

CHIPS

CYCLE HIGHWAYS INNOVATION
FOR SMARTER PEOPLE TRANSPORT
AND SPATIAL PLANNING





SUMMARY

CHIPS will develop and promote cycle highways as an effective and cost efficient low carbon solution for commuting towards and from urban employment poles. Innovations to make cycle highways more attractive, comfortable, safer and easier to use, will be tested and demonstrated on routes leading to Brussels, Belfast, Frankfurt, Arnhem and Tilburg.

North-West European urban areas are struggling with high GHG-emissions as a result of increasing car traffic. Different cities and regions in the area are considering cycle highways as a new and cost efficient low carbon solution for medium distance (5-20 kilometres) commuting towards and from urban employment poles. Especially in combination with the growing number of e-bikes, cycle highways can effectively get commuters out of their cars. However, a number of barriers, both physical and behavioral, exist across the region for this potential to be realised. **The CHIPS project will develop transnational standards and approaches and test, demonstrate and roll out solutions and tools** that enable regions to tap into the full potential of cycle highways as an attractive commuting option. **Cooperation between leading bicycle regions in the Netherlands and Belgium** (with high levels of bicycle commuting and operational first generation cycle highways) **and follower regions in the UK and Germany** (with lower levels of bicycle commuting and cycle highways in advanced planning phases) will prepare the ground for a new, more attractive generation of cycle highways and related services that optimize synergies with public transport and even cars. CHIPS will identify common barriers across Europe and will develop solutions to enable more commuters to commute by bicycle on cycle highways. Eventually, this will lead to a sustainable change in commuting habits of an important group of commuters. In an equally innovative approach, the project will examine how cycle highways can play a role in future-proofing spatial policy in the NWE region.

By **re-designing cycle highways in five regions** (see below) to high quality standards, both with regard to infrastructural and non-infrastructural aspects, CHIPS will demonstrate the potential impact of this mobility concept for a sustainable modal shift towards low carbon commuting in the NWE region. As a result of funded investment and campaigns, we forecast a 150 to 300 percent increase in the actual number of cyclists on the cycle highways. The CHIPS-consortium will provide policy makers, city planners, employers and commuters in the whole of NWE with a proven, well documented, viable and sustainable alternative to car-dominated commuting approaches.

Roll-out of approaches and solutions that are validated throughout the project is guaranteed by the important number of associated partners. Secondly, the yearly meetings of advisory boards in Belgium, Germany, The Netherlands and the UK will enable other cities, regions and stakeholders to learn about project and investment results, have their input in the different work packages and share their ideas and initiatives. Last but not least, a series of five innovative transnational Cycle Highway Academies will enable authorities and other stakeholders to meet with companies that offer cycle highway related products and services, to learn about the new solutions and approaches that are being developed, to have an input on the further development of these solutions and to develop a 'common language' regarding cycle highways. The Cycle Highway Academies will become self-supporting and will be continued after the end of the project.

A STRONG TRANSNATIONAL PARTNERSHIP: 9 PARTNERS, 8 SUB-PARTNERS AND 34 ASSOCIATED PARTNERS:

- 1 Provincie Vlaams-Brabant (B)** (lead partner) (sub-partner: Mobiel 21)
- 2 Provincie Gelderland (NL)** (sub-partners: Radboud University, stad Nijmegen)
- 3 Regionalverband FrankfurtRheinMain (D)** (sub-partners: Fraport, Gateway Gardens G3, DB Rent)
- 4 Regionalverband Ruhr (D)**
- 5 Verband Region Rhein-Neckar (D)**
- 6 European Cyclists' Federation (B)**
- 7 Flanders' Bike Valley vzw (B)**
- 8 Sustrans (UK)**
- 9 Stichting NHTV internationale hogeschool Breda (NL)** (sub-partners: TU Eindhoven, Stad Tilburg)

Associated partners:

