

NON-MOTORIZED TRANSPORT: WALKING AND CYCLING IN ALL CLIMATES AND ENVIRONMENTS

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Dear Ladies and gentlemen, I am very pleased to be here and meet you all

I bring greetings from Scandinavia, Finland. This year our Northern country Finland celebrates the hundredth year of its independency. Approximately 30 percent of world's people who are living in north side of 60. latitudes (about Helsinki level) are Finns. There is slogan in Finland: "What works in arctic, that works everywhere"...

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I POLITICS

PHILOSOPHY OF CYCLING

"In my experience, driving on a city motorway makes thinking impossible."

"Intelligent vehicle, which no longer needs a driver..."

Walking and cycling as a thinking method

In the presentation Walking as a thinking method (10/28/2015) Mauri Myllylä, former traffic engineer of Oulu, wrote: "Walking is more than just a marginal mode of transport. Describing walking and cycling as wise forms of mobility is strongly justified. Walking can be raised high on a pedestal as a mode of thinking and spiritual life." There is a phrase in my previous book in favour of walking and cycling: "the most important new ideas and decisions forwarding the agenda have been born in my "free time" as a resident or a tourist. **My feet have been on the ground or on the pedals.**"

THOUGHTS OF FINNISH GOVERNMENT

Former Prime minister Matti Vanhanen: "Now we need to invest in roads, so that they would be in good condition when the wheels of economy begin rotating again..."

Philosopher Georg Henrik von Wright...In his book Tieto ja ymmärrys [Knowledge and understanding] Wright considers that, in the future, private cars turn into a genuine plight of the human race and an obstacle to mobility in the modern, rapidly urbanizing society. **It will eventually lead into trouble**, it should be curbed to match the human scale, but this is a task responsible administrations are unable to do. Economic stimulus has opposing targets and indicators. The target of economic growth and the increase in traffic move hand in hand. Ref. 28.

ROAD AND THE CITY ARE ONE

"Here's the road, where's the city?"

I think that social capital is the starting point of the city! If we want to support social interactive of the city, we must create possibilities for walking and cycling.

ROAD AND THE CITY ARE ONE

We can argue that big share of walking and cycling create 1) more social contacts, 2) more new thinking and thoughts for people than city where private cars share of modal split is big. Better walking and cycling condition mean better 3) environment and 4) image, 5) energy saving, 6) **better health for people in the city.**

II TACIT KNOWLEDGE

TACIT KNOWLEDGE

"Who would you call first, if you got this or that motion or responsibility, is a classic question. Who are the key stakeholders and executives in your opinion?"

This question has even been presented to president Obama before the ending of his tenure. I repeatedly replied that **as the municipal traffic planner I would call a zoning planner** first and traffic officials next. But just a phone call would not be enough, we would need to sit down with them and talk directly at the same table."

III GOOD CITY

SIGNS OF GOOD CITY

"Community and its transport system have a dependency ratio in our minds as well as in reality."

The Professor of Urban Planning Helka-Liisa Hentilä from the Oulu University told in newspaper

11.7.2016, that preferable features of a good cycling environment are as follows:

1. The place has a historical perspective
2. The nature is present
3. The wider view is there possible
4. The buildings varies uniformly
5. The maintenance is well arranged

The Oulu region, "the Capital of Northern Scandinavian" with 200 000 inhabitants, is one of the most successful areas in Finland. The traffic system is involved when making evaluations and has been part of lifting Oulu's rating. In a financial study comparing the image of the biggest cities in 2006 the traffic circumstances boosted Oulu's stocks. That same year Oulu's university succeeded in a comparison between schools because of the walking and cycling possibilities. The city's traffic system has been developed far and it has good qualities. / Ref. 7

SIGNS OF GOOD CITY, examples

- People are living within a cycling distance. Elegant streets can be seen.
- Fishers have their own steps. Environment has attraction factors.
- Taking all modes of transportation into account. Year-round cycling is possible.
- Downtown area is a symbol of for the city. It is the place of social interaction.
- The good city is good from childhood to old age. Since the year 1940 chained Merikoski.

IV INFLUENCING

CREATING POSSIBILITIES FOR WALKING AND CYCLING

The public sector, municipal and state economic entities are dominant in the organization of transport within a municipality. The municipal contribution is emphasized in the organization of pedestrian and cycling traffic. The state has been a latecomer as regards taking responsibility for this mode of transport.

