
COMMUTING CYCLING: OBSTACLES, INCENTIVES AND ECONOMIC BENEFITS HEAT-CASE KUOPIO, FINLAND



KUOPIO

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The views expressed herein can in no way be taken to reflect the official opinion of the European Union.



PRESENTATION CONTENT



- | Context
- | Project aims – Kuopio
- | Survey on bicycle commuting
- | Survey results
- | Economic benefit
- | Conclusions
- | Best place to cycle?

CONTEXT (1)

- | Physical inactivity is
 - | one of the leading risk factors for ill health in Europe
 - | associated to nearly 1 million deaths per year
 - | has become the fourth most important cause of death in high-income countries *

- | Physical activity
 - | prevents weight gain
 - | benefits physical and mental well-being
 - | reduce risk of heart disease and type 2 diabetes
 - | reduce risk of hypertension and some form of cancers
 - | decrease stress, anxiety, depression and loneliness *

CONTEXT (2)

- | WHO
- | EU
- | PHAN (Networking for Physical Activity) –project aims to
 - | offer Member States information, knowledge, tools, examples for the good practise and possibilities to exchange knowledge in order to **promote physical activity**
 - | create stronger **collaboration** with **heath care** and **other sectors**
 - | promote **new tools** and approaches to increase physical activity in different urban environments *



CONTEXT (3)



- | City of Kuopio belongs to WHO Healthy Cities network
- | Four towns besides Kuopio were invited **to test** HEAT (Health Economic Assessment Tool)
 - | cycling -> **HEAT for cycling**
 - | walking -> HEAT for walking



Introduction

[HEAT for walking](#)

[HEAT for cycling](#)

[Examples of applications](#)

[Methodology and user guide](#)

[Acknowledgements](#)

[HEAT for walking](#)

[HEAT for cycling](#)

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HEAT ▶ Introduction

Welcome to the WHO/Europe Health Economic Assessment Tool (HEAT).

This tool is designed to help you conduct an economic assessment of the health benefits of walking or cycling by estimating the value of reduced mortality that results from specified amounts of walking or cycling.

The tool can be used in a number of different situations, for example:

- **when planning a new piece of cycling or walking infrastructure.** HEAT attaches a value to the estimated level of cycling or walking when the new infrastructure is in place. This can be compared to the costs of implementing different interventions to produce a benefit–cost ratio (and help to make the case for investment)
- **to value the reduced mortality from past and/or current levels of cycling or walking,** such as to a specific workplace, across a city or in a country. It can also be used to illustrate economic consequences from a potential future change in levels of cycling or walking.
- **to provide input into more comprehensive economic appraisal exercises, or prospective health impact assessments.** For example, to estimate the mortality benefits from achieving targets to increase cycling or walking, or from the results of an intervention project.

More information is available at <http://www.euro.who.int/HEAT>

- [Start using HEAT for walking](#)

More information

What data do I need?

Before you begin, check that you have the data you need to produce an assessment.

[more...](#)

HEAT ANSWERS THE QUESTION



- | If x people cycle a distance of y kilometres on most days, what is the **economic value** of the health benefits that occur as a result of the reduction in mortality **due to** their **physical activity**?



