



urbanintelligence

Monitor; why and how should we?

Cycle Highway monitoring and evaluation

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Interreg 
North-West Europe
CHIPS
European Regional Development Fund

POWERED BY 

WORLD SMARTCITY AWARDS 2017

SEVENTH EDITION





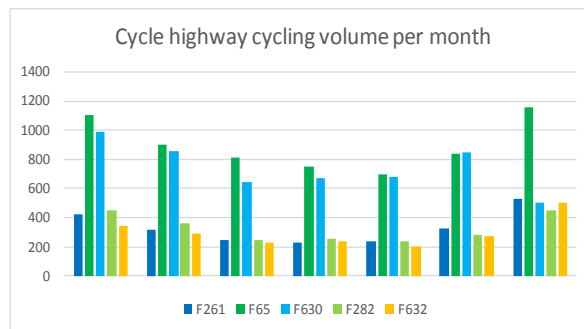




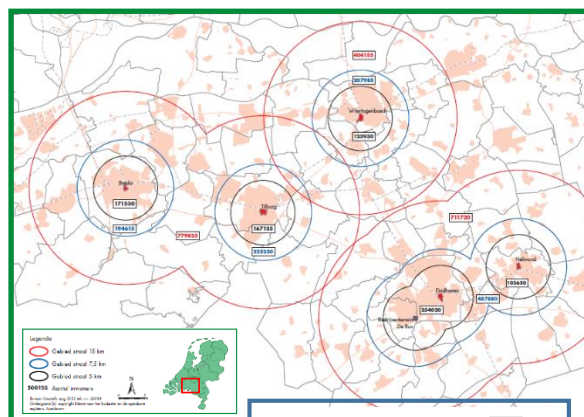
Cycle (super)Highway Life Cycle

Regarding the cycle highway as a product and not only as infrastructure

Dashboard cycling volume

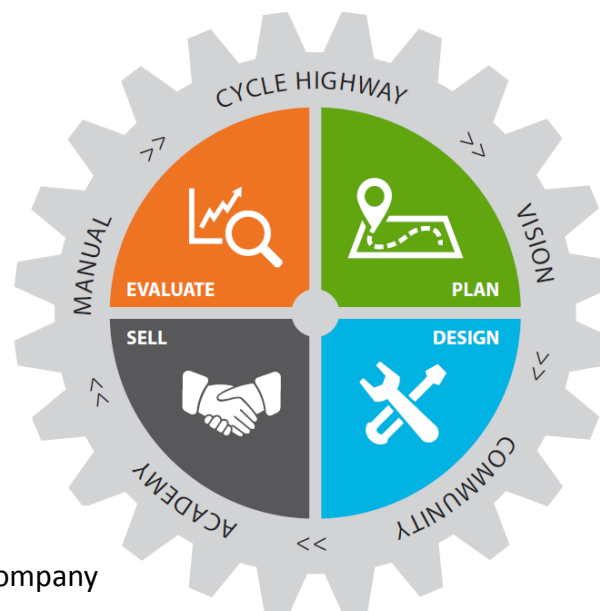
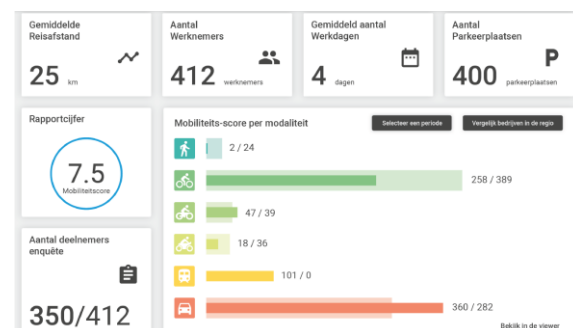


