

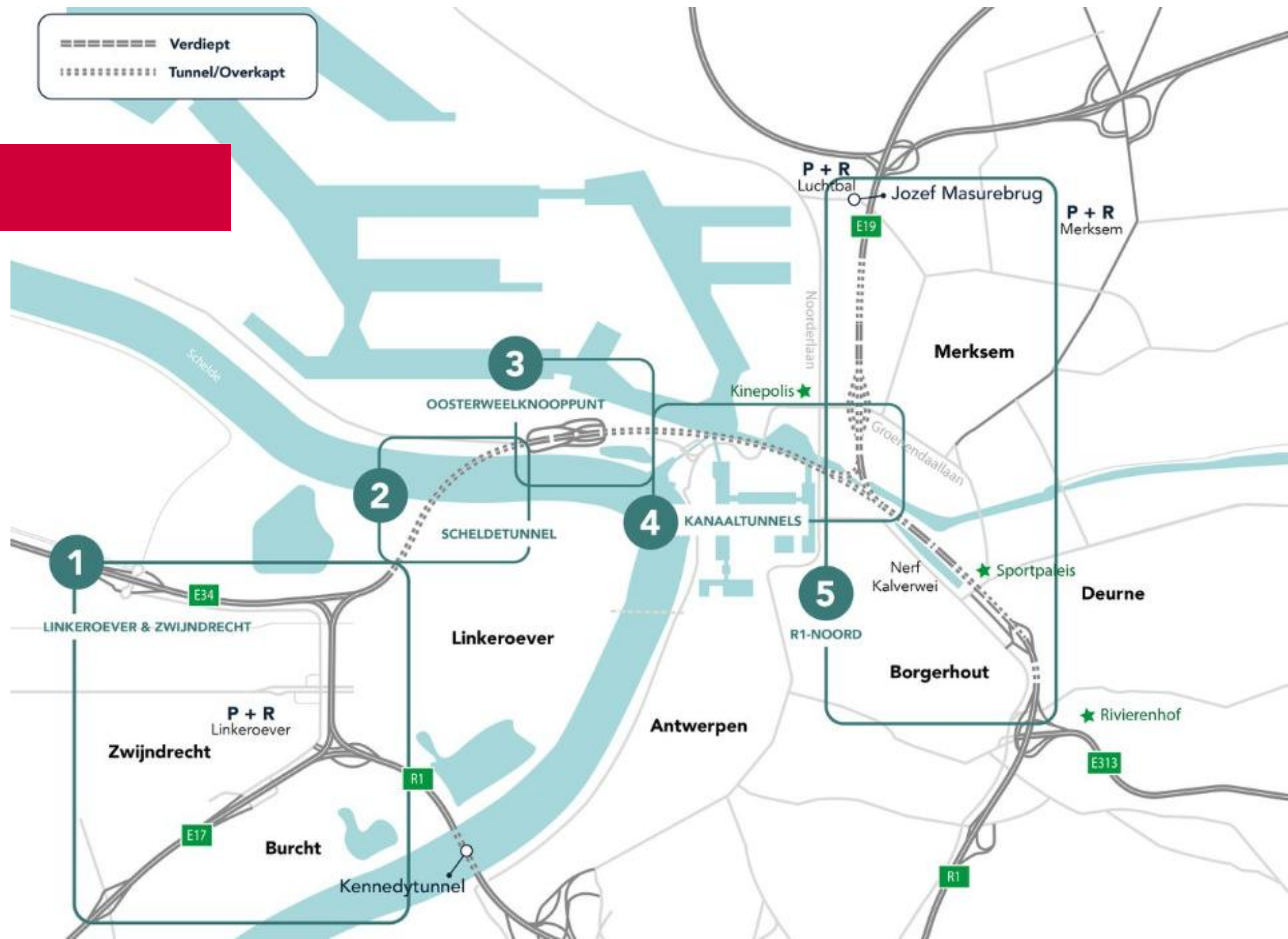


Multimodal routeplanning

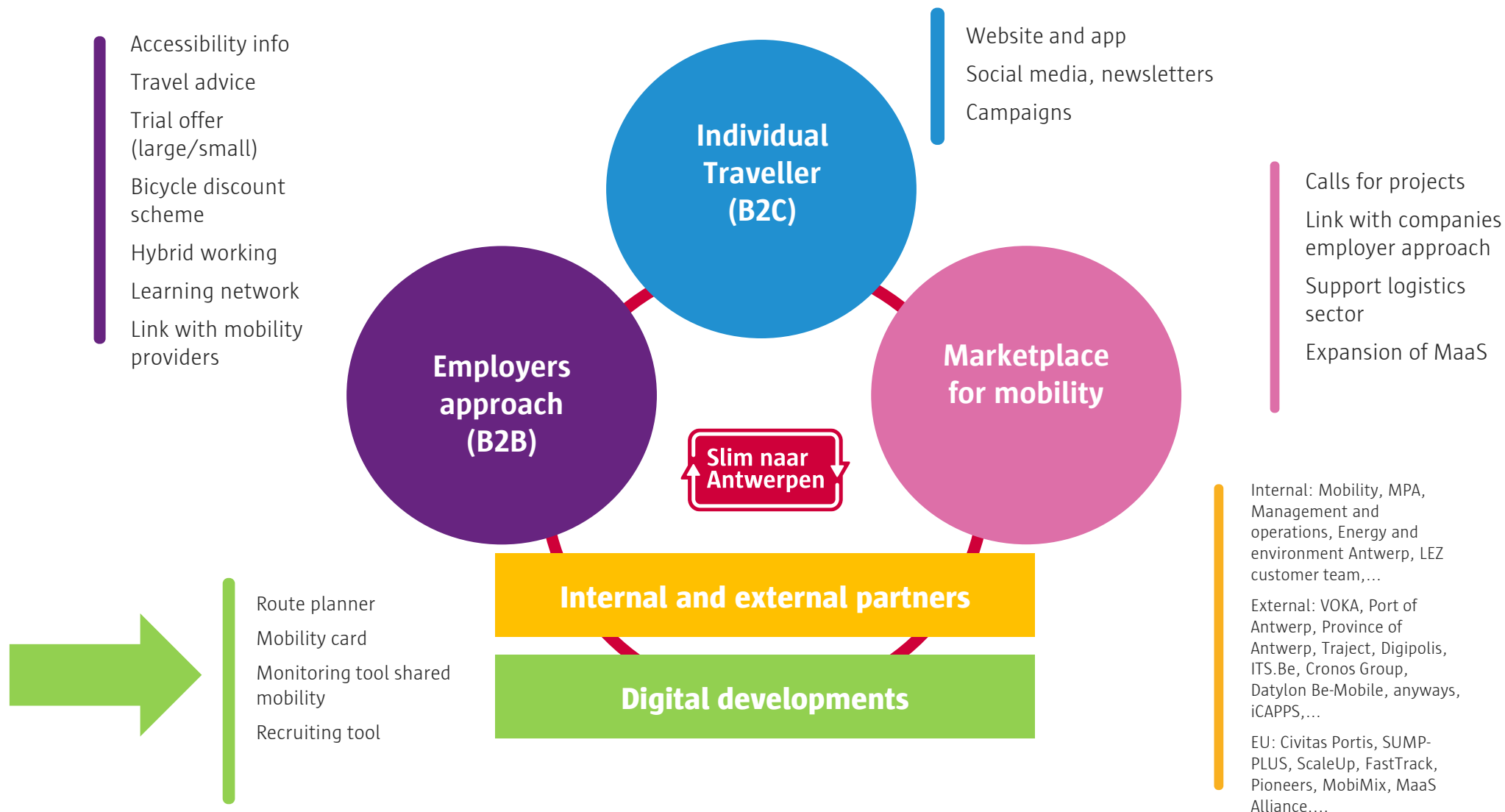
Stijn Vernailen – Mobility Data Expert



Context



Smart ways to Antwerp: A selection from our offer



Opties

Beveren (Beveren, België)

Brecht (Brecht, België)

Slimste keuze

1 u 38 min

Slimste route

15:01 → 16:39

179 Kcal 1.003 stappen ± 8,8 euro

763 m → S34 → S35 → 4,5 km

1 u 33 min

15:05 → 16:38

179 Kcal ± 10,8 euro

1,5 km → S34 → S35 → 4,5 km

1 u 48 min

14:51 → 16:39

200 Kcal 912 stappen ± 11,3 euro

372 m → 885 m → 321 m →

S34 → S35 → 4,5 km

1 u 35 min

15:03 → 16:38

131 Kcal ± 8,13 euro

2,9 km → 1 m → S34 → S35

→ 4,5 km

51 min