Provincie Antwerpen (B), Stad Leuven (B), Gemeente Zaventem (B), Brussel Mobiliteit (B), Ruimte Vlaanderen (B), Gemeente Herent (B), Gemeente Kortenberg (B), Fietsberaad Vlaanderen (B), Gemeente Machelen (B), Departement Mobiliteit en Openbare Werken (B), Allgemeiner Deutscher Fahrrad Club Hessen e.V. (D), House of Logistics & Mobility GmbH (D), Stadt Frankfurt am Main (D), Stadt Hanau (D), Stadt Darmstadt (D), Stadt Heidelberg (D), Landratsamt Rhein-Neckar-Kreis (D), Stadt Mannheim (D), Stadt Ludwighafen am Rhein (D), Verkehrsverbund Rhein-Neckar (D), Nantes Métropole (F), Départements & Régions Cyclables (F), Stichting Groene Allianties (NL), Hermes Openbaar Vervoer B.V. (NL), NS (Nederlandse Spoorwegen) (NL), Hogeschool Van Hall Larenstein (NL), CROW-Fietsberaad (NL), Supercykelstier (DK), Provincie Noord-Brabant (NL), Provincie Limburg (NL), De Lijn (B), Department for Regional Development (UK), Department of Transport Tourism and Sport (IRL), Transport for London (UK).

The CHIPS consortium consists of a combination of partners and associated partners, local and regional authorities, transport operators, not-for-profit companies, sustainable transport charities and universities, from NWE regions at the forefront of cycle highway development (the Dutch and Belgian actors plus Transport for London in the UK and Supercykelstier in Denmark) and from follower NWE regions (the German, Republic of Ireland and Northern Ireland - UK partners) that have the ambition to shift an important part of commuting transport to cycle highways. The strong complementarity between partners means that all partners and associated partners gain a lot from participating in the project. Fields of partner expertise include actual experience with operational cycle highways (Flemish Brabant, Gelderland), spatial planning (Flemish Brabant, German partners), behaviour change, workplace and commuter engagement (Sustrans), far reaching cooperation with public transport (Gelderland, Rhein-Neckar), monitoring (NHTV, Sustrans), relations with companies (Flanders Bike Valley) and European outreach (ECF).

Frontrunner and follower partners will work closely together in all work and investment packages, whereas frequent national and transnational meetings will enable knowledge transfer and a much broader exchange of views and experiences among partners, associated partners and other stakeholders.

The project partners share a strong belief that together, they will be able to overcome the barriers that hinder cycle highways to realise their full potential. They will continue to cooperate through frequent teleconferences and bilateral visits, dependent of work package requirements. Every six months, all will participate in physical meetings of the project management committee, the investment steering group and in joint site visits. These meetings will be crucial for the coordination of the activities in the different work and investment packages and for the development of a sustainable nucleus of a transnational cycle highway community.

Yearly advisory board meetings in Belgium, Germany, The Netherlands and the UK and a series of five transnational Cycle Highway Academies will provide ample cooperation opportunities between partners and associated partners. They will guarantee that there will be broad input from stakeholders from the whole NWE area in the standards, guidelines, models and tools that will be developed in the project and do also facilitate roll-out in regions outside the CHIPS partnership.



SIX WORK PACKAGES, FIVE INVESTMENTS

The development of standards and approaches to upgrade cycle highways and their usage, as well as supporting tasks, are organized in different work packages. New solutions will be demonstrated and tested in five NWE regions. On all test sites, partners will also invest in monitoring equipment.

Work packages

Project activities are organised in six work packages. Work packages 3, 4, 5 and 6 can be seen as the laboratories where partners closely cooperate to develop common standards and innovations for a new generation of cycle highways, and approaches for maximisation of usage and long-term roll out of project results. Simultaneously, they provide the ideal platform for joint preparation of the investments and the campaigns towards cycle highway users.

1) Project management (lead: Provincie Vlaams-Brabant)

2) Communication (lead: ECF) Development and multimedia dissemination of key messages that will maximize visibility of project activities and results, facilitate the inclusion of stakeholders and raise awareness about the GHG reducing potential of cycle highways among decision makers, implementers and innovators on local, national and European level.

