

## **BYPAD: applying quality management techniques to improve local cycling policy**

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# BYPAD: applying quality management techniques to improve local cycling policy

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## **Abstract**

This paper presents BYPAD – Bicycle Policy Audit, an instrument for the quality management of local cycling policy, and the experiences which have been made so far with its application in almost 60 cities in 16 European countries. BYPAD has been developed and tested in the framework of two EU projects. To promote the application of BYPAD in order to improve cycling policy and by this stimulate cycle use and contribute to a more sustainable transport system, a European BYPAD quality centre is being established.

## **Keywords**

Local cycling policy – Total quality management – BYPAD – Europe – Bicycle policy audit

## 1. Introduction

It isn't a new cognition among transport experts that cycling can contribute significantly to improve accessibility and quality of life in cities and agglomerations. Mobility studies show repeatedly that the share of short trips that can be substituted by cycle trips is considerable: about 50 % of all car trips are no longer than 5 km. This figure already shows that there is a huge not utilised potential for cycling. Especially in cities and agglomerations cycling can contribute enormously to solve the daily transport problems and their negative effects.

Increasing the 'market share' of cycle traffic in the total transport system and improving its safety and attractiveness at the same time, demand a pro-active cycling policy on all political and administrative levels, e.g. in cities and towns, counties, cantons, federal states and on national level. This comprises that - depending on its responsibilities - each level cares for the corresponding favourable general framework. It doesn't suffice just to conduct a cycling policy. To achieve the best possible effects by using taxes economically, cycling policy needs to be both effective and efficient. Thereto it is of essential importance to take the right measures and to avoid measures that are counterproductive. This means that the factors of success and failure of cycling policy need to be known. In times, when public authorities need to spend money sparingly, this applies more than ever. Public authorities are postulated to conduct an intelligent, target-oriented cycling policy on a high quality level and at economical spending.

Quality management can contribute to improve and safeguard the quality of cycling policy in the long run, and thus help to actually tap the full problem solving potential of cycle traffic.

During the last ten years there is an increasing awareness for the need of a high-quality cycling policy. Looking for manners for assessment and improvement of the quality of local cycling policy, benchmarking instruments and indicator systems have been developed and measures and programmes have been evaluated during the last years in several countries:

- United Kingdom: *Benchmarking project* of the CTC (user organisation);
- Netherlands: *Cycling Balance* of the Dutch cyclists' union (user organisation);
- Netherlands: *Evaluation of the Dutch Bicycle Master Plan* (national cycling strategy);
- Switzerland: *Indicators for cycle-friendly cities and towns* (research project of the SVI);
- Germany: *Evaluation of the cycling policies* of the member cities of the city network 'Cycle-friendly cities and towns in Nordrhein-Westfalen'.

## 2. BYPAD

### 2.1 The BYPAD projects

BYPAD (Bicycle Policy Audit) is an instrument for the evaluation and quality improvement of local cycling policy which has been developed in a European framework. BYPAD is based on international best practice in local cycling policy, availing strategies and measures which are successfully put into effect somewhere in Europe.

It was the objective to develop an instrument wherewith cities and towns can evaluate their cycling policy themselves and wherewith they can define quality objectives, and to contribute to a sustainable improvement of cycling policy in European cities and towns by Europe wide application and exchange of experience between BYPAD cities.

BYPAD was developed in 1999 -2001 by an international consortium<sup>1</sup> in the framework of an EU project and tested in seven European cities: Gent, Graz, Troisdorf, Birmingham, Zwolle, Ferrara and Grenoble.

It was the objective of the subsequent EU project BYPAD+<sup>2</sup> (2003-2004) to improve the method and to apply BYPAD Europe wide. Based on the outcome of an expert meeting in Leuven with the architects of the above-mentioned benchmarking and evaluation instruments, BYPAD questionnaire and process were revised. An international network of cycling experts from 15 European countries was set up, who were trained in Männedorf/ Switzerland for the BYPAD audits in their own countries in June 2003. These auditors are the national BYPAD contact points. Since summer 2003, they have supervised the audit processes in about 45 cities and towns all over Europe from Finland to Portugal, from Czech Republic to Ireland.