PROJECT AIMS - KUOPIO

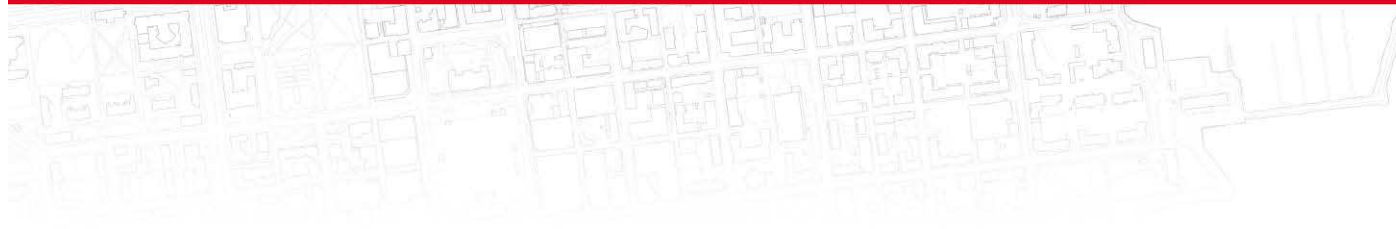


- | Assess the **level of bicycle commuting** by city employees
- | Estimate its **economic benefit** to society
- | Assess the possible **obstacles** and **incentives** of commuting by bicycle
- | Report the **experiences on using the tool** to WHO

SURVEY ON BICYCLE COMMUTING



- | Online survey was conducted 17 Nov – 2 Dec, 2011
- | Target group -> the City of Kuopio personnel (6069 employees)
- | Questionnaire
 - | based on survey questions drafted by international experts in the PHAN –project
 - | partly rephrased from the perspective of Kuopio
 - | Kuopio region strategy for bicycle and pedestrian traffic was utilized (published 2010)
- | Response rate 17 %