The municipal council has delegated its powers to the city government, to boards and management committees, or further to individuals holding office. The municipal term of office is four years, which is a short time as regards transport projects that can go on for dozens of years. Who will ensure the continuity of, for example, the cycle path network and community structure?

Transport issues have traditionally been treated by municipal **technical bureaus**. Their importance was higher earlier, as different sectors and bureaus vigorously fought for space against one another amidst governance reform and the pursuit for accountability. The most important transport solutions in Finnish cities have been made during the early phases of urban growth. Pedestrian and bike paths were not easy to drive where municipal politics or transport policy were concerned. **Key persons**, who had good positions to promote the issue and impact the decision-making process, were needed.

IMPORTANCE OF KEY PEOPLE

"The most influential people in promoting non-motorized traffic are the people drafting and presenting the plans and proposals."

Despite the attention and trophies presented to the non-motorised traffic solutions of Oulu and the pleasure such rewards produced, walking and cycling have not been at the centre of local politics or the city's **transport policy**. Well, perhaps as a word but not into values or in actual operations. Promotion of walking and cycling has taken place at the individual level and locally. A single operator, the **key person** has the potential to affect issues he considers important. The need for key people and respect given to his work stems from **business activities**.

Transport planning can certainly be compared to a business, which requires

- **Open atmosphere and trust**
- **Enthusiasm and courage**
- **Creativity**
- **Conscious risk taking.**
- **Aiming at sustainable growth and actual results.**

Cooperation, Continuity, Engineering-oriented project thinking, Professional know-how, Caring and concern...

If the position of "walking and cycling key person" should be declared vacant, the recruitment process should emphasize caring and concern instead of superb competences. I asked a traffic consultant who had tried to reach some customer representative for a long time, what are the best competences a customer needs? "**The fact that they are available to the consultant**", was the immediate answer. The competence requirements can even get lower: "A good employee comes to work, stays at work, and completes assigned tasks."

VIEWS AND VISIONS IN PROMOTING WALKING AND CYCLING

What were the factors that influenced the vision for walking and cycling in Oulu? And what were the most essential hurdles? Every company and community that is concerned with their success now has a written vision - either it is created as a group task at development days or dictated by the executive. Vision can be compared to the word 'dream' which is familiar from magazine and newspaper ads. **Vision forms a picture of the future that you want to achieve together. In the description of an individual's own life, only few people dare to talk about vision.** The word vision originally meant a religious or spiritual illusion. Cool concepts for leading arise, but their implementation can often only be seen in texts. At best they become mantras, which do not include concrete measures. However, the concept of vision is an important part of the strategy process, which must be made to work as a whole. In the City of Oulu's first transport system plan in 1969 the word vision was not known or used. It pursued a transport system that can "serve the transport needs well into the future".

EMERGENCE OF ONE'S OWN VIEW

A view can be equated with ideological and even religious thinking. **A view is a strong internal power that cannot be pushed aside.**

The promotion of these issues does not take anything from anyone and it does not stand against anyone. They also contribute to other forms of transportation and provide additional space for car traffic, believe it or not.

In Hutchinson's photograph: the only underpass in Hutchinson when the pilot project development of walking and cycling in Hutchinson started with co-operation Oulu / Mauri Myllylä and Greg Pates USA, Minnesota, Minnesota Department of Transportation (Mn/DOT).

CREATING A VIEW IN OTHERS

"Walking and cycling were not previously considered mode of transportation. For tax purposes you were entitled to deduct your travel expenses in accordance with the cheapest form of transport. The tax authorities believed that taking the bus was the cheapest way to go to work for most people. When I did not take the bus and the current cost-sharing rate did not exist yet, I deducted my walking shoes as travel expenses. There was a loophole in the tax code and this went through. A private operator cannot simply alter the thinking of a large operator, but he can at every turn use his voice for an issue that he deems important."

OBSTACLES IN FORMING A VIEW AND PRESERVING IT

Obstacles in forming a view and preserving it

The first milestones for Oulu's pedestrian and cycling path networks in the 1970's were reached at the same time as the construction of new parts of the city began. Budget allocations would have been exhausted just by building roads for cars, sidewalks were something to eliminate. "Underpasses for hares," one of my colleagues stated. Yes they were narrow, but meant for human use and they did the job.