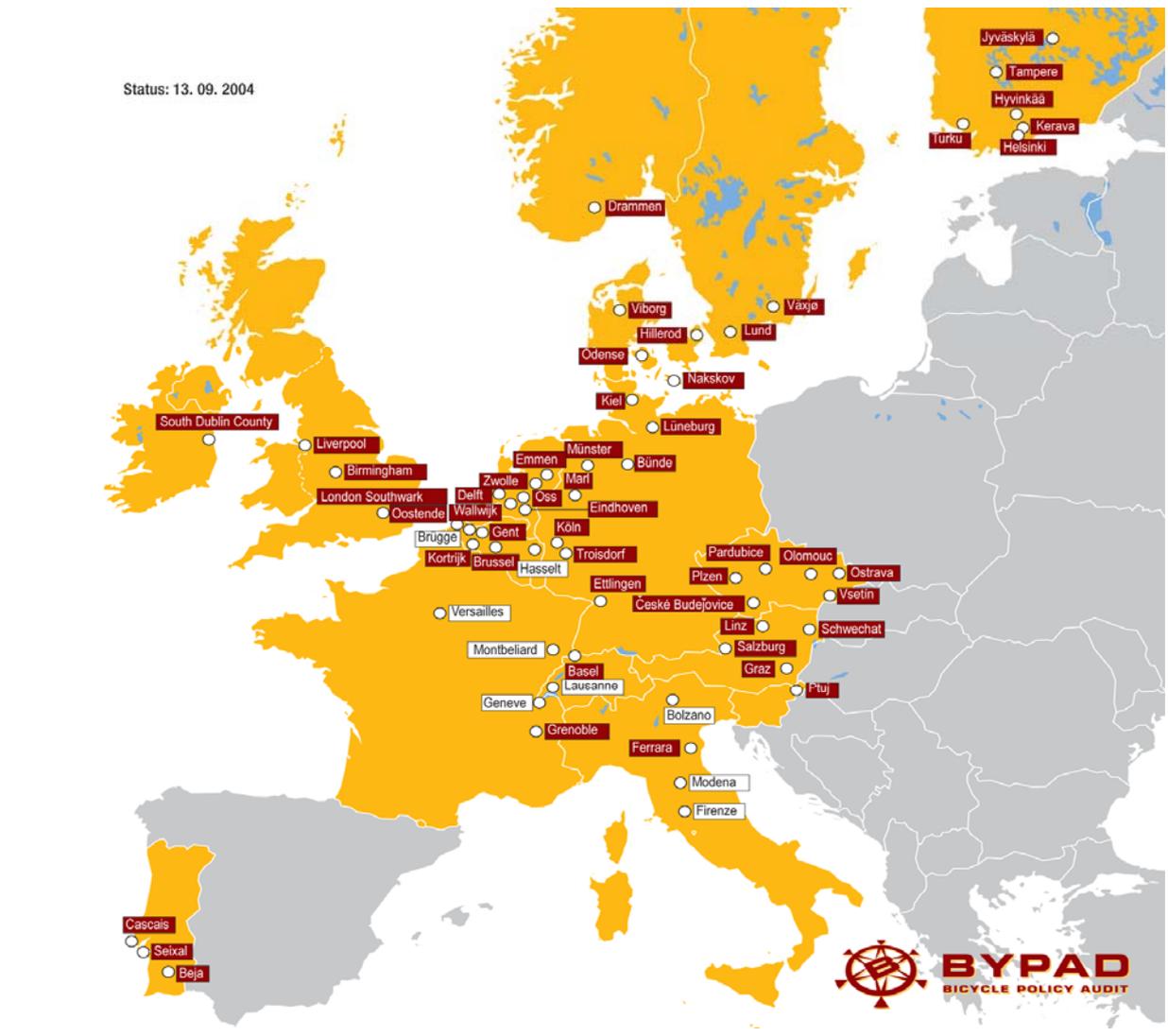
Including the seven pilot cities and other cities that have conducted BYPAD audits independent from the EU projects there are altogether meanwhile about 60 cities in Europe, that have put their cycling policy to the test (see figure 1).

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<sup>1</sup> Langzaam Verkeer, Belgium (project co-ordinator), FGM-AMOR, Austria, velo:consult, Switzerland, European Cyclists' Federation

<sup>2</sup> Same consortium

Figure 1 BYPAD cities in Europe



## 2.2 BYPAD approach

BYPAD is based on the idea of Total Quality Management, which has been established in the business world since long time. By applying quality management techniques (QM), companies try to improve their products and services, optimise their processes and strengthen customer retention – with regard to increased turn-over and market share. Improvements are based on benchmarking processes, in which companies learn from best practices in other companies. Examples of such QM models are the ISO 9000 series or the EFQM model (European Foundation for Quality Management).