3) Long term effects: planning cycle highway oriented development (lead: Regionalverband FrankfurtRheinMain; supported by Flanders Bike Valley). Development of planning tools and guidelines for cycle oriented spatial planning in order to envision, plan, build, improve and integrate high quality bicycle infrastructure into spatial planning with a focus on industrial zones facing severe mobility issues; launch of a Cycle Highway Academy (CHA), an annual event with workshops and courses bringing together business and authorities that will continue to be organized after 2019; development of a post 2018 communication plan and of a Cycle Highways Vision 2025.

4) 'Building' the bicycle highway as a new mobility product in Europe (lead: Provincie Vlaams-Brabant). Analysis of existing cycle highways; development of elements to increase 'readability' (easy to grasp), orientation, security, comfort and recognizability, development of standards for cycle highways in Europe; preparation of demonstrations and tests; monitoring and evaluation of effects.

5) Enabling commuters to increase their usage of cycle highways (lead: Sustrans)

Mapping of target audiences; business and commuter engagement to identify barriers faced by commuters to using cycle highways; development of a general framework and of concrete campaigns to respond to these barriers; implementations of at least two campaigns per partner; monitoring and evaluation of effects.

6) Exploring the cycle highway's future role in people transport (lead: Gelderland)

Development of a model to better connect cycle highways with public transport and cars and to solve finance and governance issues; preparation of demonstrations and tests; monitoring and evaluation of effects.

Monitoring and evaluation as a transversal task (lead: NHTV)

Baseline measurement; monitoring and evaluation of all demonstrations and campaigns throughout the project, applying the leading Dutch cycle network analysis toolkit.

Investments

Investments are jointly prepared and monitored by the partners in the relevant work packages. General monitoring and coordination between the different investments happens in the transnational investment steering group, where all partners with investments are represented and other partners play an advisory role. There will be joint preparation of procurement and joint monitoring and evaluation. Part of the investments will be mirrored in several of the investment sites, permitting comparisons.

Innovative enhancement of bicycle highways (lead: Provincie Vlaams-Brabant): Investment in innovative measures that will improve orientation, information, safety and visibility and comfort of the cycle highway along the High Speed Train line between Leuven and Brussels. Additional investment in monitoring equipment to evaluate the measures, in a service and information station and in e-bikes that will be used for campaigns to convince commuters to use the cycle highway. Some partners will implement similar measures in their investment area.



Strengthening the link between (inter)regional public transport, cycle highways and the e-bike (lead: Provincie Gelderland): Investment in e-bikes, fast e-bikes, smart lockers and better parking infrastructure on five sites along cycle highways in the region Arnhem-Nijmegen. Investments aim to improve synergies between cycle highways and public transport or private cars and thus strengthen intermodal solutions. Additional investments in readability measures parallel to the investments of other regions.

Considering the needs of employees: developing innovative commuting infrastructure at strategic locations within the cycle highway network (lead: Regionalverband FrankfurtRheinMain):

On three sites in and around Frankfurt Airport, a mobile service and information station for the users of cycle highways will be tested. Later, this mobile 'Mobility Hub' will also be tested on the sites of other partners. The station can be integrated in larger mobility infrastructure such as train stations or car parks. It contains smart lockers and smart racks, charging infrastructure, bike share infrastructure, information panels and counters.

Realising the potential of the Comber Greenway (Comber-Belfast) as a Cycle Highway

(lead: Sustrans): Investment in an 'Active travel hub' providing a base for behaviour change and promotion actions, as well as information and services; smart cycle storage units, bike service points, e-bikes for e-bike demonstration actions and positive messaging and promotions. CHIPS investments on the Comber Greenway will leverage additional local stakeholder investments in route development, including extending the route into Belfast City centre and lighting.



Bicycle Highway Hart van Brabant (Tilburg-Waalwijk): evaluation of the 'Live Cycle' Highway

(lead: NHTV) : Investment in innovative monitoring equipment along the cycle highway Hart van Brabant. The world's first real Virtual Reality cycle experience monitor will enable authorities to test the ideal mix of measures that will attract commuters. Based on the results of this monitoring, there will be investments in measures that increase readability and attractiveness, parallel to the investments in other regions.