



# Self-Guided Tour

## Zwolle



# Welcome to Zwolle

Zwolle was named the best cycling city in the Netherlands in 2014. Not surprising, as the capital of the province of Overijssel has one of the highest cycling shares in the Netherlands and the world. Almost all daily destinations are within cycling distance and Zwolle is playing a pioneering role in the field of cycling innovation for years. The Hanseatic city with 133,140 inhabitants<sup>1</sup> stays ambitious and wants to remain a world cycling city. With the action plan “Zwolle Wereldfietsstad 2030”, the city has set itself the goal of 20 % more cycling kilometres in 2027 compared to 2017.<sup>2</sup> To achieve this, various measures are and will be implemented to further promote cycling.

## Zwolle cycling statistics

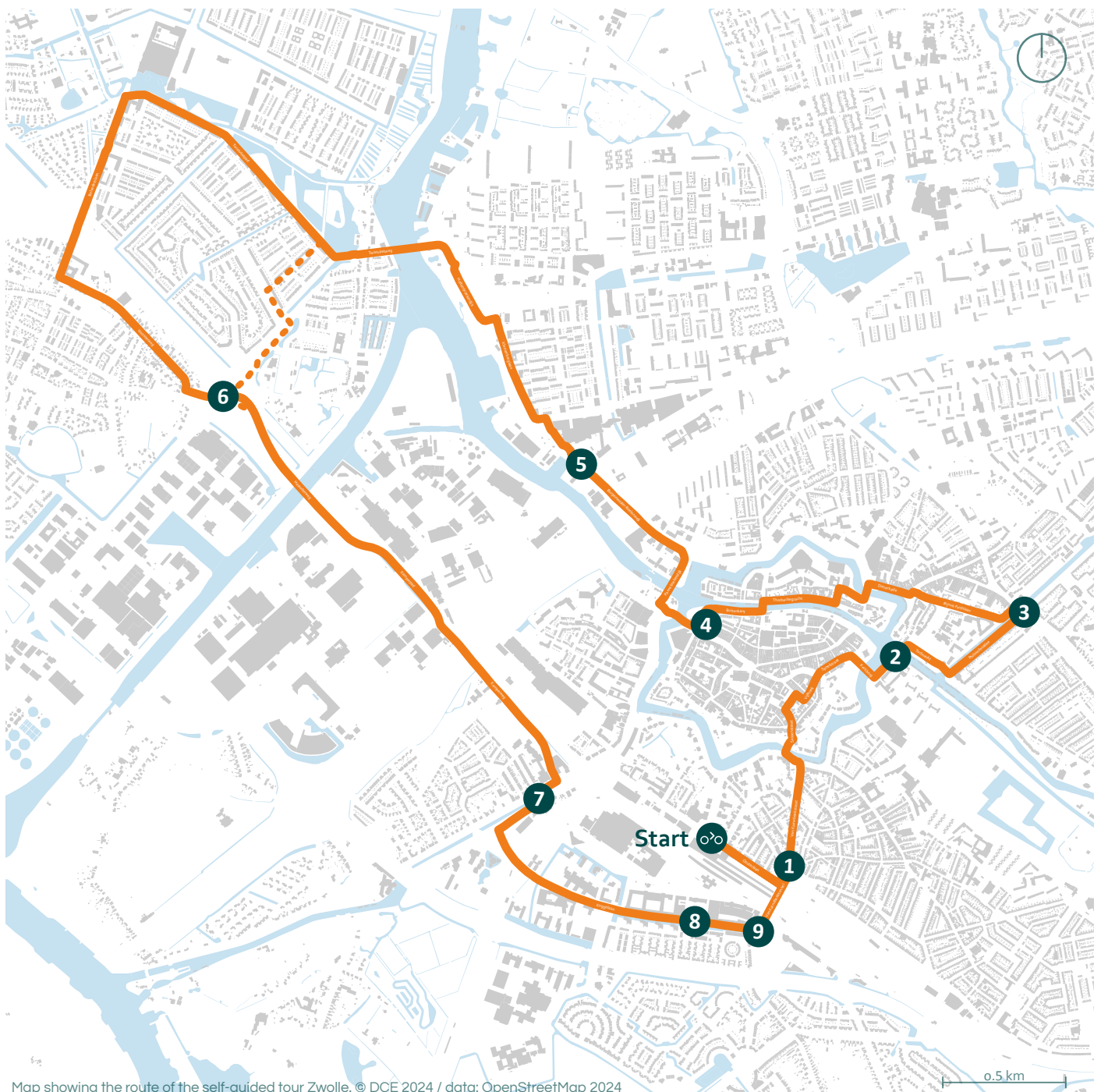
- Zwolle has around 260 km / 162 miles of cycling infrastructure.<sup>3</sup>
- 43 % of journeys in the city are made by bicycle.<sup>4</sup>
- In 1997, the percentage of journeys made by cycling was already 39.5 % in Zwolle.<sup>5</sup>
- The bicycle parking garage at the train station can accommodate 5,800 bicycles.<sup>6</sup>
- There is room for around 580 bicycles in four separate guarded bicycle parking facilities in the city centre.<sup>7</sup>



