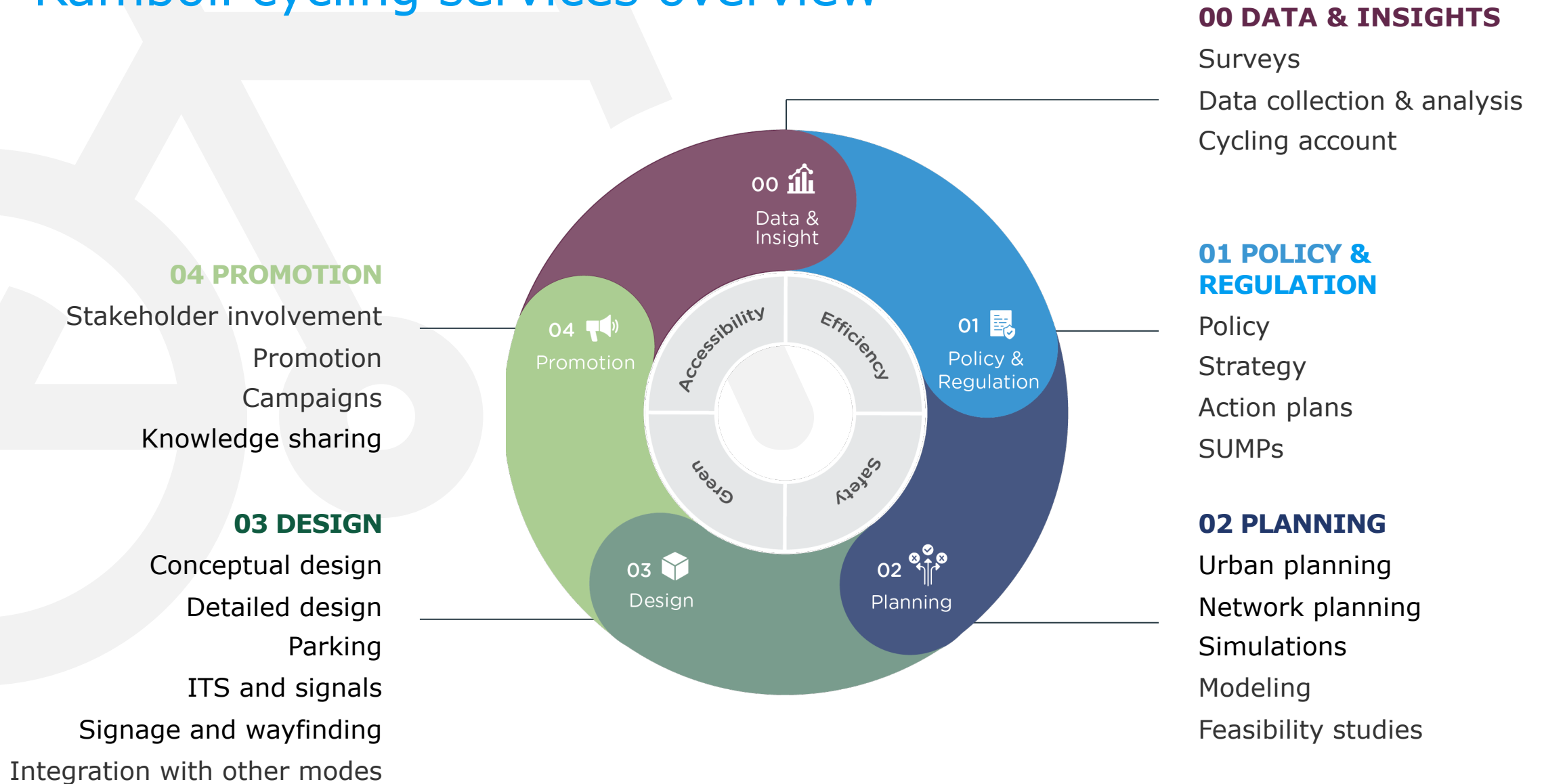


Ramboll cycling services overview



03 Design

References

03 Design

When designing cycling infrastructure we always use our experience and **best practice from the Nordics, Germany and the Netherlands** and adapt this to the **local context and the local cycling culture**.