current
network
performance
&
Cycle Highway
potential



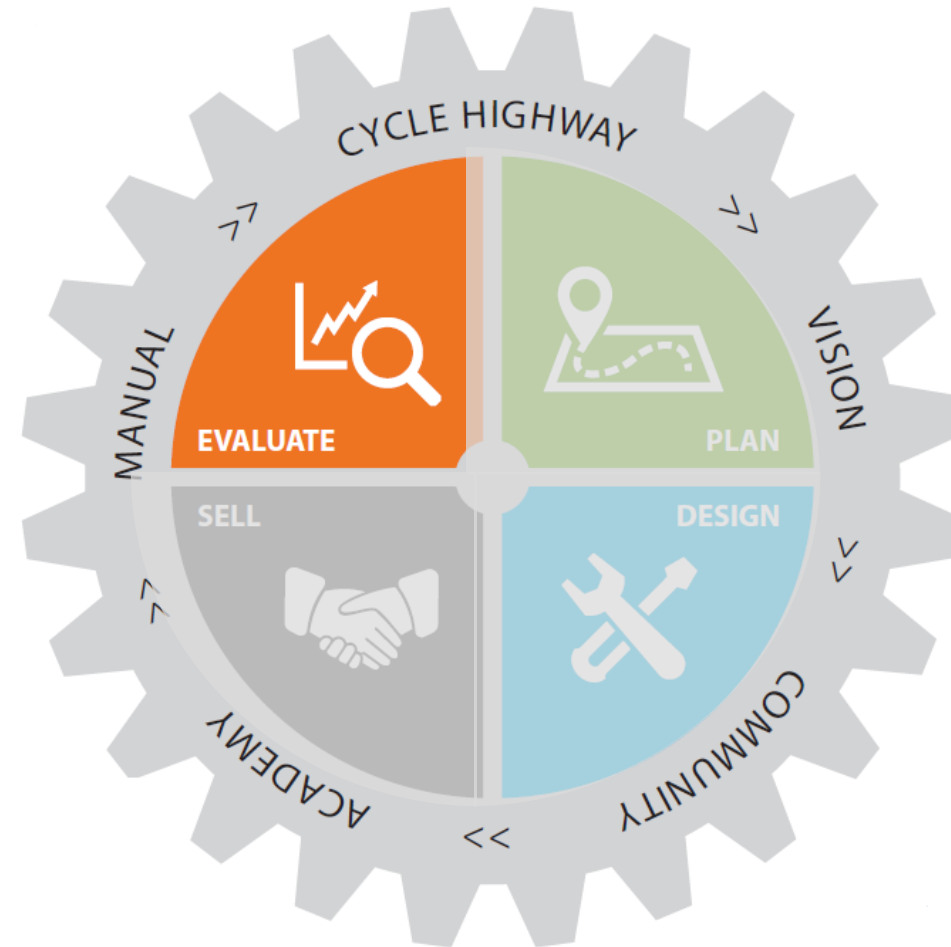
VR cycling
simulator

Accessibility scores per company

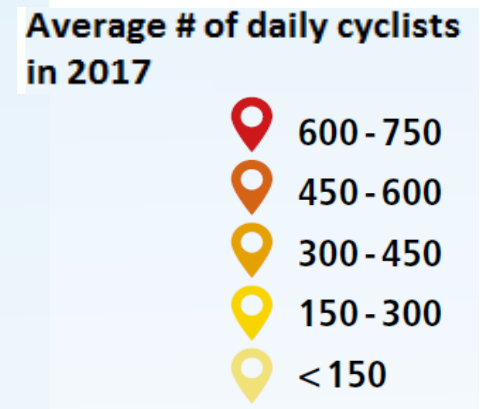


VR cycling
simulator

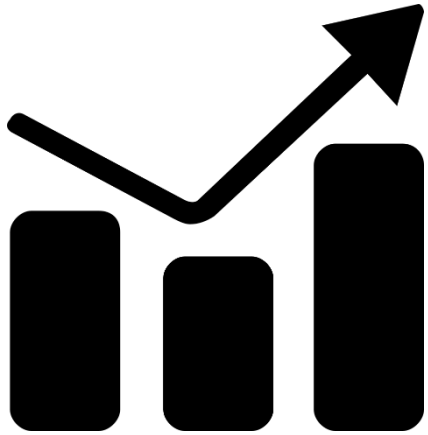




EVALUATE



The Province of Flemish Brabant's Monitoring Program



VOLUME
(user)