## About the tour

With this self-guided tour you will explore the cycling infrastructure, culture and policy in Zwolle and the Netherlands. All you need is a bicycle, this document, and about 1.5 hours of time. For navigation, you can download the [GPX file](#), use [Google Maps](#), or the map below, which also shows the location of the nine stops. The tour starts at the train station and will take you through the centre of Zwolle to the west district and back. You can take a shortcut in the west or, of course, further detours at any time as there is always more to see. Get on a bicycle and let's go!

↔ 13.7 km    ⌚ 1.5 h    🚲 9 stops



## Start: Stationsplein

### Square redesign with bicycle parking

We start the tour at Stationsplein next to the train station Zwolle. This square has gone through a major transformation in recent years. The new design creates a strong connection between two levels: the underground bicycle parking and the station forecourt. Special attention was paid to the blue-green infrastructure. With a lot of greenery and a special water management, the square functions as a sponge for rainwater storage.<sup>8</sup> This contributes to resilience and shows how cycling infrastructure can be integrated into climate adaption and an attractive public space.

Take one of the three entrances and have a look into the bicycle parking garage. The staircase you are on has underfloor heating to never be slippery in freezing conditions. The large entrances are equipped with a brush and conveyer gutter that allows one to easily walk in and out of the storage area with your bicycle next to you. It was opened in 2021 and can accommodate 5,800 bicycles. This makes it the largest bicycle parking garage outside the Randstad. You can find more information and some videos (in Dutch) [here](#).

### Public transport - bike combination

Many people in the Netherlands commute distances that are too far to cycle. Combining train and cycling infrastructure is key for avoiding car use on such trips. To facilitate multimodal travel, it is important to have railway stations in central locations, to connect them to the cycle network, and to provide sufficient bicycle parking facilities.

Every large Dutch railway station has a guarded bicycle parking garage that provides a reliable and safe place for people to leave their bikes. Checking in and out is easy possible with a personal public transport card (OV-chipkaart) and a digital system indicates the number of available parking spots. Parking is usually free for the first 24 hours. There is also often a service station where bicycles can get repaired. These garages are also home to OV-Fiets rental bikes for the last mile that are available at more than 300 different locations.<sup>9</sup> Renting and payment are linked to the OV-chipkaart. These strategies benefit both cyclists and public transport, as close to 50 percent of all train commuters arrive by bicycle.

o>o We start cycling to the east, to the left when you look at the railway station.



