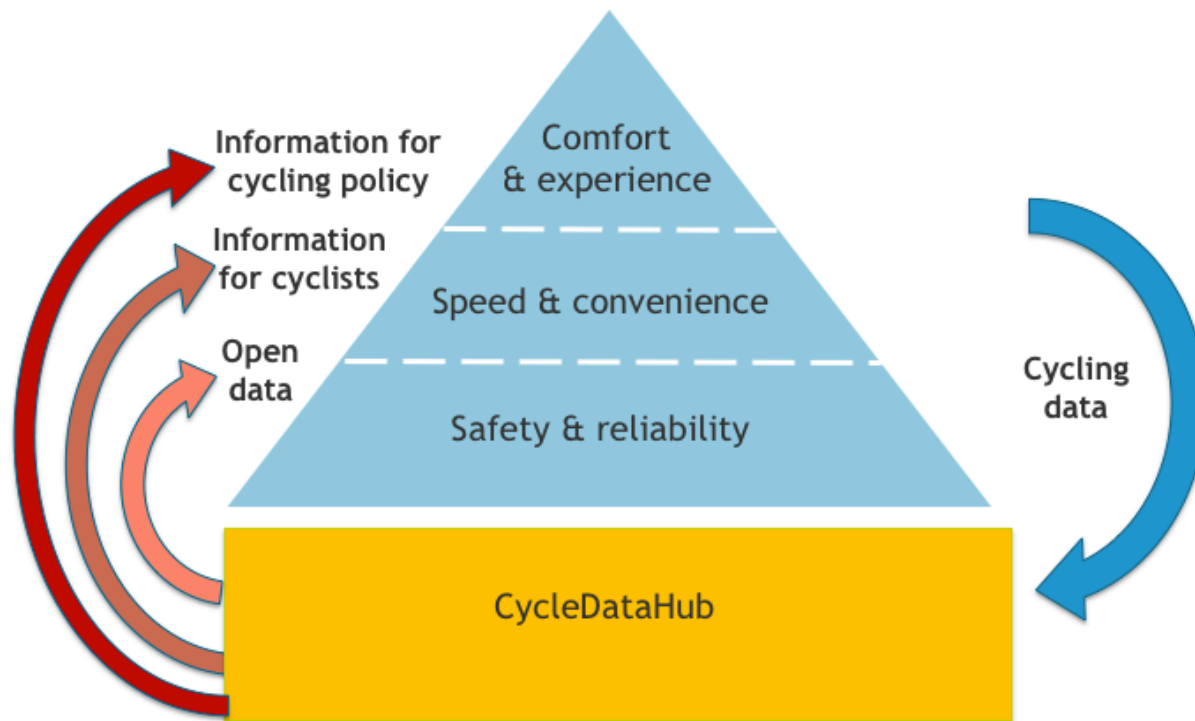
Implementation of ITS will stimulate cycling by making it more safe, attractive, comfortable and efficient.

Many of the ITS systems and services will generate data that can be used:

- to give direct feedback to cyclists
- by app-builders to make new applications for cyclists
- by policy makers to improve their cycling policy.

A cycling datahub will be created as a central and harmonized hub for all bicycle related data in the NSR.

BITS concept: Bicycle pyramid



Opening up information

- Lack of cycling data to support decision making
- Structural barriers limit exploitation:
 - Data is often only available locally
 - No open data
 - Issues of privacy and ownership
 - Cycling data is not integrated with data from other modes
 - Commercial services are potentially conflicting with policy objectives

Examples of ITS for cycling

Infra-based ITS



Smart signage & lighting



Traffic light with rain sensor
(source: RTV Rijnmond)