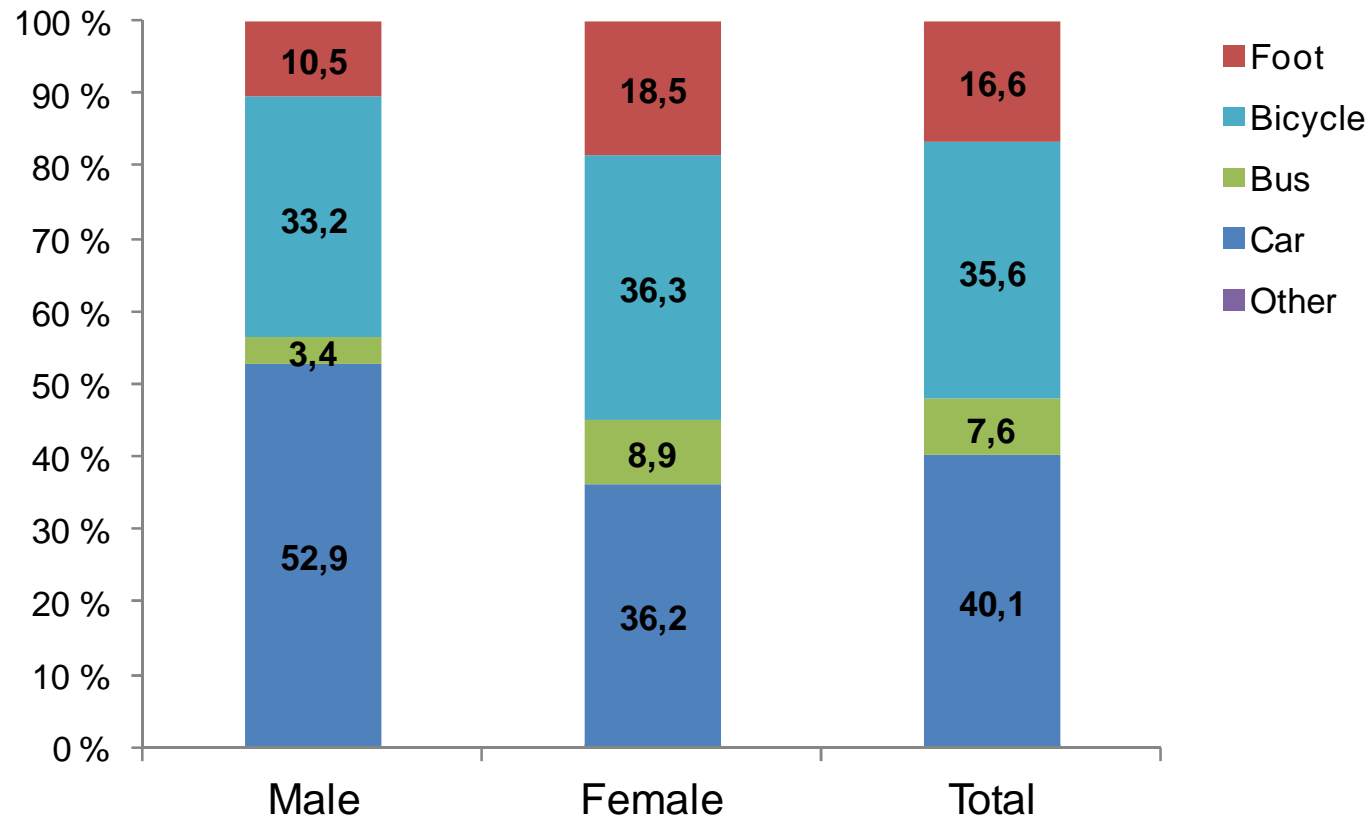


SURVEY RESULTS

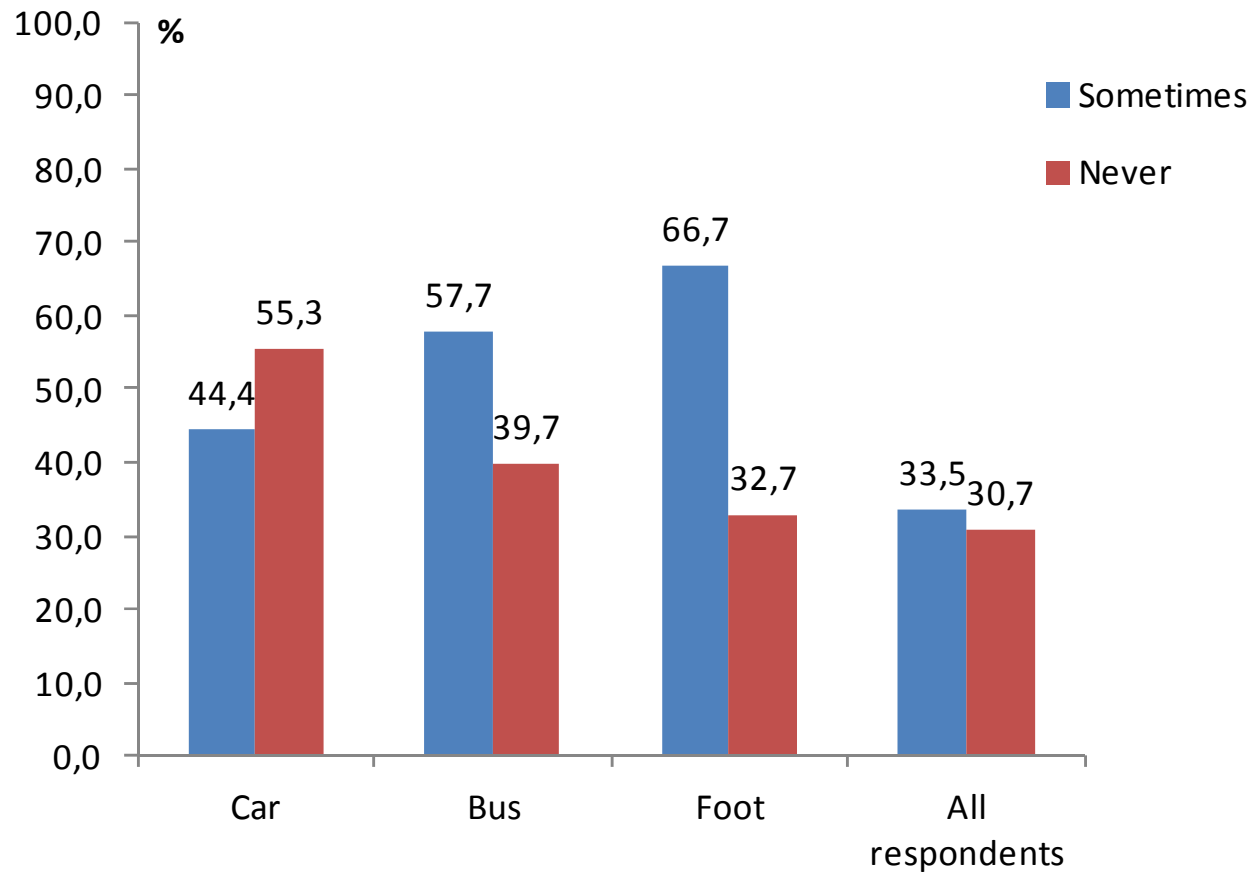