14:30 → 15:21

0 Kcal ± 25,3 euro

45,7 km

2 u 7 min

15:01 → 17:08

203 Kcal 4.749 stappen ± 9,8 euro

763 m → S34 → S35 → 69 →

2,7 km

1 u 30 min

14:30 → 16:00

225 Kcal 489 stappen ± 17,67 euro

372 m → 7 km → 37,3 km

1 u 19 min

15:01 → 16:21

53 Kcal 1.177 stappen ± 17,72 euro

763 m → S34 → 28,7 km

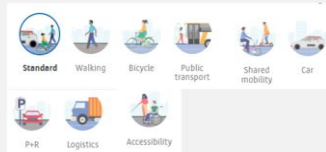
Toon lagen

Plaats op jouw site | © Mapbox © OpenStreetMap

Smart Ways to Antwerp routeplanner

Unique routeplanner

1 All modes and predefined presets



Transport options



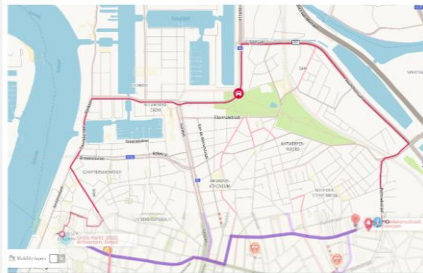
Shared mobility



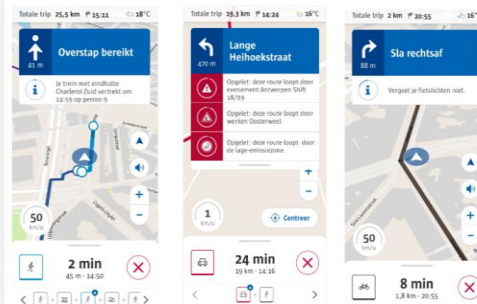
2 Logical combinations of modes and nudges