V OULU'S CYCLING NETWORK

DESIGN PRINCIPLES

"Preparing for the growth of car traffic in the beginning of my career was trendy and at the same time gave birth counterreactions. Car traffic forecasts and a main road network plan was ordered for Oulu. We got what we ordered."

The American engineering office Wilbur Smith & Polvinen drew up Oulu's first car traffic plan for the years 1967 - 1969 and **it opened the eyes** of the commissioners to recognize walking and cycling as equal with other modes of transport. At the same time the importance of holistic urban planning was understood. **It was realized that walking and cycling conditions are for the most part determined in connection with car traffic planning and zoning.** / Ref. 8
Oulu's first pedestrian and bicycle traffic engineering plans was completed in 1972.

Municipal policy had no significant links to transport planning policies. Other planners pushed engineers to take up the task of non-motorized traffic.

Oulu cycling and walking planning history

- 1967 The first attempt to start up experiments of the pedestrian zone
- 1969 Transport system plan
 - Walking and cycling were included for the first time
- 1972 City development plan of bicycle and pedestrian traffic
 - Extensive network separated from car traffic covering the whole city
 - Separate funding for bicycle and pedestrian projects
 - Major part of construction using other funding sources
 - Since then cycling and pedestrian planning have been a “part of the system”
- 1981 Development plan of bicycle and pedestrian traffic in the city center
- 1987 Pedestrian zone Rotuaari opens
- 1993 First extensions to Rotuaari
- 2007 Regional strategy for bicycle and pedestrian traffic
- 2010 City development plan for bicycle and pedestrian traffic
- 2011 – 2013 Further extensions to Rotuaari, also street heating installation
- 2012 Online cycling journey planner
- 2013 International winter cycling congress (www.wintercycling.org)
- 2013 Cycling coordinator
- 2014 Oulu cycling quality routes
- 2014 Green for cyclists –pilot

OULU'S CYCLING NETWORK: THE WORLD'S FIRST WINTER CYCLING GONGRESS 2013 IN OULU

Oulu is a well-known cycling city in Finland. Winter cycling holds the worldwide reputation. About 27 percent of cyclists ride daily both in summer and winter. **We may speak about moving culture which is based on the excellent cycling network, its good winter maintenance and its long systematic development.** Clearly, winter cycling is automatically a clear part of that development. Citizens who appreciate the wisdom of this movement, understand that winter does not prevent cycling.

BEST IN ALL MODESTY

How the best ideas will come?

"Cycling is a better tool for social interaction than walking the dog and bike is better planning tool than a computer."

The representatives of ELTIS, European

Local Transportation Information System participated in the congress. They produced the video and collected information about the history of Oulu's cycling planning. Oulu's former Traffic engineer Mauri Myllylä: My answers to the Eltis groups Austrian director Robert Pressl's questions about the foundations of bicycle traffic at Oulu's "winter cycling congress"

12.2.2013. www.eltis.org:

RP I assume that the use of the City's structural resources and soft measures, when used in combination, lead to success. **Is it possible to start the promotion of bicycle traffic without major structural measures**, for example in the new EU Member States?

MM Civil engineering is a continuous process. The promotion and protection of cycling interests must be a part of this. Advocacy is a full-time job. It is difficult to outsource. **Time is the most important resource**. It is never too late to start working better. The starting point affects the objectives and the selection of the bike traffic system.

VI THE VALUE OF ECOLOGICAL BIKING

"We know well the myth that diminishing of emissions is an expensive job and requires wonderful technics. It is not the truth. We have now a lot of acting and quite advantageous solutions, which must put to the wide use" said the senior expert Oras Tynkkynen from Sitra. /Ref.24

The Paris Climate Agreement in 2015 obliges the government of Finland: therefore, the new energy and climate strategy of Finland is consisting concrete actions in order to achieve determined goals before the year 2030.

There is the important goal to increase usage of traffic services and to actualize **Finnish people to walk and cycle 30 per cent more than today**. In addition, to these acts the government is planning to use traffic payments, which are able to direct travelling to low emission traffic modes. It can be found that the bicycle is receiving the status which it deserves.

VII CONCLUSIONS

Societal, Scientific/theoretical, Methodological...