METHOD OF TRAVEL TO WORK



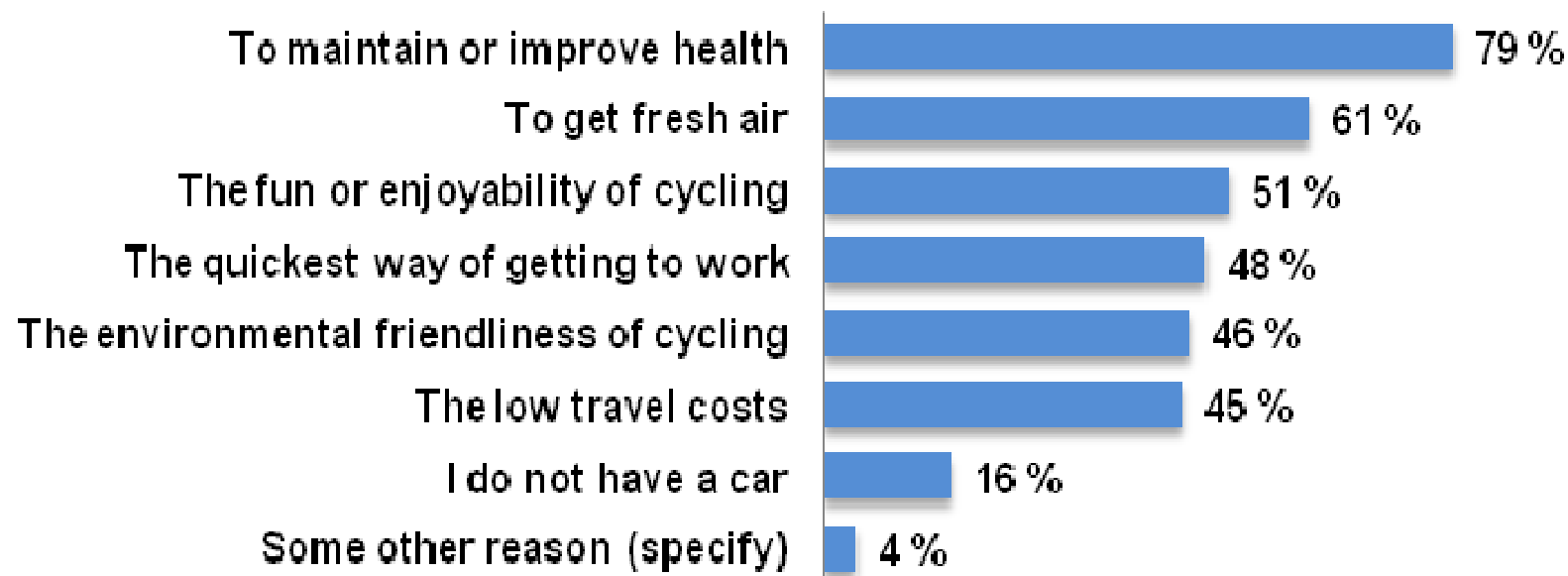
HOW DO YOU NORMALLY TRAVEL TO WORK?



