TURN UP THE HEAT
Recommendations to increase the use of the World Health Organization’s Health Economic Assessment Tool for Cycling across Europe

Summary Report for the European Cyclists’ Federation
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Physical inactivity is associated with nearly one million deaths per year in the 53 Member States of the WHO European Region, making it one of the leading risk factors for Europe’s health. The Health Economic Assessment Tool (HEAT) for walking and cycling was designed to estimate the economic value of the health benefits that result from walking or cycling. In so doing, the WHO intended to advocate cycling and walking as healthy and environmentally friendly means of transportation, which can increase the levels of daily physical activity in the general population, and to facilitate their consideration and integration in policy and planning processes related to transport and urban planning.

Since its initial appearance in 2007, the HEAT has been applied by a variety of users, including policy makers, researchers, professionals and students from all over the world. Feedback on their experience in the use of the HEAT is of paramount importance to guide the further development of the tool, improve its relevance and usefulness to its target audience, and expand its application, particularly in the context of policy making.

This report, whose development was spearheaded by the European Cyclists’ Federation, provides new, interesting insights on the impacts that the HEAT has had in policy making processes, and particularly on their integration into the planning, evaluation and assessments tools used across several EU Member States. We look forward to implementing the useful lessons that have been derived from these analyses, which will help increasing the uptake and impact of the HEAT both in the countries where the tools are already used, and in new countries interested in cycling and walking.

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The Health Economic Assessment Tools (HEAT) for walking and cycling have been developed by the World Health Organization Europe. They enable users to estimate the societal value of reduced mortality that results from physical activity through regular walking or cycling.

This report brings together findings from the literature on the HEAT, a survey of users, and interviews, to make recommendations for increasing its use across Europe. The study found the following learning points:

- National-level endorsement of the HEAT is scarce but increasing.
- The HEAT is solid and respected; this is not a barrier to its wider use.
- The use of the HEAT largely depends on an enthusiastic ‘early adopter’.
- The most impressive thing about the HEAT are the numbers they produce.
- HEAT is more useful in countries with low levels of cycling.
- HEAT is more applicable in countries where economic appraisal is established.
- HEAT is often used to justify existing decisions.
- Communication and dissemination of HEAT and specific results – and its timing – can greatly influence its uptake.

Recommendations for a strategy to increase the use of HEAT

- Focus on countries with the highest potential.
- Create a network of HEAT ‘super-users’.
- Encourage key stakeholders to ‘give it a try’.
- Encourage its use in larger scale modelling and scenarios.
- Aim for the HEAT to be recommended for use by national transport administrations and the European Commission.
- Invest in data collection.
- Promote its use more generally.

1. INTRODUCTION TO THE HEAT

Origins

Coordinated by the World Health Organization Regional Office for Europe, the development of HEAT for walking and cycling was initiated and is being carried out under the umbrella of the Transport, Health and Environment Pan-European Programme (THE PEP). THE PEP is a unique intersectoral and intergovernmental policy framework to promote mobility and transport strategies that integrates environmental and health concerns. It involves the transport, health and environment sectors of 56 member States in the UNECE-WHO European region.

First launched in 2007 as an Excel sheet for cycling and launched in 2011 as an online tool for cycling and walking, the HEAT allows users to estimate the societal value of reduced mortality that results from physical activity through regular walking or cycling. It has been supported by over 60 scientists, practitioners and policy makers, and has received financial support from a number of governments, organisations and institutions, highlighting the broad intersectoral support HEAT has received so far.

The HEAT for cycling and walking:

- Is intended to be part of comprehensive cost–benefit analyses of transport interventions or infrastructure projects;
- Complements existing tools for economic valuations of transport interventions, for example on emissions or congestion;
- Can also be used to assess the current situation or past investment;
- Is based on best available evidence, with parameters that can be adapted to fit specific situations and contexts. Default parameters are provided for the European context.

HEAT calculates the answer to the following question: if x people cycle or walk y distance on most days, what is the economic value of mortality rate improvements?