Ramboll also have expert knowledge in street design, intelligent transport systems (ITS), ground engineering, landscape architecture, climate adaptation and stormwater handling. This means that we can **take care of the whole design phase, from conceptual and principal design to detailed design**.

Examples of services for this phase are:

- Conceptual design
- Design manuals
- Detailed design
- Bicycle parking
- ITS and signals
- Wayfinding and signage
- Urban and landscape integration
- Climate resiliency and adaptation



Planning manual

National planning manual for bicycle traffic

Challenge

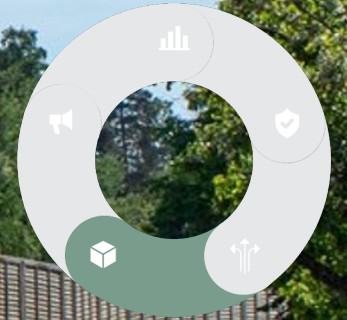
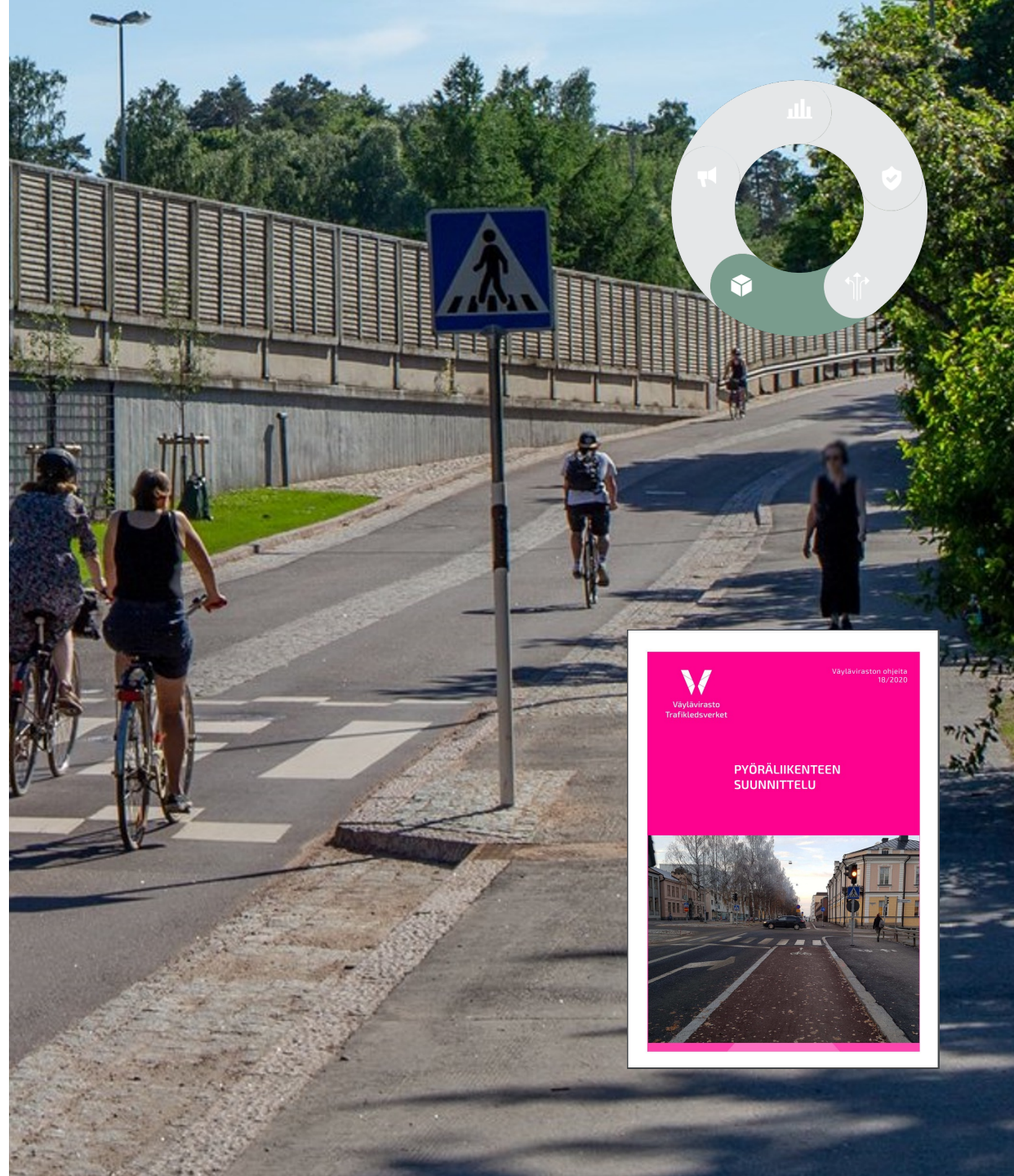
In order to reach the set goals for bicycle traffic, a significant improvement is required for bicycle infrastructure in Finland. The low standards of planning have limited the growth of cycling for decades.