51 min Smartest route 15:32 → 16:22 81 Kcal 3,832 steps 5.89 euro 1.3 km → 1.3 km → 1.3 km	47 min 15:15 → 16:01 104 Kcal 4,706 steps 7.96 euro 1.4 km → 1.4 km → 1.4 km
54 min 15:05 → 15:59 124 Kcal 3,882 steps 5.4 euro 1.3 km → 1.3 km → 1.3 km	1 hr 1 0 min 15:32 → 16:39 124 Kcal 3,882 steps 5.4 euro 1.3 km → 1.3 km → 1.3 km
43 min Fastest route 15:09 → 15:52 18 Kcal 408 steps 1.44 euro 1.2 km → 1.2 km → 1.2 km	1 hr 0 min 15:05 → 16:05 379 Kcal 3,339 steps 4 euro 1.8 km → 1.8 km → 1.8 km
45 min 15:09 → 15:54 90 Kcal 494 steps 1.70 euro 1.2 km → 1.2 km → 1.2 km	1 hr 1 min 15:10 → 16:10 124 Kcal 3,882 steps 5.4 euro 1.3 km → 1.3 km → 1.3 km
57 min 15:26 → 16:22 108 Kcal 1,443 steps 8.39 euro 1.8 km → 1.8 km → 1.8 km	3 hr 17 min Most active route 15:05 → 18:22 848 Kcal 17,332 steps 9 euro 1.2 km

3 Policy preferences (for all modes)



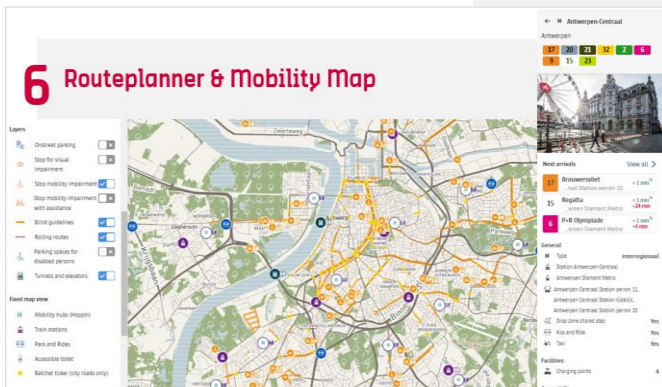
4 Navigatie App



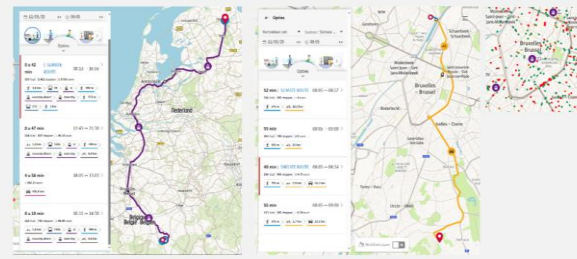
5 Mode-specific routing engines

43 min Car free route 15:30 → 16:13 184 Kcal 3,782 steps 0 euro 1.3 km	20 min Smoothest route 15:30 → 15:50 16 min 5.8 km 139 Kcal 0 euro 1.4 km
38 min Shortest route 15:30 → 16:08 162 Kcal 3,307 steps 0 euro 1.3 km	12 min Shortest route 15:30 → 15:42 9 min 5.8 km 81 Kcal 0 euro 1.8 km
32 min 15:35 → 16:07 11.3 km	11 min Comfort route 15:30 → 15:41 9 min 5.8 km 78 Kcal 0 euro 1.8 km
	20 min Node route 15:30 → 15:50 16 min 5.8 km 142 Kcal 0 euro 1.4 km

6 Routeplanner & Mobility Map



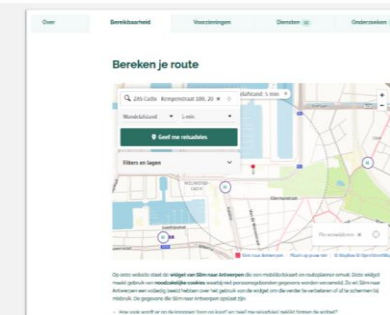
7 BeNeLux



8 Widget

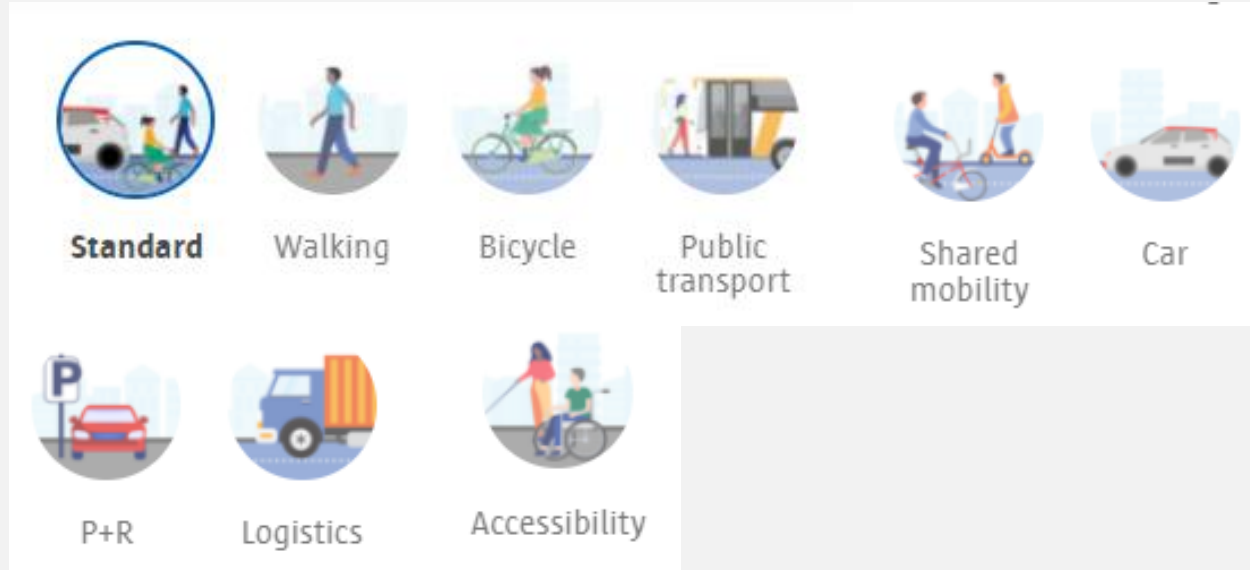
- Used by SWtA on website & app
- Customised settings
- Free to use (for Antwerp based organisations)