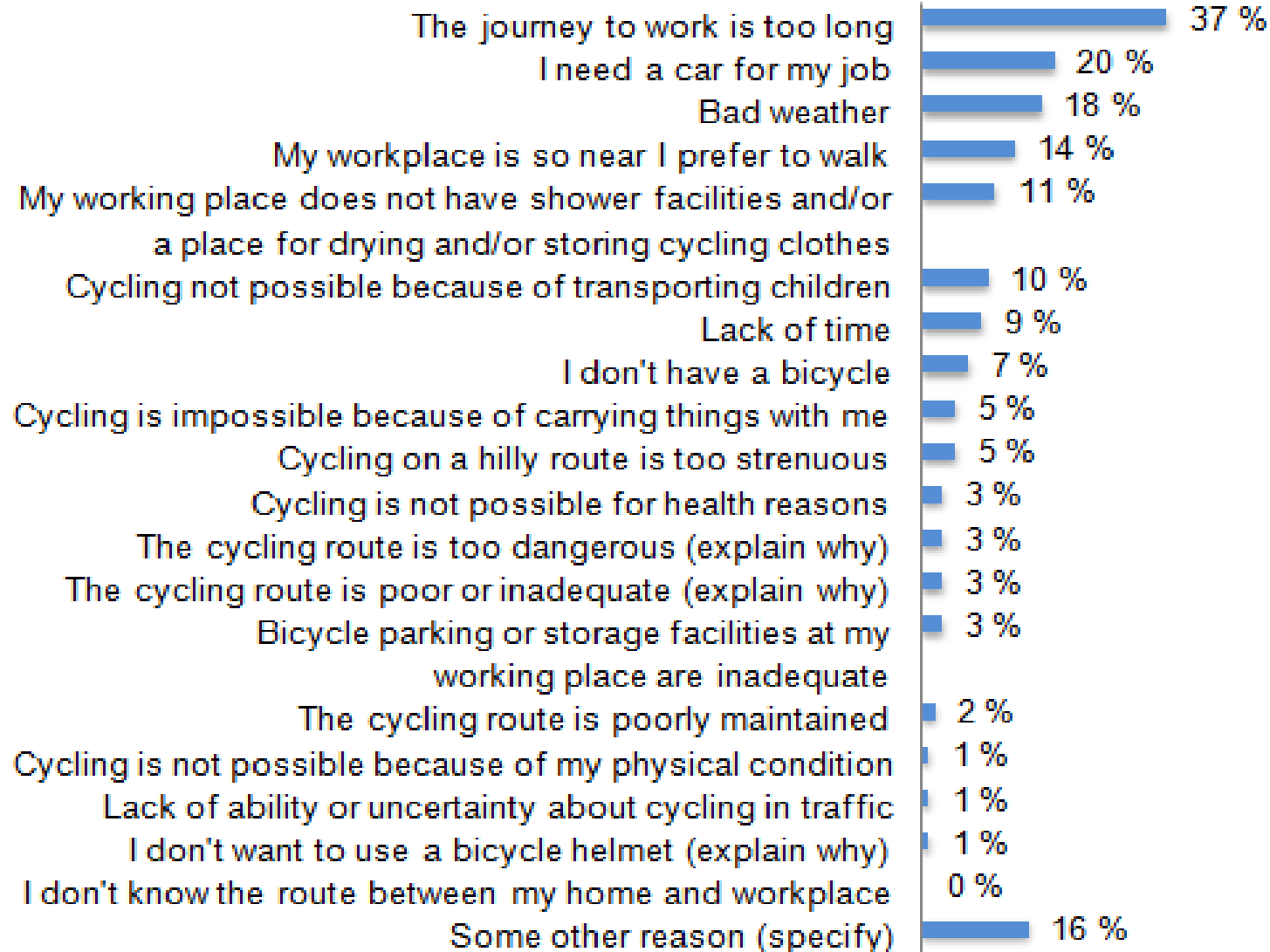
DO YOU EVER CYCLE TO WORK?