SPEED
(infra)



ATTRACTIVENESS
(route)

 map options

Tools

Usage

Intensity (Heatmap)

Attractivity

Zone attributes and trips

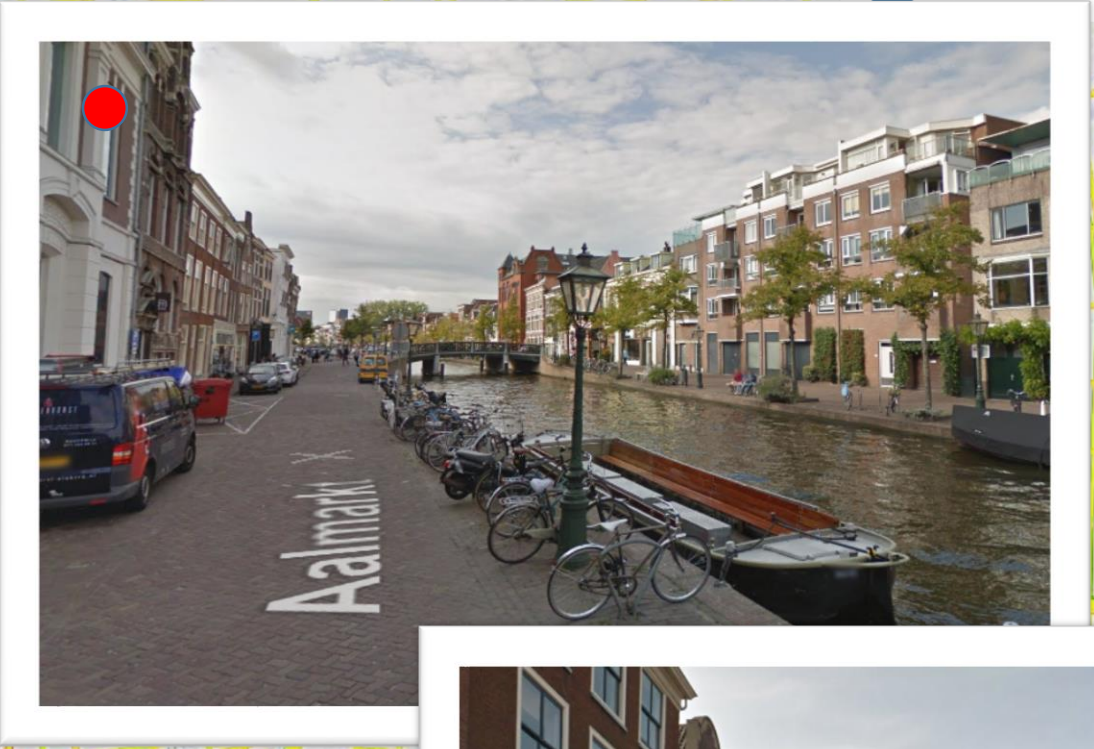
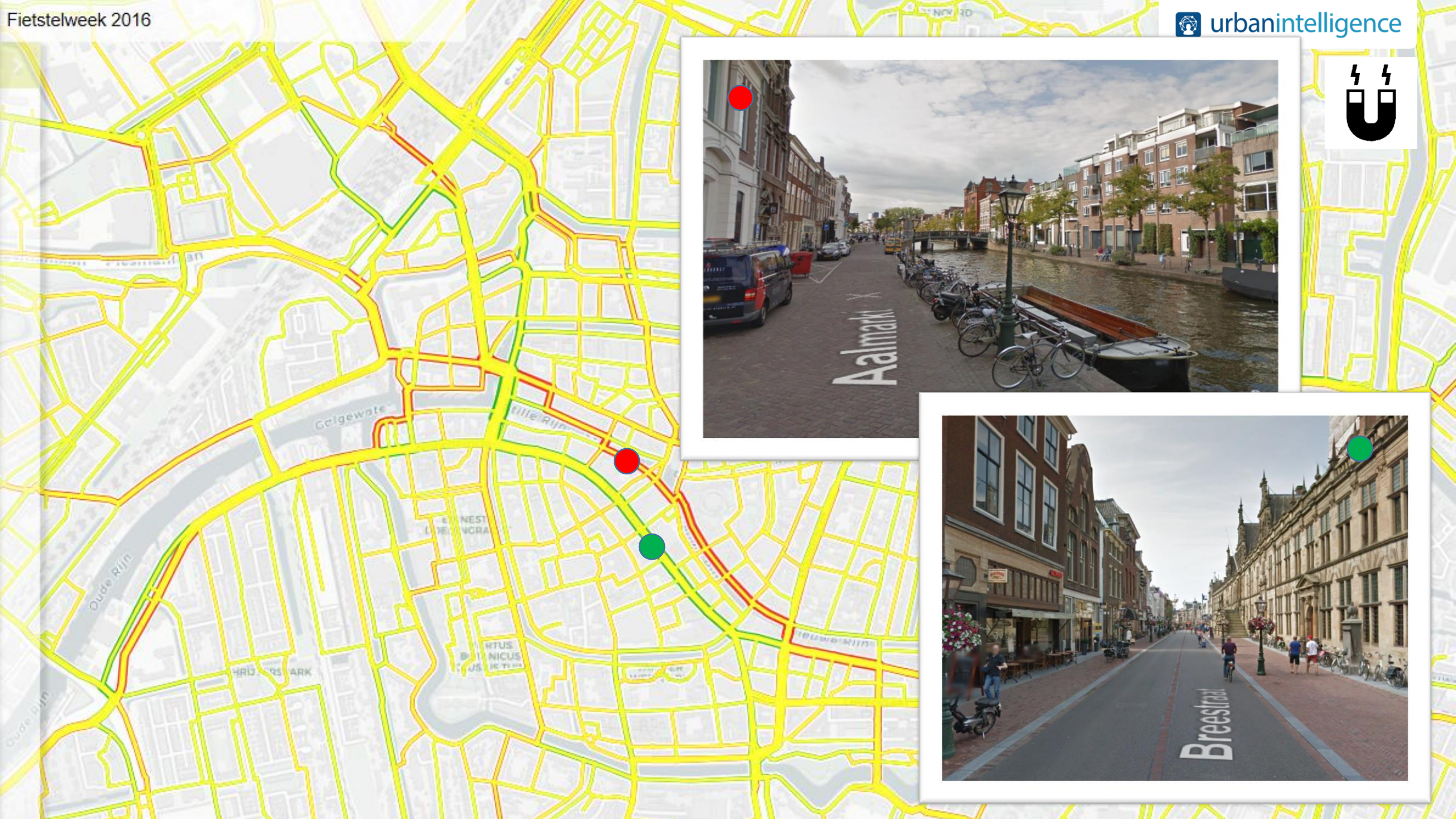
Routes