[Configure widget](#)

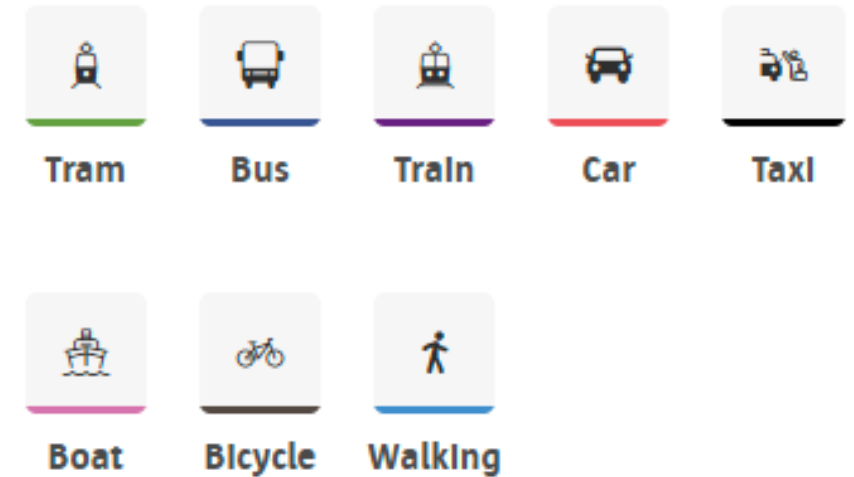


1

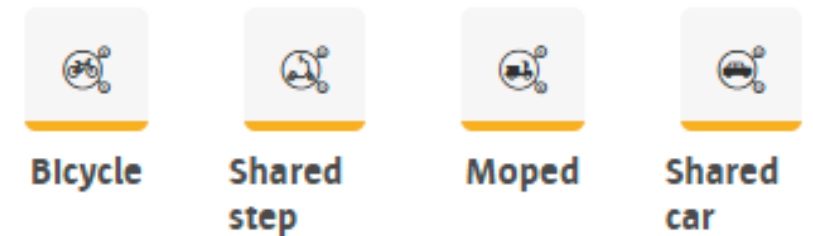
All modes and predefined presets



Transport options



Shared mobility



2 Logical combinations of modes and nudges

51 min **Smartest route** 15:32 → 16:22

81 kCal 1,932 steps ± 5.89 euro

 1,3 km →  Stoptrein →  2,2 km

54 min 15:05 → 15:59

 43 min E-bike 385 kCal ± 0 euro

 13,5 km

43 min **Fastest route** 15:09 → 15:52

18 kCal 406 steps ± 6.44 euro

 1,2 km →  S32 →  2,2 km

45 min 15:09 → 15:54

90 kCal 494 steps ± 7.95 euro

 1,2 km →  S32 →  2,2 km

57 min 15:26 → 16:22

108 kCal 1,443 steps ± 8.39 euro

 689 m →  1,6 km →  S32 →  2,2 km

47 min 15:15 → 16:01

104 kCal ± 7.06 euro