A guidance book and summary addresses practitioners and experts, focusing on approaches to the economic valuation of positive health effects related to cycling and walking.

Applications

HEAT can be applied in many situations, for example:

- To plan a new piece of cycling or walking infrastructure: it models the impact of different levels of cycling or walking, and attaches a value to the estimated level when the new infrastructure is in place;
- To value the mortality benefits from current levels of cycling or walking, such as benefits from cycling or walking to a specific workplace, across a city or in a country;
- To provide input into more comprehensive cost–benefit analyses, or prospective health impact assessments: for instance, to estimate the mortality benefits from achieving national targets to increase cycling or walking, or to illustrate potential cost consequences of a decline in current levels of cycling or walking;

2. INTRODUCTION TO THIS STUDY

The HEAT has been carefully developed over a number of years and a great deal of effort has been put into ensuring it is technically accurate, and combines the best knowledge on the relationship between physical activity and mortality; with appropriate application of transport economics. It has been well received, and appears to be influential, but two key questions remain:

- To what extent is the HEAT used, and by which groups?
- How could the HEAT be more widely and effectively disseminated to facilitate greater policy influence?

This study aims to improve understanding of the potential for integrating HEAT for cycling into more European countries’ national transport, health, and environment policy evaluations. It provides a detailed investigation into the factors that have led to its successful implementation in selected European countries. These factors are explored and analysed to provide recommendations for increasing its use across Europe.

1. THE PEP; the European Union; the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management; the Swiss Federal Office of Public Health; the Swedish Expertise Fund, facilitated by the Karolinska Institute; Department of Health England; Environment Agency for England; the Countryside Council for Wales; Public Health Wales; the Physical Activity Nutrition Network for Wales; the Forestry Commission; England; the Scottish Government Public Health Directorate; Natural England; the French Ministry of Social Affairs, Health and Women’s Rights and the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
Aim: To explore the potential for increasing the use and influence on policy making of the HEAT for Cycling.

Objectives:
- To review the impact of the integration of HEAT in evaluation protocols in the UK, Austria and other European countries where it has been applied.
- To determine what lessons can be learned about integrating HEAT into transport infrastructure assessments in other European countries.
- To assess the potential for increased application and impact in those and other European countries.
- To provide input useful for a strategy to expand the number of European countries using HEAT type analyses when transport infrastructure planning decisions are made.

3. METHODS

3.1. Overview of documentation to date on the HEAT’s use and impact

Information on HEAT’s use and impact to date was collected from a wide range of sources.*

3.2. Identification of case study sites

To explore the factors that had led to successful implementation of the HEAT, we initially had to identify people who had used the HEAT and had fulfilled at least one of the following criteria:

- Established the HEAT as a tool that was recommended (or mandated) for use by an authoritative body within their country or organisation.
- Reported that the HEAT had achieved a direct influence on policy or practice in their organisation or country.
- Reported other findings or thoughts that might lead to the above in the future.

People were identified through a bespoke survey sent by email to 2,865 people identified as users of and/or interested in the HEAT.†

3.3. Semi-structured interviews

The results from the above process were used to identify people who could offer further valuable learning about the HEAT. These people were contacted and asked to participate in a semi-structured interview.‡

4. RESULTS

4.1. Overview of documentation to date on the HEAT’s use and impact

The HEAT website was launched in May 2011. Since then, it has received almost 600,000 page views1 by over 34,000 users, or a weekly average number of visitors of about 110. While developed for the European region, the HEAT use is global, with the top countries being the United Kingdom and the United States, followed by Italy, Germany, Canada, France, Australia, Finland, Spain and Belgium. Lises are recorded by countries as far away as New Zealand, India or Mexico. However, 17 of the top 25 use countries are within the European Region.

Since November 2012, WHO/Europe offers regular HEAT training webinars in English and German; since late 2014, some of the English editions have been run in collaboration with the ECF. To date, over 600 people have been trained. In addition, the ECF and local experts also run training sessions; however, there is no comprehensive overview of these sessions and to our knowledge, attendance is not systematically recorded.