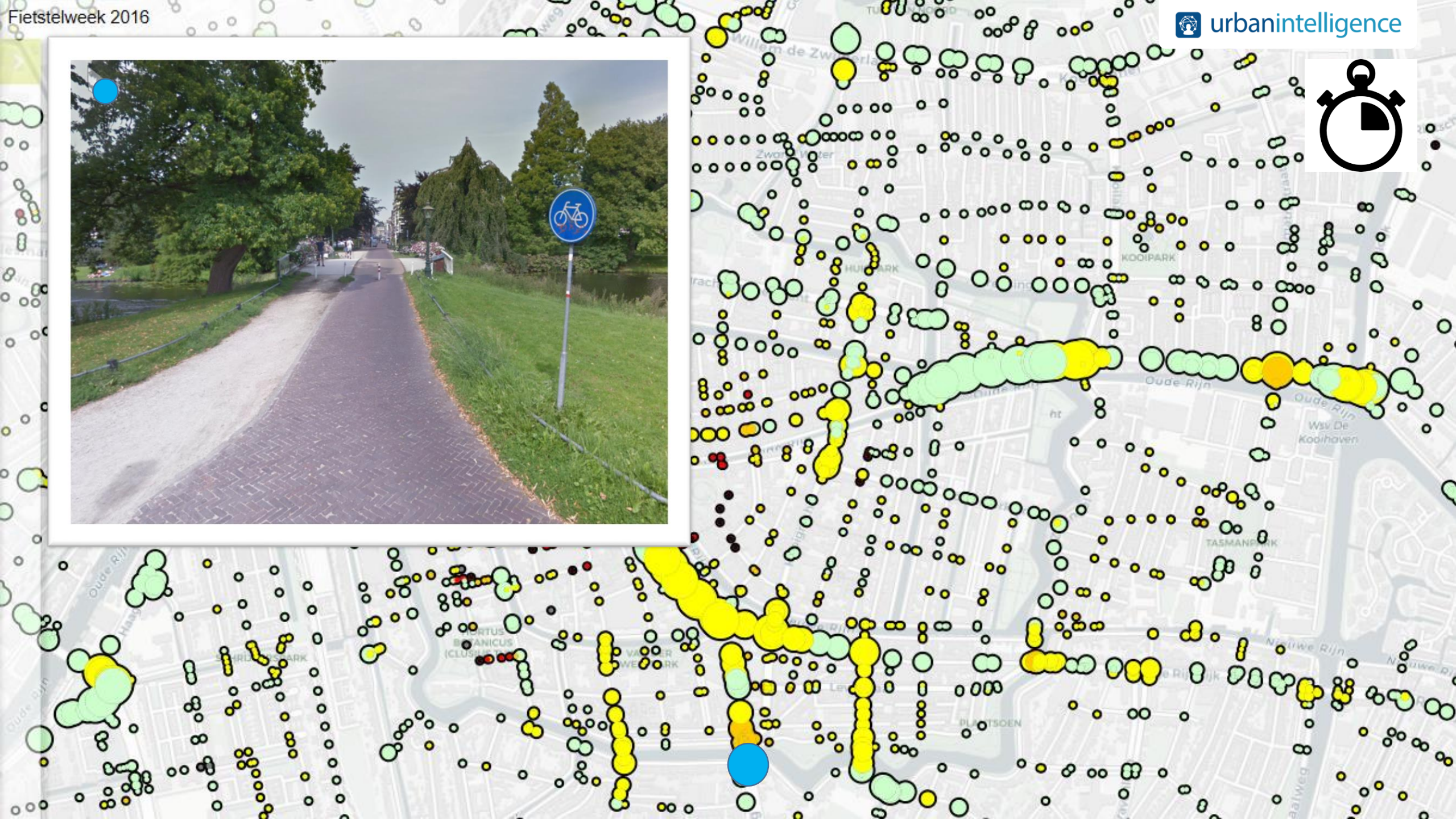
Speed

Preview New Features

Pending



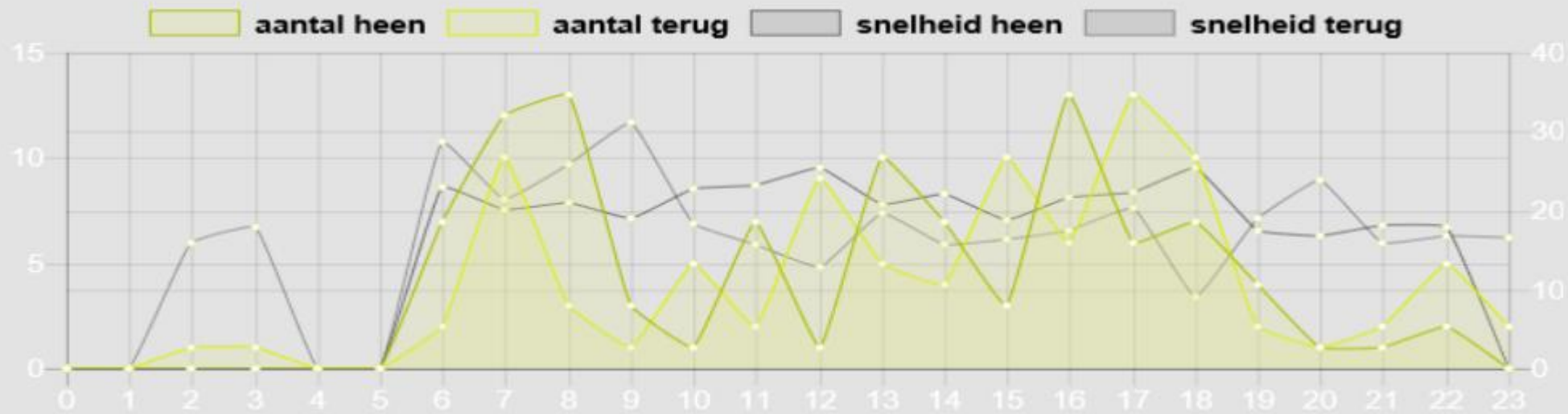






🕒 21 km/uur 16 km/uur 🚲 98 94