 1,4 km →  S32 →  2,2 km

1 hr(s) 8 min 15:32 → 16:39

114 kCal 2,692 steps ± 5.4 euro

 1,3 km →  Stoptrein →  408 m →  10 →  302 m

1 hr(s) 0 min 15:05 → 16:05

379 kCal 1,199 steps ± 4 euro

 689 m →  11,3 km

1 hr(s) 1 min 15:10 → 16:10

53 kCal 1,231 steps ± 7.05 euro

 3,4 km →  S32 →  612 m →  P5

3 hr(s) 17 min **Most active route** 15:05 → 18:22

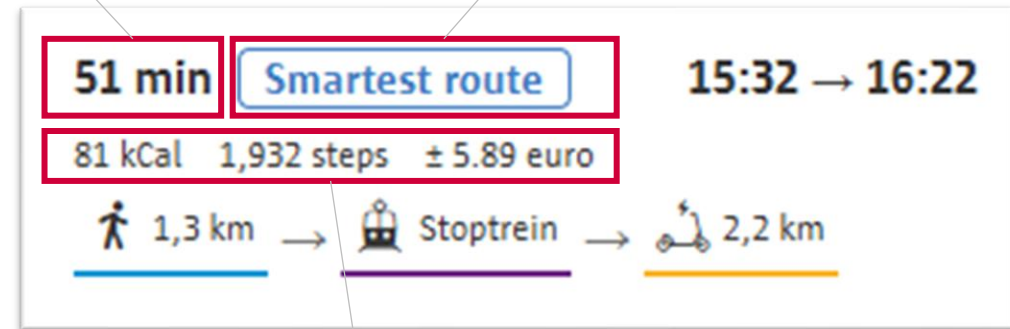
846 kCal 17,312 steps ± 0 euro

 13,2 km

2 Logical combinations of modes and nudges

Standard not sorted based on travel time alone

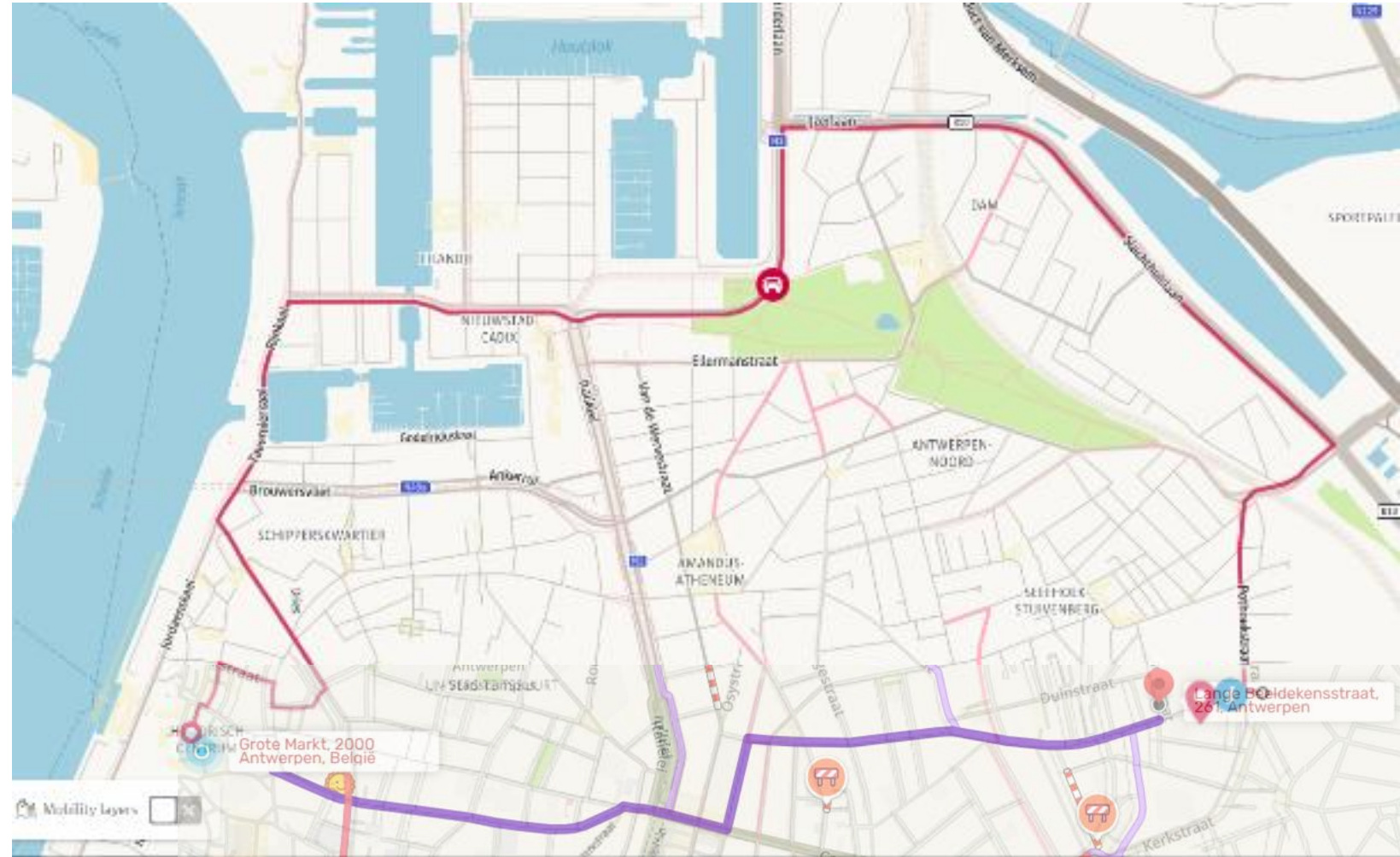
Type of route indication: smartest, shortest, P+R route, comfort route,...



Other indicators that nudge people toward a more healthy choice.