Bicycle data collection

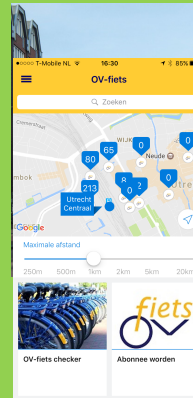


Bicycle counters



Floating bicycle data

Info provision to cyclists



Bike parking & bike sharing info

Green light indicator



Interactive systems

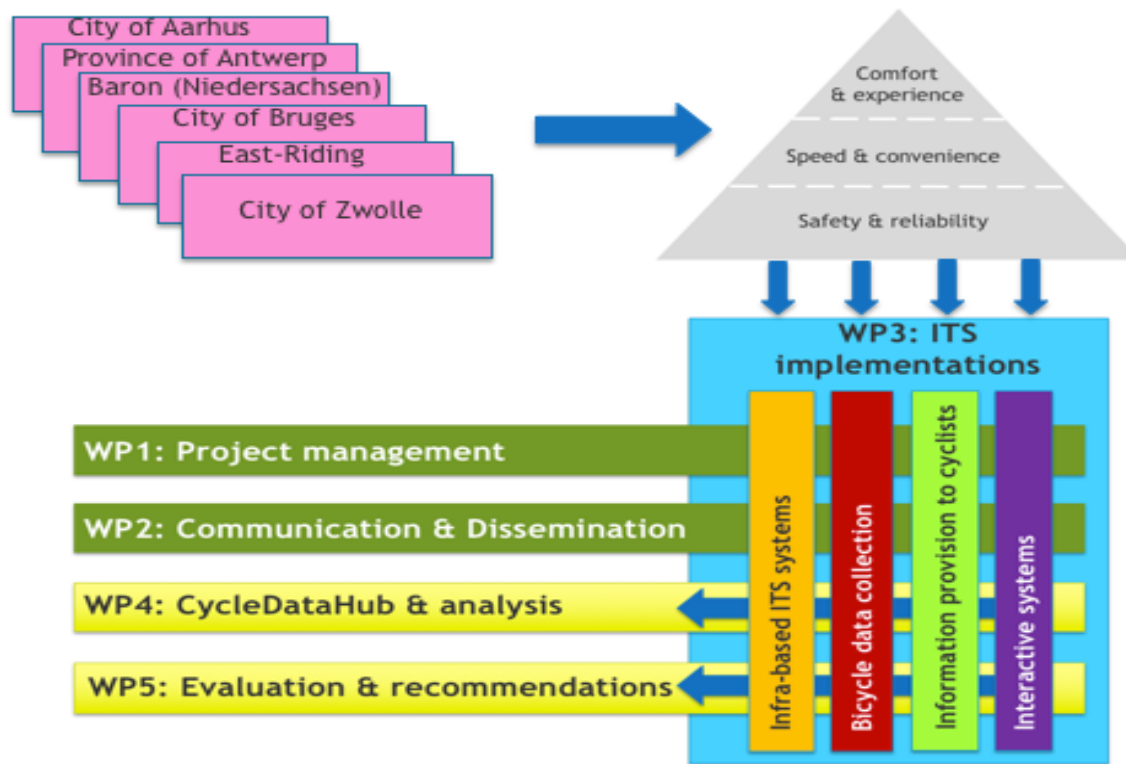


Ping



gamification

Project structure



ITS implementation plans (but likely to change)



BITS
Bicycles and Intelligent
Transport Systems

	Aarhus	Province of Antwerp	Baron (Niedersachsen)	Bruges	East-Riding	Zwolle
Comfort & experience	Information panels on train, travel times, etc. Tracking/ counting cyclists	Tracking/ counting cyclists	Gamification (nudging) Tracking + sensors cyclists	Ping app (quality of bike infra)	On-bike ITS & wearables (nudging) Tracking/ counting cyclists	Information on bike parking
Speed & ease of use	Infra: smart traffic lights		Information on routing	Counting cyclists	Information: on routing	Information: on routing Floating bike data Infra: smart traffic lights
Safety & reliability	Infra: LED lights in bike lane	Infra: 3D cameras for safety		Ping app (dangerous spots)	Real-time info on hazards On-bike ITS & wearables (safety)	Infra: collision warning bikes Infra: LED lights in bike lane
Open Data	Geographic Information System (GIS) CyclingDataHub					

Get involved

- State-of-the-art overview of ITS for cycling → send your examples/best practices
- Do you have an ITS system or service? → potential for demonstration in one of our cities/regions
- Do you have cycling data? → inform us and include it in our CycleDataHub
- Participate in workshops → to give information or to learn from others
- Want to stay informed? → send e-mail to r.jorna@overijssel.nl

More information

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<https://northsearegion.eu/bits/>



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