Per uur ▾ ☐ beide richtingen

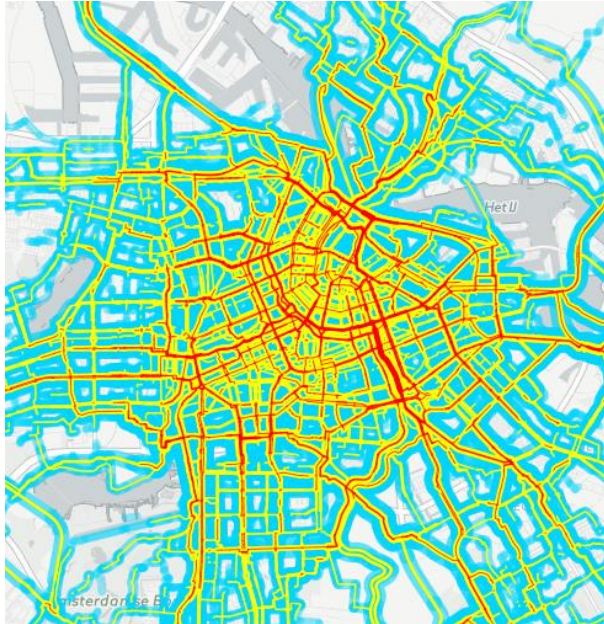


🕒 18 km/uur 🚲 192



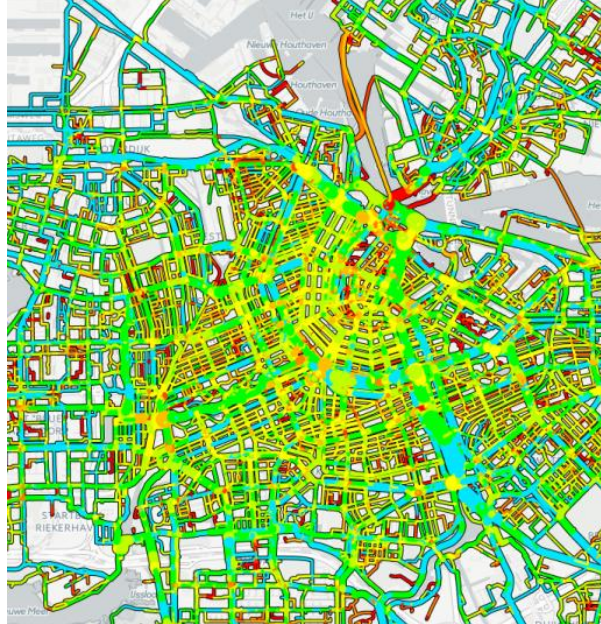
Cycleprint: GPS-data visualisatie en analyses