All users are asked to specify their main area of work. As to be expected, transport and health as well as environment were the most frequently mentioned main areas of work. This is followed by comparable shares of research-related and policy-related users, while users active in evaluation or advocacy seemed to attend the webinars less frequently.

4.2. Documented applications

The information from the different information sources described above yielded a total of 124 applications (not including requests for technical support sent by email without a full description of the application). From these, 28 did mention HEAT but not apply it in practice and 4 were incomplete draft reports.

The large number of officially published applications both by academia, governments, NGOs and consultancies does demonstrate a wide recognition of the HEAT as an established and credible tool to calculate health benefits from transport interventions. Within the scope of this study, the most interesting applications are the 16 government papers, i.e. documents issued by a part of an administration, and/or guidance documents that promote the use of HEAT, 11 of these from the European Region.

There are also several reports from academic institutions or consultancies that were developed on behalf of administrative bodies and research reports, in particular by local administrations. As they were not issued as official documents by national governments and/or were of a more technical nature less conducive to have an impact on policy or practice, they were of less interest for this study. As becomes apparent from the overview, despite the wide-ranging searches and repeated invitations to report applications, there is to date still only a limited number of documented uses of HEAT by government agencies, and a majority of those come from the United Kingdom. This may be due to an English language bias, but this seems to be only a partial explanation, as the HEAT user guide has also been translated into German, French, Spanish, Finnish and Polish. It is more likely that this reflects the differential uptake of the HEAT by certain countries (as explained in the case study section 4.4).

4.3. Results from the survey

By 1 December 2015 there were 263 responses in total, of which 212 were complete (representing 9% of the total sample).

- Work background of respondents
  The majority of respondents came from public health with similar numbers of responses from transport and academic sectors. This is interesting when it is considered that the HEAT was aimed at the transport sector, but the subject matter is clearly of interest to public health.

- Experience of using the HEAT
  74 respondents (28%) reported having performed one or more full calculations using the HEAT, while 101 people had either not looked at the HEAT or just looked at the website.

- Reasons for not using HEAT
  Those respondents who had not used the HEAT were asked the main reasons why. Not 56 people (41%) claimed lack of time

*Outline in detail in the full report available from www.ecf.com/heat-study
†May 2011–October 2015
‡Turn up the HEAT - Summary Report for the European Cyclists’ Federation
while 38 (28%) said they did not have the right data. 16 people said they did not think it would produce results that they could use.

The following more detailed data therefore comes only from the 74 people who had carried out a full calculation. 61 people said they thought the HEAT calculation they had carried out had some impact on their target audience. Of these, 6 people reported a negative impact, one a neutral impact, and the vast majority of respondents (54) reporting a positive impact.6

4.4. The HEAT as a voluntary or mandatory tool

Five respondents reported that the HEAT is a mandatory part of transport assessments. These were all from the United Kingdom. As discussed later, this is not actually the case; HEAT is formally recommended by the Department for Transport but is not mandatory.

Twelve respondents stated that the HEAT was formally encouraged by their government or key organisation. 8 of these were from the United Kingdom, referring to the DfT’s webTAG guidance. Others included:

- Finland (2 mentions) where the HEAT has been promoted by the national transport authority and used in a number of cities.
- France where the HEAT was promoted by the WHO Healthy Cities network.
- USA (outside the scope of this study).

The remainder (47) reported that the use of the HEAT was voluntary. Some had discovered it through academic routes, others had used it for occasional calculations or to demonstrate the tool to others.

Influence on policy

Finally the survey asked about influence of HEAT results on policy. 41 people (58%) said they thought it had had an influence while 33 people (46%) said it had not.6

4.5. Summary of findings from the interviews

Department for Transport, England, United Kingdom

England’s Department for Transport (DfT) was one of the first national government departments to use and endorse the HEAT. The HEAT method is a core component in the DfT’s webTAG (Transport Appraisal Guidance) methodology. Its national support has gone on to encourage many others in the United Kingdom to use it. The HEAT was included in webTAG for three main reasons:

1. There was political will to support cycling and walking. Ministers were increasingly supporting cycling and walking initiatives, including demonstration towns and pilot programmes. To a large extent this may have been for environmental reasons rather than health, but it seems that the health arguments have helped to support the environmental aspects.