Note: no CO2-emissions = no discussions on methodology

3 Policy preferences (for all modes)

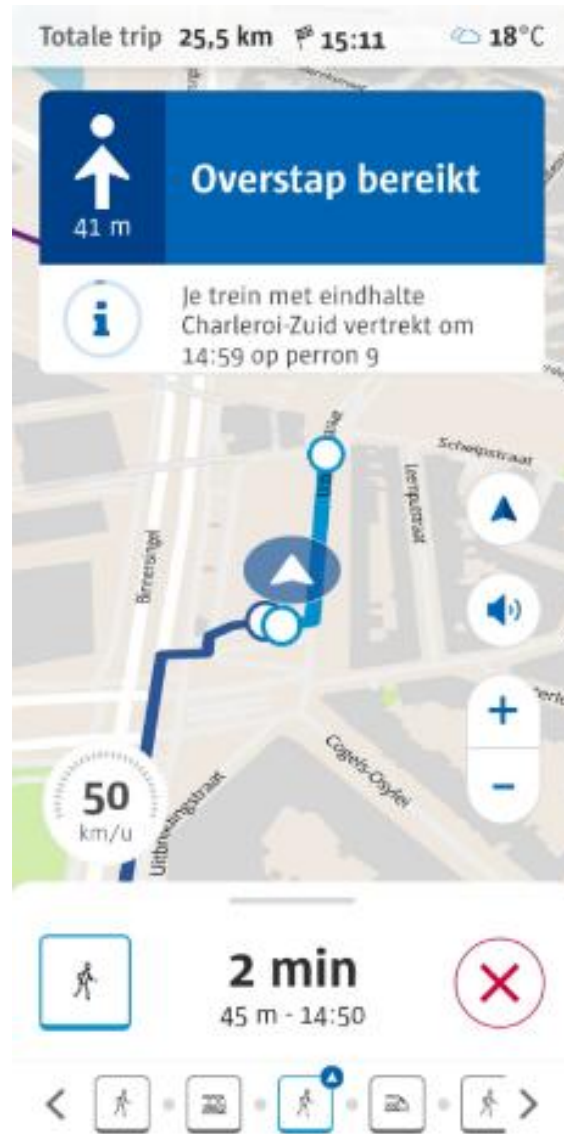


3

Weighting
depending on
vehicle
characteristics



4 Navigatie App



5 Mode-specific routing engines

51 min Smartest route 15:32 → 16:22 81 kCal 1,932 steps ± 5.89 euro 🚶 1,3 km → 🚶 Stoptrein → 🚶 2,2 km	47 min 15:15 → 16:01 104 kCal ± 7.06 euro 🚶 1,4 km → 🚶 S32 → 🚶 2,2 km
54 min 15:05 → 15:59 🚴 43 min E-bike 385 kCal ± 0 euro 🚴 13,5 km	1 hr(s) 8 min 15:32 → 16:39 114 kCal 2,692 steps ± 5.4 euro 🚶 1,3 km → 🚶 Stoptrein → 🚶 408 m → 🚶 10 → 🚶 302 m
43 min Fastest route 15:09 → 15:52 18 kCal 406 steps ± 6.44 euro 🚶 1,2 km → 🚶 S32 → 🚶 2,2 km	1 hr(s) 0 min 15:05 → 16:05 379 kCal 1,199 steps ± 4 euro 🚶 689 m → 🚶 11,3 km
45 min 15:09 → 15:54 90 kCal 494 steps ± 7.95 euro 🚶 1,2 km → 🚶 S32 → 🚶 2,2 km	1 hr(s) 1 min 15:10 → 16:10 53 kCal 1,231 steps ± 7.05 euro 🚶 3,4 km → 🚶 S32 → 🚶 612 m → 🚶 P5
57 min 15:26 → 16:22 108 kCal 1,443 steps ± 8.39 euro 🚶 689 m → 🚶 1,6 km → 🚶 S32 → 🚶 2,2 km	3 hr(s) 17 min Most active route 15:05 → 18:22 846 kCal 17,312 steps ± 0 euro 🚶 13,2 km

BEMOBILE

43 min Car-free route 15:30 → 16:13 184 kCal 3,763 steps ± 0 euro 🚶 2,9 km	38 min Shortest route 15:30 → 16:08 162 kCal 3,307 steps ± 0 euro 🚶 2,5 km
---	---



32 min 🚶 11,3 km	15:35 → 16:07
----------------------------	----------------------



20 min Smoothest route 15:30 → 15:50 🚴 16 min E-bike 139 kCal ± 0 euro 🚴 4,9 km
--

12 min Shortest route 15:30 → 15:42 🚴 9 min E-bike 82 kCal ± 0 euro 🚴 2,6 km

11 min Comfort route 15:30 → 15:41 🚴 9 min E-bike 76 kCal ± 0 euro 🚴 2,6 km
--

20 min Node route 15:30 → 15:50 🚴 16 min E-bike 142 kCal ± 0 euro 🚴 4,7 km



6 Routeplanner & Mobility Map

Layers

☐ Onstreet parking

☐ Stop for visual impairment

☒ Stop mobility impairment

☐ Stop mobility impairment with assistance

☒ Blind guidelines

☒ Rolling routes

☐ Parking spaces for disabled persons

☒ Tunnels and elevators

Fixed map view

☒ Mobility hubs (Hoppin)

☐ Train stations

☒ Park and Rides

☐ Accessible toilet

☒ Ratchet ticker (city roads only)



The map displays the city of Antwerp with various mobility features highlighted. Orange lines represent rolling routes, and blue lines represent blind guidelines. Green circles indicate mobility hubs (Hoppin), and purple circles indicate train stations. Yellow dots represent accessible toilets, and blue dots represent parking spaces for disabled persons. The map also shows the city's waterways and parks.

← H Antwerpen-Centraal

Antwerpen

17 20 21 32 2 6

9 15 23



Next arrivals

View all >

17 Brouwersvliet

...raal Station perron 10

< 1 min

15 Regatta

...eroen Diamant Metro

< 1 min +24 min

6 P+R Olymplate

...eroen Diamant Metro

< 1 min -4 min

General

H Type

interregionaal

Station Antwerpen-Centraal

Antwerpen Diamant Metro

Antwerpen Centraal Station perron 11, Antwerpen Centraal Station tijdelijk, Antwerpen Centraal Station perron 10

Drop zone shared step

Kiss and Ride

Taxi

Facilities

Charging points

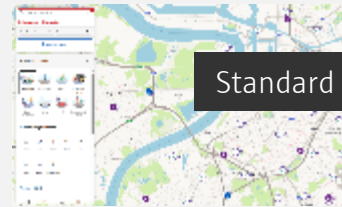
4

Accessibility

6

Routeplanner and mobility map

Mobility data, accessibility, roadworks info,....