Examples: City of Amsterdam, the Netherlands



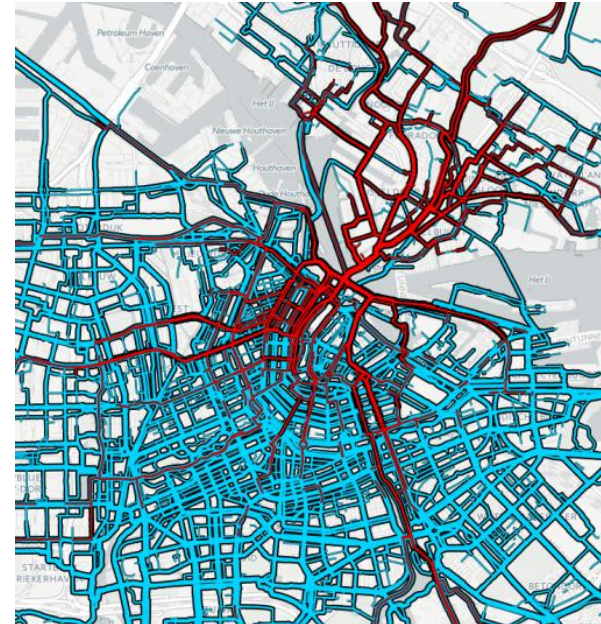
Heat map

Discover heavy cycling traffic
on the network



Speed map

Discover the actual speeds
Of cyclists



Route map

Discover origin and destination
of cyclists on specific links



Delay map



Discover delays cyclists
Experience in their daily travel








BELFAST intercept survey



CHIPS	Wayfinding experience	Objectives	Target volume	Status
			460	

Generic cycling	Generic cycling Stated customer cycling experience (general public)			
	 (online) Survey Maps & photos (360) video footage Branding / logo Recognizability NBD-spoeltje?	Information about use of wayfinding, feedback on current situation and new concepts and specific questions related to new concepts	200	
	 Interviews Fiets4daagse (Drunen) Usage signage / Recreative routebebording BCBC Usage signage / Recreative routebebording	Target group information: about use of wayfinding and opinion of current and new wayfindingconcepts.	50	

On route cycling	On route cycling Reveiled cycling behaviour			
	 Cycle along (TU/e: Smart cycling Futures) Visabilitysignage Cycling behaviour (speed, braking, etc)	Observation of cyclist by ride along (current and new situation) to get knowledge about their behavior in the environment	10	
	 On route survey (NHTV) Online Survey (end-users)	Specific questions related to new concepts (at specific location), online survey for all end-users	50	nog te ontwikkelen
			50	nog te ontwikkelen
	 Exploratory cycling behaviour cases (NHTV i.s.m. NBD) Readability distance to signage Readability speed differences Design variables on signange (lettertype, grootte, spoeltje, reisdoel) Alignment Day/night	Get knowledge about behavior of cyclists on a specific topic (as mentioned). To get answers on research questions related to wayfinding	20 20 20 20 20	
	Reveiled cycling experience			
	 Interview (based on cycle along) (TU/e: Smart cycling Futures) Maps & photos (360) video footage Readability signage Recognizability	After observation by cycling along get more insight in behavior of cyclists in specific situattions using photos and maps. The post map journey recall will help participants to give more explanation about their behavior.		
	Measuring behaviour			
	Cycleprint Routes	Insight in routes, average speed, speedreduction with GPS		

Virtual Reality	Virtual Reality cycling			
	 Exploratory cycling behaviour cases (NHTV i.s.m. Van Rens) Alignment Crowdedness Width Color Day/night	Research on some specific topics using VR to have a controlled way to see effects of the variables.		Details vormgeven o.b.v. reeds ontwikkelde omgeving

NHTV cycle Intelligence

Enhance a global shift towards active modes of transportation by supporting cities and professionals in built environment to get a grip on their cycling ambitions through applied science

www.nhtv.nl

www.shapingsociety.nl