Stationsplein Zwolle. © Stijn Poelstra



Stationsplein Zwolle before redesign. © Gemeente Zwolle



Bicycle parking Zwolle Stationsplein © DCE 2024



Check-in at bicycle parking Stationsplein. © DCE 2024



Van Karnebeekstraat before becoming a cycling street. © Google Maps 2009



Bicycle street Van Karnebeekstraat. © DCE 2024



Traffic sign L51 - fietsstraat



Wayfinding with the junction network. © Gemeente Zwolle

## 1 Van Karnebeekstraat

### Priority for cyclists

The Van Karnebeekstraat is part of one of the busiest cycling routes in Zwolle and merges into the Van Karnebeek tunnel that we will pass at the end of the tour. Before it was converted into a cycling street in 2012, the profile of the street followed the route of car traffic going in the direction where we just came from. Cyclist entering the tunnel had to make a left turn across incoming traffic. Now, cyclists have priority and can safely enter the tunnel.

### Bicycle street (fietsstraat)

A bicycle street (fietsstraat) is a street with priority for cycling on which cars are allowed but considered guests. A precondition for the realisation of a cycling street is that bicycle traffic is or should dominate the street scene. According to the "Design Manual for Bicycle Traffic" from fietsberaad CROW, the volume of motorized traffic should be less than 2,500 PCU per day.<sup>10</sup> The layout and design of the street indicates that it is a cycling street, so it is clear to motorists that they must adapt their driving behaviour and give cyclists the right-of-way. Bicycle streets provide great accessibility for everyone and much more space for cyclists than regular bike lanes, helping them travel quickly and comfortably.

In 2005, Zwolle was the first municipality in the Netherlands to develop a bicycle street plan (fietsstraatplan) for the entire city.<sup>11</sup> This was in order to achieve a more structural application of bicycle streets. They are part of the cycle network, which is the topic of our next stop.

🚲 We follow the Van Karnebeekstraat into the city centre of Zwolle. After you have crossed it, stop in front of the Schoenkuipenbrug.

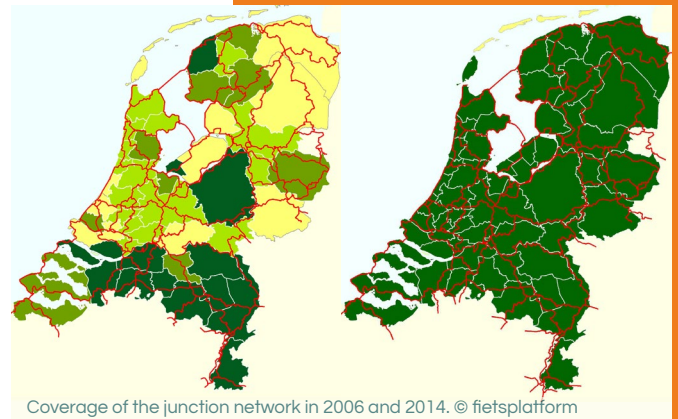
## 2 Knooppunt 66

### Cycle networks and the junctions

Have you noticed the white signs with green or red lettering along the way? They show two types of cycle networks in the Netherlands. The white signs with red writing outline the most direct routes for cyclists. The white route signs with green numbers are indicating recreational connections. This network is known as the junction network and right now we are at junction (knooppunt) 66. The entire country is covered by around 9,500 junctions in 37 regional networks that are seamlessly interconnected. The total length of these networks is more than 34,000 kilometers.<sup>12</sup>

Go to the information board with the map on your left. This will explain you how to navigate using the junction system. You can see that there are also LF (long distance cycling routes) and theme routes that run via the junctions. For example, if you want to explore more of the area around Zwolle, you can follow the signs of the 42-kilometer long “Rondje Zwolle” cycle route.

o> For now, follow the signs in the direction of junction 05 and stop when you get to the bicycle roundabout after the Vondelkade cycling street.



### 3 Fietsrotonde

#### Bicycle roundabout Zwolle

“A network is as strong as the weakest link,” is probably the best way to describe the importance of intersections in cycle planning. Prior to 2013, cyclists had to give way to (motorised) traffic on the Wipstrikkerallee, a busy access road. As a result, cyclists were inconvenienced by long waits that impeded their travel times. Giving cyclists priority and introducing traffic lights did not fully address or solve this issue.