What we did

We wrote the manual from A to Z in order to set the necessary planning principles and introduce some new traffic arrangements. The manual content is following the best practices in the world and fit them in the local context.

Effect

The new national planning manual represents the new era of bicycle traffic planning in Finland. Building bike paths with the new standards will take time – but most importantly, the page has turned.



Oslo City Center

Pre-study Stenersgata and more

Challenge

There is a lack of bicycle infrastructure through the center of Oslo. At the same time, the needs of public transport, pedestrians and goods delivery must be taken care of.

What we did

Rambøll assists Oslo municipality in carrying out a pre-study for bicycle facilitation for the missing links in the city center. This includes designing of 6 street sections.

Ramboll draws up various solutions and assesses these against requirements.

Effect

City of Oslo will use the report and the designs as a basis for implementing measures to better facilitate for cycling through the city center.



Wayfinding

Wayfinding for bicycle traffic

Challenge

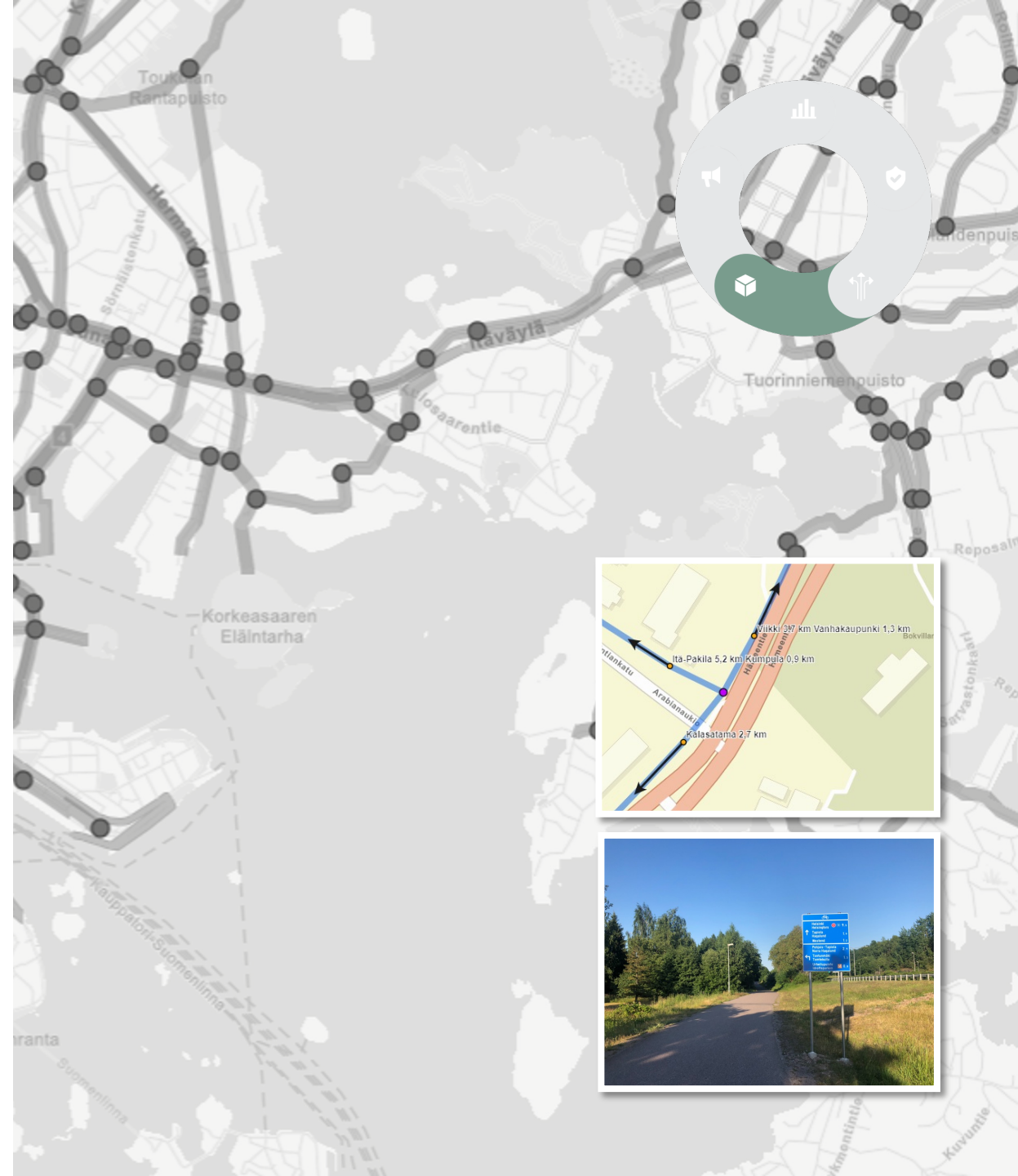
Bicycle paths are not always intuitive and easy to follow from A to B. To make cycling an attractive alternative for everyone, people need to find their way in the cities.