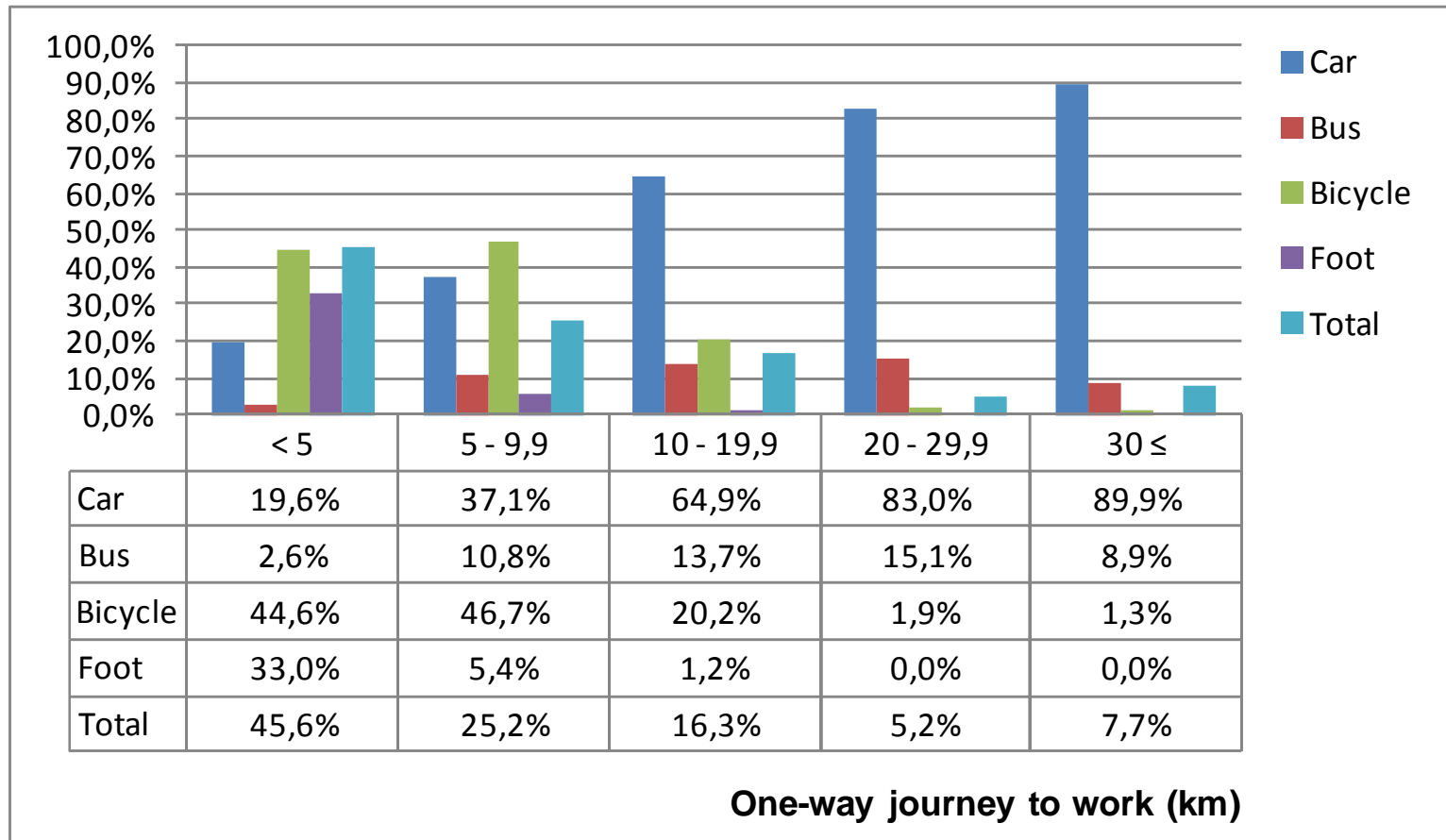
REASONS FOR COMMUTING BY