Therefore, the City of Zwolle constructed a unique bicycle roundabout (in Dutch fietsrotonde) at the Filosofenallee-Vondelkade bicycle crossing: motorised traffic has only partial, or limited, access to the roundabout, cars can either go straight or turn right, but not swing around it. Cyclists, on the other hand, may take any direction they like, similar to a normal roundabout. Consequently, the flow of bicycle traffic has been greatly improved. Like many intersections and roundabouts in the Netherlands, it is a protected roundabout.

#### Lessons learned:

1. Cyclists now have priority and can cross the Wipstrikkerallee more quickly, safely and efficiently.
2. The bicycle roundabout does not pose challenges to road safety and may have decreased the overall number of traffic conflict situations.<sup>13</sup>

o> We take the last exit at the bicycle roundabout and then turn left into Rhijnvis Feithlaan. At the end of the street, we pass the Brink-Diezerkade-Thomas a Kempisstraat intersection, which used to be a car-centred roundabout and after a redesign now offers a better quality of life at a human scale. We continue along the city centre.





Smart wayfinding for bicycle parking in Zwolle/Vispoorbrug. © DCE 2024



Ambition inner-city bicycle parking. © Gemeente Zwolle

## 4 Rodetorenplein

### Inner-city bicycle parking

Many people come to the city centre by bike. Therefore, there must be sufficient parking facilities so that bicycles can be parked safely and do not become obstacles in public spaces.

We are now at the Fietsenstalling Rodetorenplein, one of the four guarded bicycle parking facilities in the city centre of Zwolle. Smart wayfinding is used in the city to show the way to free spaces in the parking facilities. In total, up to 580 bicycles can be parked for free at the four facilities, but as the demand is higher, they are being expanded further. In addition, a new cycle ring is planned around the city centre, which makes the parking facilities easily accessible and is also connected to the cycle network. In this way, more space is created for pedestrians in central parts of the city while also improving the situation for cyclists.<sup>14</sup>

🚲 We continue our tour towards the north-west over the Rodetorenbrug. As there is no separation on the shared pedestrian and cycle bridge, the approach is based on awareness and respect.

## 5 Doorfietsroute

### Fast Cycle Route

Did you notice anything on the section you just cycled? It's part of one of the fast cycle routes and connects Zwolle to Hasselt and Genemuiden. Without having to stop, we were able to cross the two large roads through tunnels.

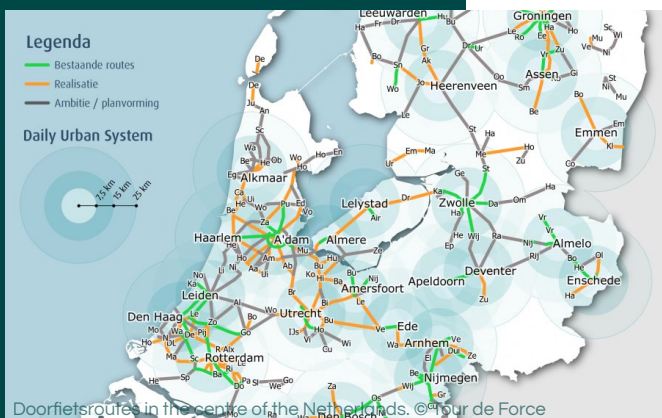
### Doorfietsroutes

Directly translated as "cycling through route", doorfietsroutes are regional cycling routes that provide fast and comfortable riding between cities and towns. There are about 750 kilometres of doorfietsroutes in the Netherlands. Another 1,400 kilometres are planned for the coming years until 2030, supported by a budget of over 850 million euro. This inter-regional network aims to promote cycling longer distances that are usually done by car. On average, investing in doorfietsroutes leads to a 14 % increase in the number of cyclists.<sup>15</sup> The willingness to travel longer distances by bike has increased in recent years, a trend supported by the rising popularity of e-bikes.