Standard



Accessibility



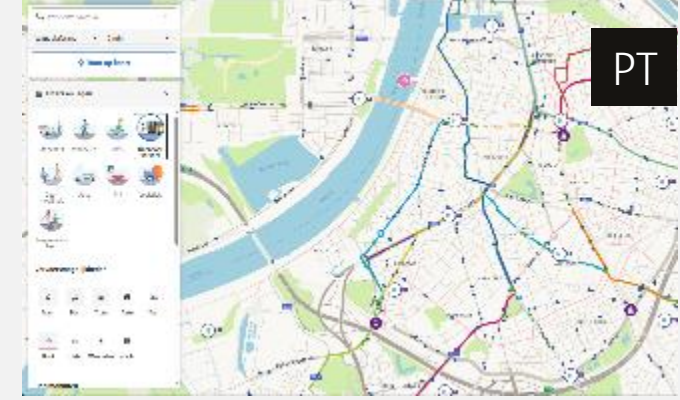
Car



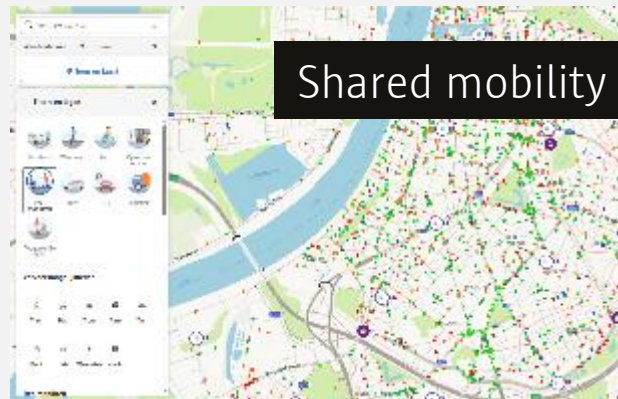
Walking



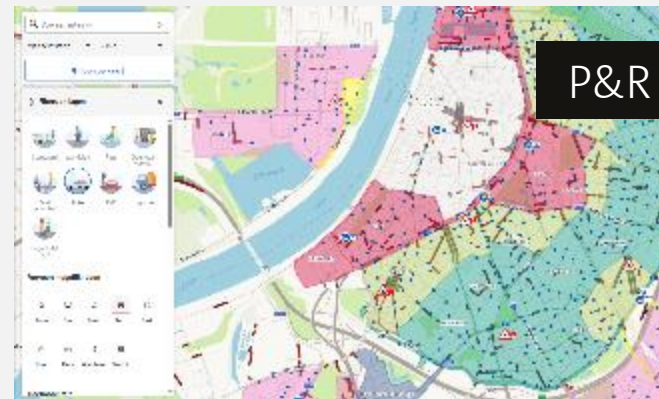
Cycling



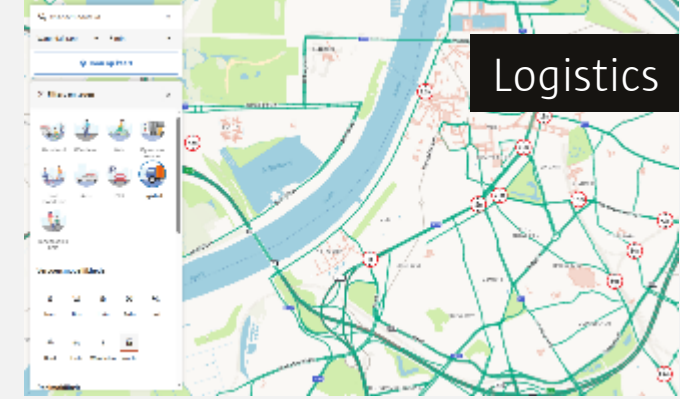
PT



Shared mobility

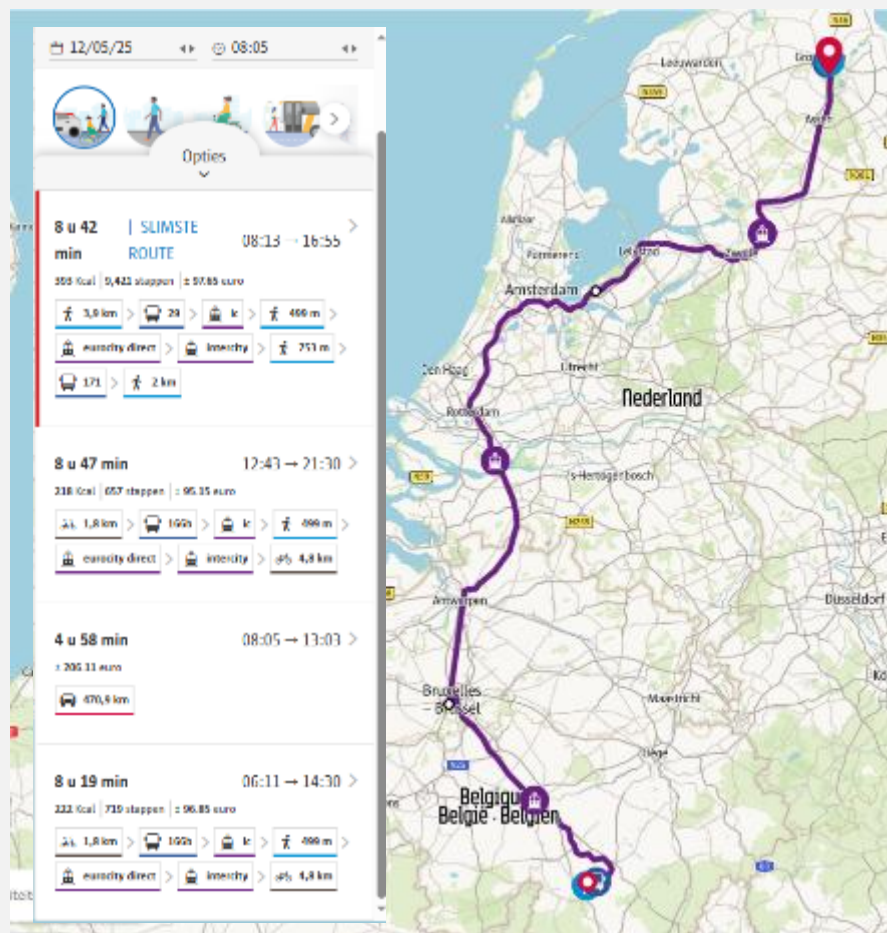
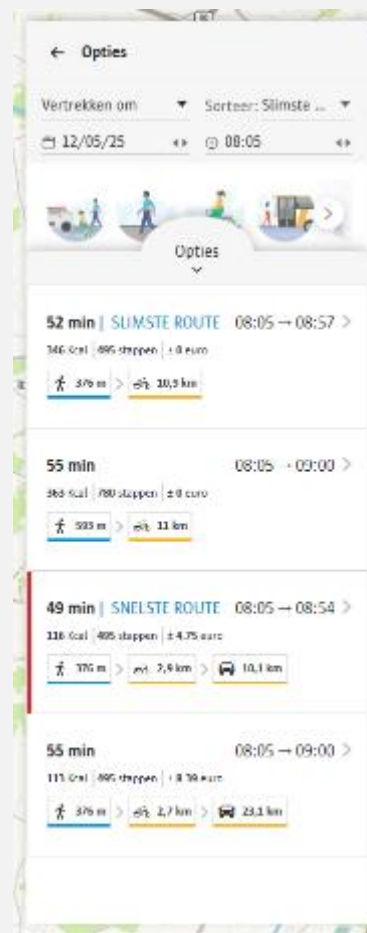