BICYCLE



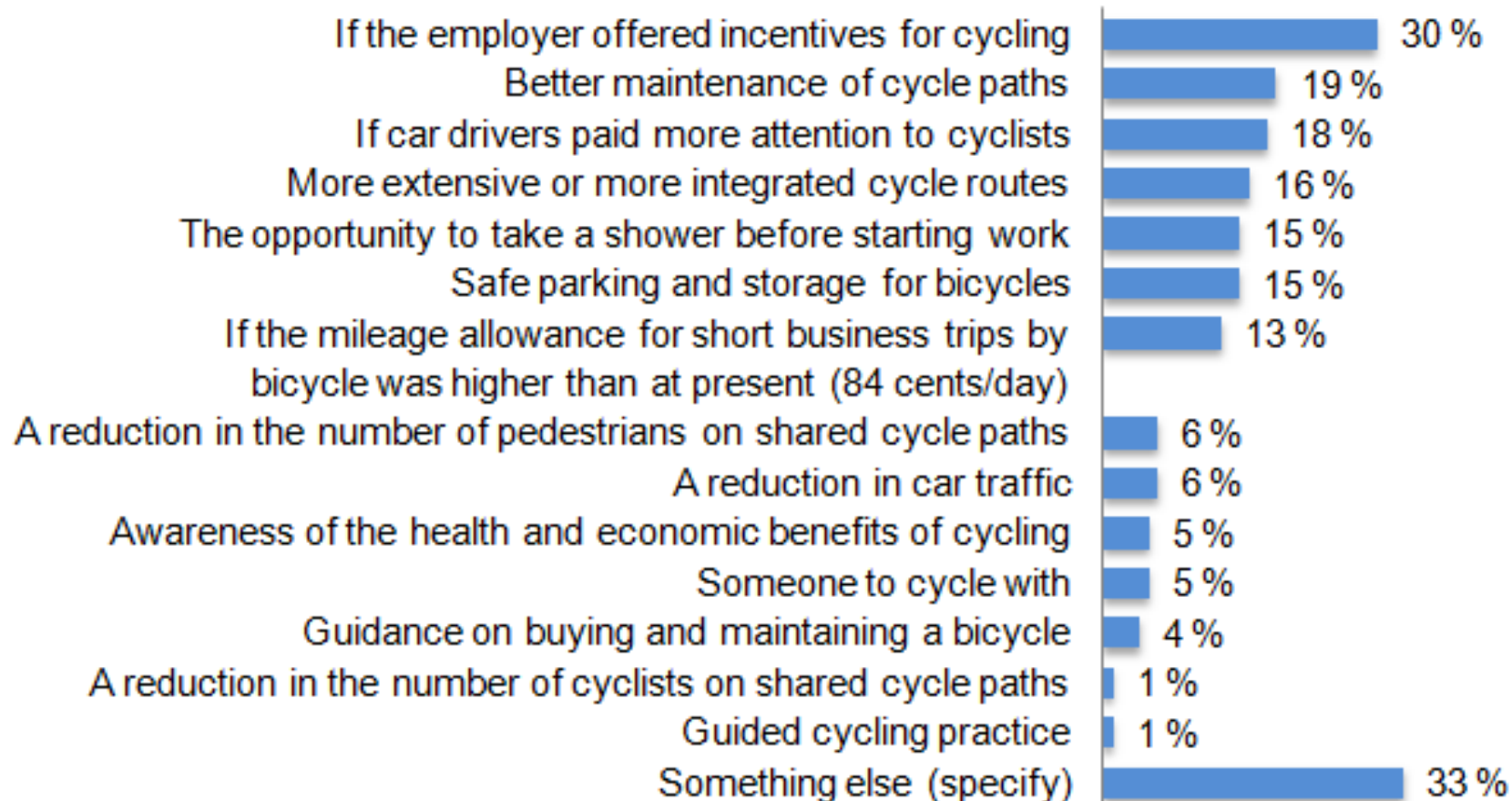
WHY NOT?