🚲 We follow the cycle path further north.



Doorfietsroutes connecting Zwolle. © Gemeente Zwolle



Doorfietsroutes in the centre of the Netherlands. © Tour de Force

## 6 Westenholterbrug

### Cycling bridge over large intersection

Via the Voorsterweg, which is part of the fast cycle route Zwolle-Kampen, we have now reached Westenholte. The neighbourhood in the West district has changed a lot in the recent years. Not only because of new developments, but also due to the Rozentunnel which we used to cross the railway tracks and the Westenholterbrug that you see in front of you. These connections have improved the accessibility of the bordering neighbourhood Stadshagen and the city centre of Zwolle.<sup>16</sup>

The Westenholterbrug was built at the same time the underlying intersection was reconstructed. It was opened in 2006 and spans the intersection in an s-shape, connecting the diagonal opposed cycle paths.<sup>17</sup> A multi-level intersection with separation of traffic types increases safety and makes it easier to cross at a busy, multi-lane intersection like this one.

Other impressive cycle bridges in Zwolle are the Zalnébrug in the south-east and the Hanzeboog bridge, which crosses the river IJssel in the south-west. A new cycling and pedestrian bridge, the Zalkerdijkbrug, is currently being planned.

### Cycling bridges and tunnels

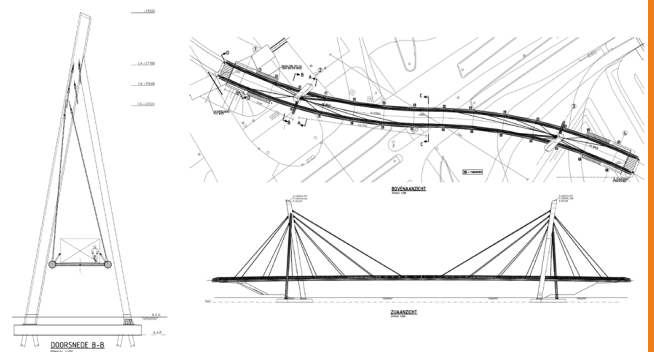
Bicycle bridges and tunnels are not unique to the Netherlands but are far more common here than in most places. These dedicated pieces of infrastructure, which require significant investment, demonstrate Dutch commitment to prioritizing bikes. Of course, bridges and tunnels are key for connecting cycling routes across canals and highways, creating accessibility and directness.

Additionally, bridges, parking facilities or tunnels are sometimes given a spectacular design. These design and engineering artworks can contribute to making an ordinary trip more exciting. Bicycle infrastructures can become iconic landmarks, helping with orientation and sometimes attracting a lot of (international) attention. Designs also take social safety into account, for example by ensuring that tunnels are as open and well-lit as possible. These aspects can contribute to the promotion of cycling.

🚲 We cross the Westenholtebrug and follow the cycle path straight ahead. It takes us over the cycling bridge Blaloweg and goes over into the cycling street Kamperweg.



Westenholterbrug from above. © BURO MA.AN



Cross section, top and side view Westenholterbrug. © Bouwen met Staal



Tesselschadetunnel under the N35 in Zwolle. © DCE 2024



Bicycle and railway bridge Hanzeboog over the river IJssel. © DCE 2024



Illustration in "Praatplaat Actieplan Zwolle Wereldfietsstad". © Gemeente Zwolle



Waiting time predictor at a traffic light. © DCE 2024



Map showing traffic lights connected to Schwung. © Schwung



Cross section of PlasticRoad. © KWS

## 7 Nieuwe Veerallee

### Cycling innovation

"Keep innovating" is one of the five basic principles in the action plan "Zwolle Wereldfietsstad 2030." Innovation describes a continuously striving for improvement and includes technical as well as infrastructural or social aspects. Spatial planning is also a key factor. For example, it was very innovative that the district Zwolle-Zuid was planned in a particularly bicycle-friendly way in the 1970s.