2. There was a strong tradition of economic appraisal in the United Kingdom. The appraisal system was well established, and transport authorities expected to have to put any proposal through some sort of assessment. This then meant that the health component embodied in the HEAT became just another module that they could add in if it could be justified. And as more and more cycling (and to a lesser extent walking) schemes were being proposed, the more it became used.

3. There was enthusiasm to include the health benefits. There seemed to be an increasing appreciation of the magnitude of the health benefits; a desire to demonstrate ‘joined up working’ between transport and health departments, and a desire to move from vague assessments of the benefits to health, towards quantification.

Sweden: Swedish Transport Administration (STA)

Along with Austria (see below), the Swedish Transport Administration has been involved in the HEAT development since the first consensus meeting in 2007.

The use of the HEAT has been recommended by the Swedish Transport Administration in its assessment tool GC-kalk3 since

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6 Outlined in detail in the full report available from www.ecf.com/heat-study
The Ministry of Transport does not use HEAT much yet for official communications, mainly because it is not part of the national economic assessment guidelines\(^4\). These guidelines are updated about every 5 years and that has not taken place since HEAT was launched. So there has not been the opportunity yet to foster its inclusion.

In Finland, the National Transport Agency encourages local transport authorities to use the HEAT.

HEAT documents have been translated and published online by the Fit for Life programme. This is a programme funded by the Ministry of Education Ministry of Social Affairs and Health and is managed by LIKES foundation for sport and health sciences\(^5\). The Finnish versions include the Finnish recommended values to help the use of the tool as well as two examples from Finland (Kuopio and Helsinki)\(^6\) and a case study application (from the town of Joensuu)\(^7\).

HEAT-tools have been promoted by the Fit for Life programme in the national cycling and walking network as well as the Mobility Management networks. Of particular importance was the promotion of the HEAT at a two-day Mobility Management seminar in 2014, organized by Motiva, which operates as an affiliated Government agency and promotes efficient and sustainable use of energy and materials. The use of the HEAT was promoted heavily through the network of cycling municipalities. As a result of this national-level promotion, HEAT analyses have been carried out in at least twelve metropolitan and rural areas (Helsinki, Espoo, Kokkola, Kuopio, Tampere, Joensuu, Ylöjärvi, Hyvinkää, Kangasala, Porvoo, Utajärvi and Jyväskylä). These cover over 25% of the whole population of Finland.

It seems likely that a major part of the success of the uptake of the HEAT in Finland has been due to the Finnish translation.


\(5\) http://www.klimaaktivwo.de/tools/mobilitaet/heatforscycling.html

\(6\) See footnote above.

\(7\) Austrian Ministry for Agriculture, Forestry, Environment and Water Management. The Division of Mobility, Transport, Noise at the ministry has been involved in the development of HEAT since the very beginning and sponsored the first HEAT consensus meeting in May 2007 in Graz, Austria. HEAT is currently promoted in three ways:

- They translated HEAT and the user guide into German when it was launched as an online tool in 2009; both are available on the Ministry’s website\(^5\).
- They applied HEAT with Austrian values and published the results in 2009 and again in 2014\(^4\); and
- They included a mention of the HEAT into the National Master Plan for Cycling\(^7\).

The HEAT results are also used regularly in presentation and communications of the ministry, e.g. in relation to a cycling tour of the former Minister of Environment.

\(8\) French Healthy Cities Network

The use of HEAT is optional in France, but has been promoted by the national transport research agency Centre d’Études sur les Réseaux, les Transports, l’Urbanisme et les constructions publiques translate (CERTU)\(^8\) and the national environment research body (Centre d’études et d’Expertise sur les Risques, l’Environnement, la Mobilité et l’Aménagement (CEREMA)\(^9\). They supported the French Healthy Cities Network to pilot the HEAT in cities across France. Healthy Cities produced a 4 page briefing in French\(^1\) and English\(^2\), developed a web page (www.villes-sante.com/HEAT) and written a Step by Step guide (“Étapes pour Reussir”) for French speakers to use HEAT\(^3\). These documents set out clear information on approaches to applying HEAT to the French situation, including advice on which data to use, and case study examples.