What we did

We created a GIS-based tool to determine the contents for wayfinding. The output is an error free and easily updateable general plan for wayfinding. The general plan is database for traffic signing contents.

Effect

We could deliver time saving wayfinding planning to our client. With new better signposting, more cycling can be expected as way finding get much easier for everyone.



Fornebu Oslo

Flytårnet sykkelutredning

Challenge

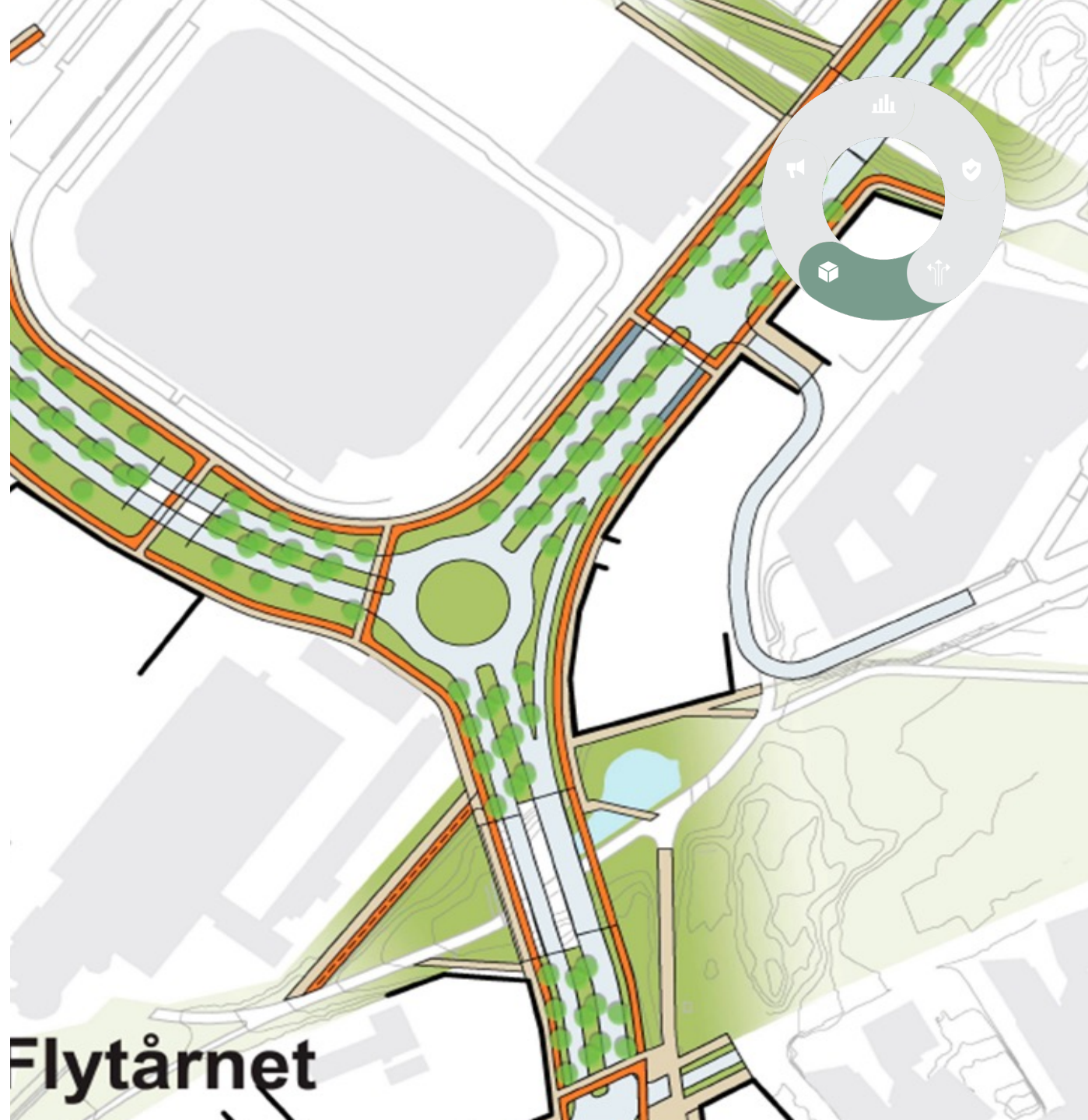
Bærum municipality wanted an assessment of bicycle solutions in the northern part of the Fornebu area. Here one saw a need to evaluate the system solutions for bicycle in more detail for a comprehensive system for the area.