Zwolle is and was also a pioneer in the technical field. It was one of the first cities that introduced a rain detector at traffic lights that gives cyclists faster green light when it is raining, what is now part of every traffic light in Zwolle. Moreover, the first LED lights showing the waiting time at traffic lights were introduced here. You can also see them at the traffic light where we have just stopped. This traffic light is also special for another aspect: it is connected to an interactive system that ensures that cyclists get green lights more quickly. For this, cyclists have to use the Schwung app, which is connected to the traffic lights and can request green.

A pilot project was carried out in which cycle couriers were given absolute priority at six traffic lights around the city. This was one of the pilots from the European project "Bicycle and Intelligent Transport Systems" (BITS) in which Zwolle was one of the initiative partners. Other pilot projects included bicycle sensors that measure air quality ("Sniffer Bike"), a dynamic lighting concept on a cycle path through an ecozone and a cycle path made of 70 percent recycled plastic.<sup>18</sup>

### Cycling data

Data can be used to get better insights into the behavior and the needs of cyclists to improve cycling policies. Cycling data can be collected in different ways, for example, through bike counting systems or on the bike itself with mobile devices. In addition, useful information to create better cycling networks and livable cities can be provided by city data portals or Digital Twin Cities. Working with data requires further knowledge, especially with regard to behavioural patterns, social and societal factors must be considered.

🚲 Cross the traffic lights and turn right before turning left and cycling through the cycle tunnel. Then we follow the cycle street Koggelaan, where our second-to-last stop is located.

## 8 Koggepark

### Redistribution of space

The Koggelaan has changed significantly in recent years. Residents wanted more green spaces and places to sit, which was taken into account in the vision that was developed together. Now, as you can see, there are much more green and pleasant spaces for both pedestrians and cyclists. The formerly wide road with cycle lanes has been turned into a bicycle street that runs through the Koggepark. The bicycle street is made of 4m wide red asphalt with 40cm paved side strips on both sides. The redesign of the street made it also possible to build a wider sidewalk.

The Koggepark functions as a green axis and link between squares in the Spoorzone, like the Hanzeplein and the Lübeckplein where we are standing right now. The greenery also contributes to countering warming of the city in hot summers, and during heavy rainfall, water can sink into the soil instead of having to be drained into the sewer system. Water is also an important element in Koggepark, as the nearby canal was made more accessible with the design.<sup>19</sup>



Koggelaan before redesign. © Google Maps 2022



Koggepark in the Spoorzone. © Gemeente Zwolle

### STO(M)P-method

In infrastructure and public space projects, Zwolle designs from an active form of mobility, according to the STOP-method. Highest priority is given to the pedestrians (stappen) and the cyclists (trappen), followed by the public transport (openbaar vervoer). Sometimes it is also called the STOMP-method, in which case it is followed by mobility as a service. Private car traffic (privé auto) has the lowest priority.

👉 We continue along the cycle street and then turn left towards the tunnel.



STOP-method. © Gemeente Zwolle

## 9 Van Karnebeektunnel

### Busy connection to the city centre

Our last stop is the Van Karnebeektunnel, which was renovated in 2023. New LED lighting has been installed which adapts to the light conditions outside and the curb can now be cycled over and is reflective.<sup>20</sup> That increases safety on the busiest cycle route in Zwolle, which is used by an average of 16,000 cyclists every day.<sup>21</sup>

👉 We get back to our starting point at the railway station when we cycle through the tunnel and turn sharp left. Hope you enjoyed the tour!



Van Karnebeektunnel. © Gemeente Zwolle

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# Dank je wel for visiting Zwolle!

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For more information or feedback, please contact the Dutch Cycling Embassy at [info@dutchcycling.nl](mailto:info@dutchcycling.nl)



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