In the Brussels Region, two 6-year cycling Master Plans had been launched in 2004 and 2010. The policy goal stated in the Regional Mobility Plan “IRIS II” was to reach 20% by 2020 (see same reference). Investment in cycling had reached about EUR 10 Mio./year.

The 2010 Master Plan also included plans for an economic assessment. The administration had been prompted to include this goal due to a presentation of HEAT (and a previous tool by Cycling England) at a Velo-city conference. HEAT was used within the wider assessment to monetize mortality reduction benefits from cycling; comparisons were made with values found in the literature. The study also included other elements such as accidents, morbidity, congestion and environmental impacts.

The results of the study were that compared to the very low levels of cycling in 1999, the 4% mode share in 2012 already lead to about EUR 100 mio. of indirect benefits, most of which were due to health effects. Reaching the 20% goal would even bring EUR 500 mio. of indirect benefits. The results were used for a press release in mid-season (the so-called ‘slack season’), which created quite a strong media response.

In Spain, there have been two interesting uses of the HEAT. The first is in Barcelona, where work on the HEAT was started by an injury prevention expert working in the city’s Public Health Institute. She realized that there is a great deal of evidence and data in the city on cycling and walking, but not much is done with it. She had heard of the HEAT through conferences and links to academics, and thought she would try it out on the data from her city.

In conjunction with researchers from the nearby CREAL (centre for research into environmental epidemiology), she worked on a paper to estimate the benefits if more people reached the WHO recommendations for physical activity through cycling and walking, and another paper looking at the benefits of Barcelona’s recent policies towards walking and cycling, using results from a mobility survey.

The latest report was sent to the City’s mobility department, who found it helped them to promote the policies in the city, providing ‘good arguments for the politicians’. The results of HEAT have also been used to support proposals.

The second Spanish example is in the town of Zaragoza, in the north-east of Spain, the fifth largest town in Spain with a population of around 670,000. Before 2008 the use of the bike for transport in Zaragoza was very low. Encouraged by the national Sports Council (Consejo Superior Deportes), an assessment was carried out on cycling in the town. It is not clear whether this had much policy impact; both Spanish interviewees pointed out that the major challenge is that the HEAT is not well known in Spain.

This study has revealed a great deal of new information about the use of the HEAT across Europe and its impact on practice and policy. It has deepened our understanding of the ways in which the tool has been used, and revealed some new cases where the HEAT is being used at the request of the national government, as summarised below in Table 1:

Analysing responses to the survey and the interviews has uncovered a number of interesting lessons learned from this study that should be considered in any future efforts to increase the use of the HEAT across Europe. These are set out below.

### 5.1. National-level endorsement of the HEAT is increasing

As shown in section 4 and 5, the HEAT is included in national-level official guidance in two countries (United Kingdom, Sweden,) and encouraged by three others (Austria, Finland, France). Regional and local-level use is far more prevalent than national use (but often, it has been mentioned that national level endorsement and/or promotion would be helpful for local implementation).

### 5.2. The HEAT is solid and respected; this is not a barrier to its wider use

Respondents identified many positive aspects of the HEAT that have encouraged them to use it (see box). The most important of these are that the tool came from the WHO, and had been developed through a thorough, transparent and evidence-based process. The strong uptake of HEAT by academia – while not an initial target audience - demonstrated by dozens of scientific publications, also is a clear sign of its high scientific quality and recognition.

No-one interviewed said that they have heard from people who did not use the HEAT due to a lack of respect for its provenance, or a lack of trust in the methods used. By and large people have not used it either because they have not heard of it, or they have not ‘got around to it’ yet.