Our delivery

Rambøll has made an assessment of the bicycle system, various crossing solutions and system switches / type of crossings at an overall level. Two principle alternatives have been considered; one-sided two-way solution and two-way one-way solution.

Impacts

Proposed solutions will provide a much better accessibility to the walking and cycle path system from the surrounding development areas. This with a good network of main routes supplemented by a network of secondary routes for cyclists.



Active School Travel

DLR (Greater Dublin), Ireland

Challenge

Unsafe conditions for children to walk and cycle to school as a result of car oriented suburban planning and street design from the past.

What we did

Designed a coherent network of Active School Travel routes with the safety concerns of families with children in mind, linking residential areas to 65 schools across the county.

Effect

Enabled more children to walk and cycle to school, and help to change the perception of cycling in DLR County.



Bicycle Snake

Attractive Urban Bicycling Connector

Challenge

Improve connectivity and reduce travel time and route distance for users of a heavily trafficked bicycle route bifurcated by a canal in central Copenhagen.

What we did

Prepared the project proposal, detailed design and tender materials, as well as fabrication and construction inspection.

Effect

The "Bicycle Snake" prioritizes connectivity, greatly increases the convenience of bicycling, and is a visually stunning example of people-focused infrastructure.



Design Principles

for pedestrians and cyclists

Challenge

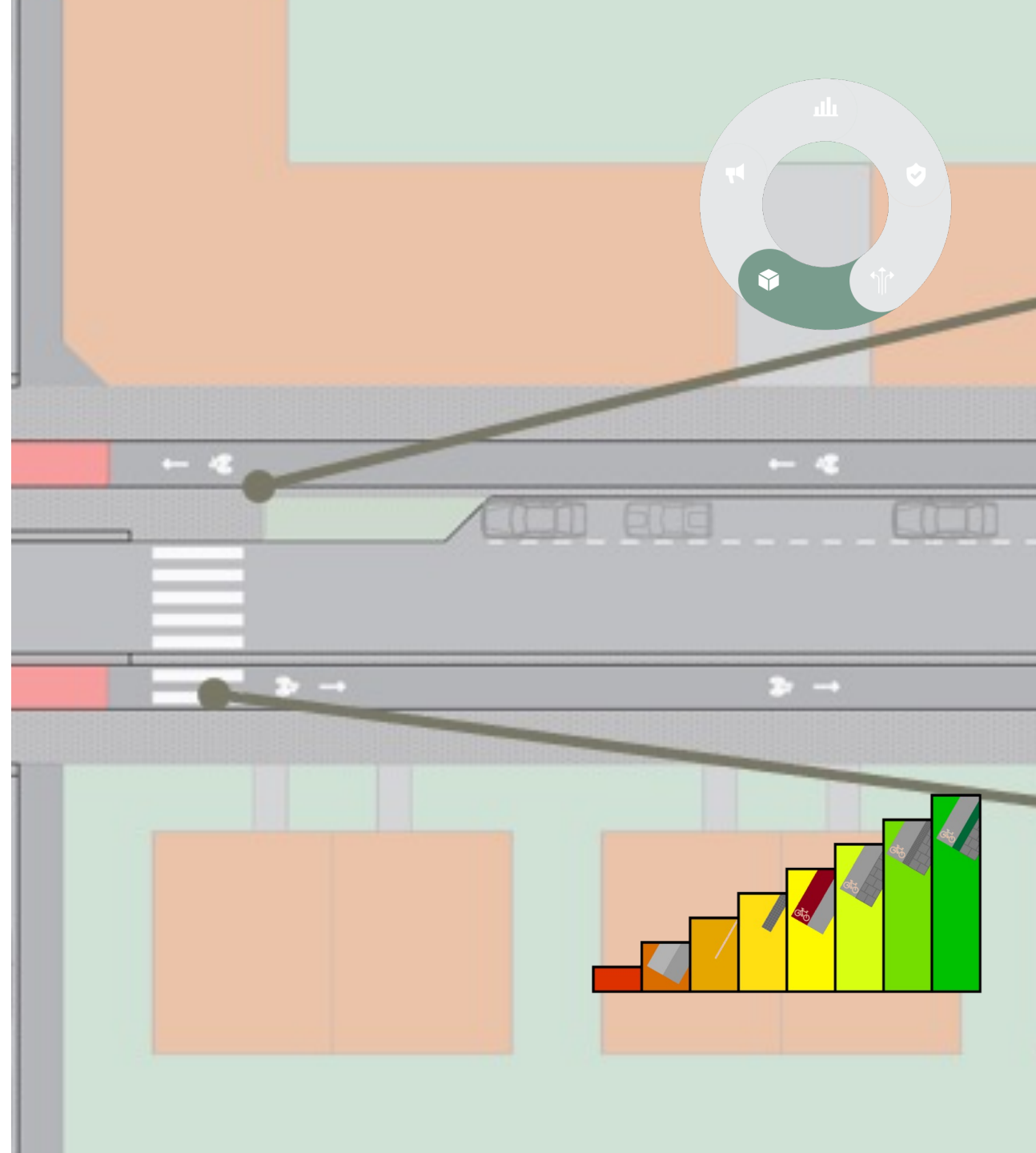
Develop design principles for interaction between cyclists and pedestrians which would be applicable in a multitude of situations around the city of Gothenburg.

What we did

From a literature study and behavioural studies we set four basic design principles. From these principles we developed guidelines on how and when to use different design elements such as materials and markings. We also provided some examples on how these can be used to realise segregation according to the design principles.

Effect

The design principles and the elements are now being incorporated into the city's design manual.



Case Sattula

Safe solutions for walking and cycling in sparsely populated areas

Challenge

In the small municipality of Hattula in the village of Sattula there was a typical need to improve walking and cycling conditions. Car traffic was perceived as a safety threat on a six-meter-wide road without separate sidewalks or bike paths.

What we did

We designed a so-called Dutch village road solution, i.e. a 2 + 1 lane solution, for the road passing the village (2.5 kilometres). This solution divides the 6 m wide road into a 3 m wide central lane and 1.5 m wide lanes marked on both sides for cycling and walking. The speed limit was reduced all the way to 40 km/h with some traffic calming measures.

Effect

Cyclists and pedestrians feel that safety on Sattulantie has improved and they are more willing to bike than before. Two thirds of the residents on Sattulantie recommend this solution for similar roads in Finland. In 2018, the "village road" of Sattula was the cycling action of the year (in Finland).

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