Societal

- ☐ **To raise the appreciation of walking and cycling.**
- ☐ To find and support key stakeholders, key persons, to promote walking and cycling.

Scientific

- ☐ Phenomena-based approach for walking and cycling
- ☐ Pay attention to cost-benefit models, for example impact on human wellness as a key factor

Methodological

- ☐ Use of the **Delphi Method** and Futures Workshop as a tool of futures walking and cycling analysis
- ☐ Use of the other futures studies concepts, like Strong Prospective Trend, Weak Signals, Wild Cards as a key concept of futures walking and cycling analysis
- ☐ Use of geographical concepts, like cluster as part of transportation analysis

Development and Research Projects proposals are needed

DEVELOPMENT PROJECTS

- ☐ **Create walking and cycling strategies** / Create visions and action plans (e.g. by Delphi)
 - ☐ in global, states, regional and communities level
- ☐ **Create training and communication programs** for promote walking and cycling,
 - ☐ appreciate walking and cycling as much as other transportation
- ☐ **Create key persons networks** in state and municipalities level

RESEARCH PROJECTS

- ☐ **Create research and development programs for walking and cycling** (e.g. by using Delphi Method)
- ☐ Investigate increasing of walking and cycling influence to reduce pollution, wellness, environment, cities' attractiveness, image
- ☐ **Supporting to develop walking and cycling cost- benefit models** (for World Bank using), /"An Economic Assessment of Investment in Walking and Cycling", see e.g. Dr Adrian Davis March 2010; Riikka Kallio and M. Myllylä in book "Biking in Practice" 2017.

METHODS: DELPHI METHOD AS TOOL PROMOTING WALKING AND CYCLING

What is futures research? Currently, according to the main flow, it helps Commons to see what they want and what is possible taking account different kind of opinions.

There are two sophisticated methods for futures studies utilising expert information, characterised by an operating system. These are the Delphi-method and Futures workshops methods. When we want the best results, we may combine these and utilise relevant historical time-series and other information.

The Delphi method is the most popular futures studies method utilising expert information and focuses on futures studies research to assess future possibilities. The Delphi methodology is widely used in future studies research especially on transportation and environmental issues.

Finland Futures Research Center was established in 1990 formulated in part by the Finnish Society of Futures Studies. Finland initiated one of the world's first committee on future scenarios by Parliament. Regional Development Ltd, Myllylä, is affiliated member in each of these groups.

The use of the Delphi method has several advantages. The method is justified, inter alia, as follows (See [Myllylä & Kaivo-oja 2015](#)):

- ☐ (1) The problem is not a valid approach for a precise analytical method;
- ☐ (2) Collective and subjective estimates are potentially useful in problem solving;
- ☐ (3) The problem is extensive or complex, and participating in the review there is no common language or method;
- ☐ (4) The test problem of determining the need for more people than the efficient working group could be;
- ☐ (5) The dispute between the experts forced to use intermediaries, and
- ☐ (6) It is necessary to act anonymously, in order to avoid the majority of strong personalities and opinion leadership of the group.
- ☐ (7) Finnish methodology expert Jari Metsämuuronen [30, p. 300] also noted the Delphi method has the advantage that it is easy to connect to both qualitative and quantitative research approaches. This example of time-series and expert information joining strong perspective trends (SPT) in the detection part of the Delphi method is based on this very well, according to Delphi methodology expert [Myllylä](#) [12, p. 73–74].
- ☐ (8) **In addition, the Delphi method can be used to create a learning and innovation environment.**

FUTURES RESEARCH PROJECTS

- ☐ Strong Prospective Trend / Megatrend analysis and their impact on walking and cycling development (e.g. by using Delphi Method)
- ☐ Analyzing new coming phenomenon, Weak Signals (whispers of silent corners) what kind of new phenomenon are coming which should take account when developing walking and cycling possibilities (e.g. by using Delphi Method)
- ☐ Analyzing Wild Cards which may be big influences for walking and cycling (climate change?, environment accidents? etc.) (e.g. by using Delphi Method)
- ☐ New technologies, like big data, possibilities that promote walking and cycling (e.g. by using Delphi Method)
- ☐ Utilizing futures studies crowdsourcing method like Delphi Method and Futures Workshop in foresight research, social impacts analysis etc.

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Thank you for your attention!

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