At the same time, the study did identify elements that could further increase the appeal of the HEAT, e.g. inclusion of morbidity or injuries and an even better explanation of the “value of statistical life” which is still not always well understood in some (and sometimes even transport-related) audiences.

### 5.3. The use of the HEAT largely depends on an enthusiastic ‘early adopter’

As with many innovations, successful adoption of the HEAT within countries or organisations has been greatly helped by enthusiastic individuals who hear of the HEAT, see its potential, and make the effort to try it out and then ‘spread the word’. More strategically developing and supporting a network of such advocates will be a key task for the future.
On the micro-level within administrations, it is about the right people being aware of it and promoting it and being willing to use it. The challenge is finding the right people, getting them to spend time to apply it at least once or twice to a specific scenario or case study and to promote it on the national and/or local level.

5.4. The most impressive thing about the HEAT are the numbers it produces

It is no use just buying a new bike and looking at it; the real joy comes from riding it. The same with the HEAT: many respondents said that they were not particularly impressed by just looking at the tool, but they were amazed to see the outputs it produced. In particular, people identified the increase in the size of the benefit-cost ratios by including health benefits in the calculations. Marketing of the HEAT should focus less on the process used to create it and the tool itself, and more on the results it produces and how these can be used.

5.5. HEAT is more useful in countries with low levels of cycling

The HEAT appears to be thought of as more useful in places where cycling is low, and where it is still useful to convince people that cycling is ‘a good thing’. Here, HEAT can be used on a wide range of scenarios or proposed infrastructure, to demonstrate the value of investment in cycling.

In higher-cycling countries, it seems that HEAT is more useful at a higher level: focussing on regional scenarios or policy evaluations. Here the HEAT may be used to sustain interest in cycling, and ensure that health is considered in the decision-making process.

5.6. HEAT is more applicable in countries where economic appraisal is established

HEAT is also more applicable in countries and systems where economic appraisal is an established practice. The United Kingdom is a good example here: the HEAT has become very established in the UK principally because there is a strong tradition of putting transport proposals through an economic analysis. Once the basics were considered (i.e. mainstream assessment of transport infrastructure using traffic modelling etc) there was then room to consider adding in health and other social outcomes. This is not the case in countries where economic assessments are not traditionally used in decision-making.

5.7. HEAT is often used to justify existing decisions

The research identified many examples of applications of the HEAT that were used to justify things that were going to happen anyway. There are few – if any – clear examples of direct impacts on decisions. This does not necessarily mean that HEAT had no influence – in many cases it seems to have been one – often important – puzzle piece, amongst others.

5.8. Communication and dissemination of HEAT and specific results – and its timing – can greatly influence its uptake

In a number of exchanges, it was mentioned that the key people first learned about HEAT thought presentations at conferences or press releases that included results for their city. At the same time, and even though hundreds of presentations have already been given at health and transport conferences, it was stated a number of times that especially local level planners still “never heard about the HEAT”. Continued and strategic further dissemination is thus another key task for the future, along with translation of the user guide and potentially the website.

In addition, when national or local HEAT results are available, it can be beneficial to aim for media dissemination. In this case, timing and/or using available media contacts can be crucial to ensure uptake.

6. RECOMMENDATIONS FOR A STRATEGY TO INCREASE THE USE OF HEAT

The following recommendations should be considered as core components of any strategy to increase the use of the HEAT. They apply to a range of stakeholders including ECF, WHO, and national and sub-national users of the HEAT.
6.1. Focus on countries with the highest potential

Increased use of the HEAT should be prioritised in selected countries or groups of countries where it is more likely to be taken up. These are countries that fulfil one or more of the following:

- Economic assessments are a routine part of decision-making.
- There are transport problems that have been identified that can be addressed by cycling and walking (e.g. congestion, overload of the public transport system or lack of one, pollution, climate change).
- There is a culture or initial steps towards sustainable transport.
- There is a transport infrastructure that allows for at least some cycling.
- HEAT is already used – perhaps by local experts or academics.
- There is a (possible) champion in or close to the Department of Transport.