P&R



Logistics

BeNeLux



8 Widget

- Used by SWtA on website & app
- Customised settings
- Free to use (for Antwerp based organisations)

[Configure widget](#)

Over

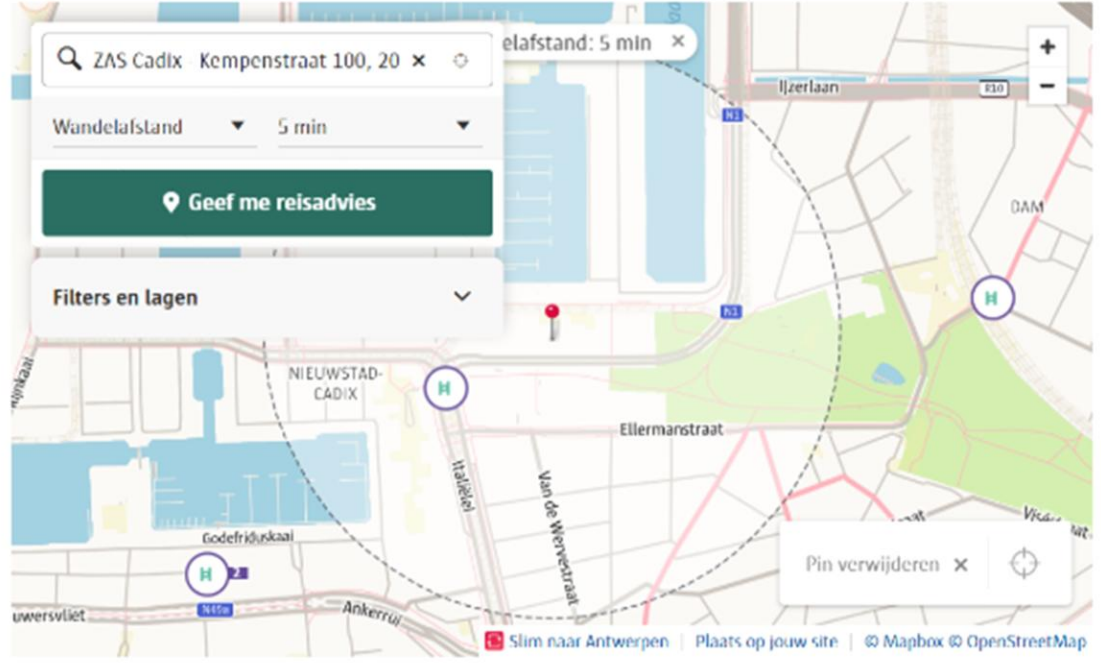
Bereikbaarheid

Voorzieningen

Diensten 52

Onderzoeken 145

Bereken je route



Op onze website staat de **widget van Slim naar Antwerpen** die een mobiliteitskaart en routeplanner omvat. Deze widget maakt gebruik van **noodzakelijke cookies** waarbij niet persoonsgebonden gegevens worden verzameld. Zo wil Slim naar Antwerpen een volledig beeld hebben over het gebruik van de widget om die verder te verbeteren of af te schermen bij misbruik. De gegevens die Slim naar Antwerpen opslaat zijn:

- Hoe vaak wordt er op de knoppen 'toon op kaart' en 'geef me reisadvies' geklikt binnen de widget?

Main challenges

Finding/scaling data

- NAP helps but only a starting point
- Unified datasources?
- Usage licences
- Data quality

Roadworks data

- Quality of GIPOD
- Conversion polygons to road segments
- Scattered data/info
- Multimodality

Policy preferences communication

- More than TCPs and TMPs
- Take-up of the “big 5” routing providers

Together?

Co-develop non-commercial interesting elements

- Walking & cycling routing engine?
- MMRoutingEngine?

Single endpoint per data type

- Easier integration

Policy preferences communication

- More than TCPs and TMPs
- Take-up of the “big 5” routing providers



Stijn Vernailen

Stijn.Vernailen@antwerpen.be

info@slimnaarantwerpen.be

www.slimnaarantwerpen.be