EFFECT OF DISTANCE TO WORK ON METHOD OF TRAVEL



WHICH FACTORS WOULD ENCOURAGE YOU TO COMMUTE BY BICYCLE MORE OFTEN? (1)

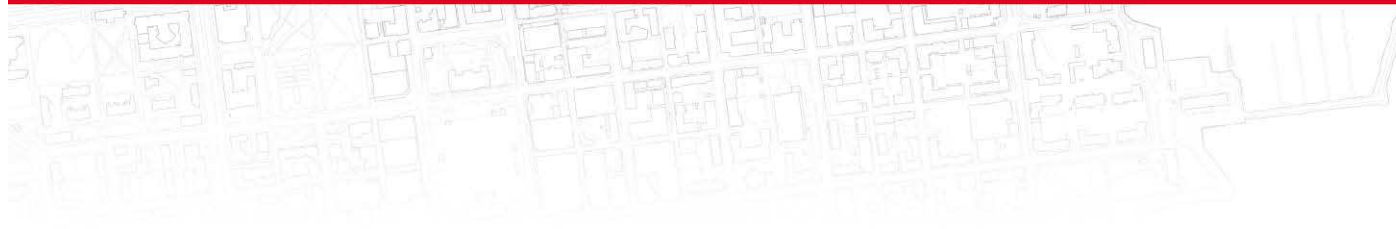


WHICH FACTORS WOULD ENCOURAGE YOU TO COMMUTE BY BICYCLE MORE OFTEN? (2)

| *”Something else (specify)?”*

| 33 %

- Longer or shorter distance to work
- No more moving between working points, different working hours, employee car for the working day
- Building or renovation of sanitary facilities to meet the needs of bicyclists
- Roofed, heated parking/storage space for bicycles
- Improvement of health or physical shape
- Personal motivation
- No winter, no icy routes
- Better winter tires and equipments



ECONOMIC BENEFIT

DATA FOR HEAT



	On average, how many months per year do you cycle to work?	On average, how many days per week do you cycle to work during a cycling month?	How much time do you spend cycling to work per day? (Give the total time in min spent on the journey to and from work.)
n	366	366	366
Minimum	3.0	2.0	1.0
Maximum	12.0	7.0	150.0
Average	8.9	4.6	45
Standard Deviation	2.4	0.8	23.6
Standard Error	0.1	0.0	1.2



HEAT RESULTS



- | Kuopio A model
 - | Prevented number of deaths 0.4 / year
 - | Annual benefit 0.6 million €
 - | Annual benefit 1582 € / cyclist

...WHAT IF...

Cycling duration (min/day)
Cycling days (n)
Cyclists (n)

} + 10 %

- | Increase in prevented number of deaths 5-27 %
- | Increase in annual benefit 7-27 %
- | Annual benefit €/cyclist stays unchanged (1582 €)
or increase 7-16 %

CONCLUSIONS

- | WHO compiling report on the lessons learned using HEAT
- | Health benefits of cycling in monetary terms for policy making
- | Cycling promotion – **winter cycling**
 - | Those who already cycle but not all year round as a target group ← regular cycling assumption in HEAT
- | Valuable information

"If there was a parking lot close to my workplace (5-10km), I could leave my car there and then come the rest of my way by a bicycle."

**WHAT IS THE BEST, MOST COMFORTABLE,
MOST RELAXING OR JUST NICE PLACE TO
CYCLE?**



Saaristokatu

Väinölänniemi

Puijo

Landscape

Beach

Nature

SAARISTOKATU - BIKERS LOVE IT!



THANK YOU!