6.2. Create a network of HEAT ‘super-users’

People need encouragement to begin using the HEAT; and then they need help and support in finding and using the right data, and interpreting and delivering the results. ECF/WHO should aim to have an identified person within each organisation, or at least within each country, who is responsible for increasing its use. Make this person responsible for training and dissemination of the HEAT, and ensure that they are available to answer routine questions. Train them to refer more tricky questions to the WHO. Develop a network of such ‘super-users’ and bring them together for training and to share ideas, perhaps linking with THE PEP focal points. Make also sure these people are skilled to defend the HEAT and its outputs, not just to use it and to support other users, in particular in view of the frequent survey response that results were met at times with disbelief.

6.3. Encourage key stakeholders to ‘give it a try’

The promotion of HEAT should focus less on the qualities of the HEAT itself and its provenance, and more on what it can do for the user. People who have used it have been universally impressed with the size of the health impacts. Thus, key stakeholders, mostly at a national level, should be targeted and encouraged to try out the HEAT (using real data and/or policy goals where possible) in their own situations.

6.4. Encourage its use in larger-scale modelling and scenarios

Linked to the above point, HEAT is at its most persuasive when applied to larger-scale scenarios, rather than small-scale infrastructure or schemes. Encourage its use for example in estimating the impact of doubling bike use in a city or achieving an already foreseen local, regional or national policy goal.

6.5. Aim for the HEAT to be recommended for use by national transport administrations and the European Commission

Local transport planners – and consultancies supporting them – tend to focus on applying tools and elements that are part of the official cost-benefit analysis guidelines. Thus, large scale application is likely to only occur once HEAT is officially recommended for use by the national transport authorities. The right key persons (see recommendation 7.1), the network of super-users (see recommendation 7.3) but also being aware of windows of opportunity, e.g. scheduled updates of national guidelines, new ministers being appointed etc., can be crucial in this process.

Just as within countries the use of the HEAT has been stimulated by national-level endorsement, we should aim for the European Commission to support HEAT at a strategic level. This would be best within the context of a European cycling action plan, strategically linked to the currently ongoing more informal process of THE PEP 23 to develop a pan-European Master Plan for Cycling Promotion by 2019. Time seems favourable to aim for a directive to implement cost-benefit analyses for national or local cycling policies, building on an informal meeting of ministers of transport 24, the ‘EU Cycling Summit’ approving the ‘Declaration of Luxembourg on cycling as a climate-friendly mode of transportation’ on October 7, 2015, which called for an EU level strategic document on cycling and European focal point on cycling.

6.6. Invest in data collection

The survey revealed that lack of data on walking and cycling is a key barrier to use of the HEAT. Users from the interview stated that trying the HEAT often had an unexpected outcome of helping them realise the gaps in their dataset. Supporting national and sub-national transport authorities in collecting better data on cycling and walking should be another key component of a future HEAT dissemination strategy.

6.7. Promote its use more generally

As well as the more specific targeted initiatives to increase use of the HEAT, it can also be promoted on a more general platform. Previous communications work coordinated by WHO-Europe could be re-considered and/or updated. Further elements includes:

- Press releases with specific HEAT calculations that have been conducted for cities / countries. These have led to high levels of publicity and lead to specific uptake.
- Use the available case studies more frequently, widely and strategically. Promote the use of the HEAT beyond the usual conferences (e.g. Velo-city), specifically also targeting national key stakeholders and local transport planners.
- Make links to ‘Health-in-all policy’ organizations – they could help to promote HEAT on the European level (e.g. EuroHealthNet, European Public Health Association), institutions linked to local transport planners such as POLIS and identify further allies in the transport world, in particular with regard to climate change debates, where health co-benefits are increasingly recognized.
- New translations of the HEAT user guide (perhaps according to demand following consultation with the network identified above).

This study has thus identified a range of possible follow-up actions, which should be further developed and disseminated strategically amongst the HEAT coordinators the ECF and its members, the HEAT core team and other players including the wider HEAT community.