BYPAD makes use of this QM approach by transferring it to local cycling policy, with the aim to stimulate cycle use and improve cyclist safety. Through BYPAD, municipalities should initiate a process of continuous quality improvement. To achieve this aim, BYPAD combines cognitive, conversational and learning elements. The quantitative assessment of the individual aspects of cycling policy helps to convince the rationalists (cognitive element). Discussing the cycling policy within the evaluation group of decision makers, policy makers, executive staff and the user organisations ('clients') strengthens the political will to improve the quality of the cycling policy (conversational element). Assessing the cycling policy in a moderated process supervised by an external auditor, strengthens the effect of learning (learning element).

BYPAD regards local cycling policy as a dynamic process where different components need to fit together to be successful. BYPAD does not only scrutinise outcomes and effects of the local cycling policy, but also if and how this process is embedded in the political and administrative structures. Are there objectives for the cycling policy? Is the selected strategy adequate to achieve these objectives? Are the allocated resources in balance with the objectives, and is the continuity of financing safeguarded? Is cycling policy restricted to few infrastructural measures or is the wide range of pro-cycling measures put into effect, including measures to discourage car use? Is there cross-sectoral co-operation with strategic partners? How is safeguarded that the measures taken achieve the objectives strived for?

BYPAD distinguishes nine modules, whose qualities are determined separately (See figure 2). For each module, a quality level is assigned on the BYPAD ladder of development which has four levels in total. The results of all nine modules altogether determine the overall quality level of the cycling policy. On the basis of the results for each module, the municipality can define quality objectives and derive measures separately for each module. Besides that, it is possible to monitor the evolution of the local cycling policy.

The principal item of BYPAD is the questionnaire, which consists of 35 questions covering all aspects of cycling policy. For each module, it contains a number of questions, whose answers are preset. They describe appropriate measures which have successfully been implemented in European cities. A quality level between 1 and 4 is assigned to each answer. The quality level is zero, if no action is taken in the field in question. Filling in the questionnaire, a person receives direct inspiration of what could be done in the field in question for climbing up to the next quality level.

Figure 2 BYPAD modules and BYPAD ladder of development



The levels of development are:

Level 1: Ad hoc oriented approach

*Fire brigade principle:* Cycling policy is mainly limited to problem solving. Measures are mainly focussed on infrastructure or road safety at specific locations. Cycling policy is on a low quality level which is characterised by low and irregular budgets, few officials with low skills and without competence. Quality is a result of individual efforts only.

Level 2: Isolated approach

*Robinson Crusoe principle:* There is already a cycling policy, but it is neither integrated into the overall transport policy nor in other policy fields such as land use, health, environmental policy. Good infrastructure is the main concern of the policy, although some supplementary activities are undertaken. Cycling policy is characterised by some use of data and a limited knowledge of the users' needs, global agreements with a limited compulsory character, measures which are often counterproductive, because they are not tuned to the needs of other road users or not integrated into the objectives of other policy fields. Continuity isn't safeguarded.

Level 3: System orientated approach

*We are pulling into the same direction:* Cycling is regarded as a system, which is integrated into the overall mobility policy. The political will to support the cycling policy is underlined by a sophisticated local cycling strategy and appropriate budget allocation. The cycling policy comprises a wide range of different measures; different target groups are targeted with tailored measures, partly in co-operation with other public and private partners. Cycling

policy is based on good data and the knowledge of user needs, but still on a project basis with limited running time.

#### Level 4: Integrated approach

*The winning team:* Cycling policy is regarded as a permanent task with strong relationship to other policy fields. Measures to encourage cycle use are complemented by measures to discourage car use. There is strong political support, good leadership, regular budget allocation, enough skilled staff and comprehensive in-house expertise. Systematic networking and regular exchange of information, knowledge and experiences with internal and external actors help to raise and maintain the quality standard. The cycling policy is characterised by the availability of high quality data, regular monitoring and evaluation, strategic partnerships with the aim to win these partners over to allies who contribute their part to the local cycling policy.

### **2.3 BYPAD evaluation group**

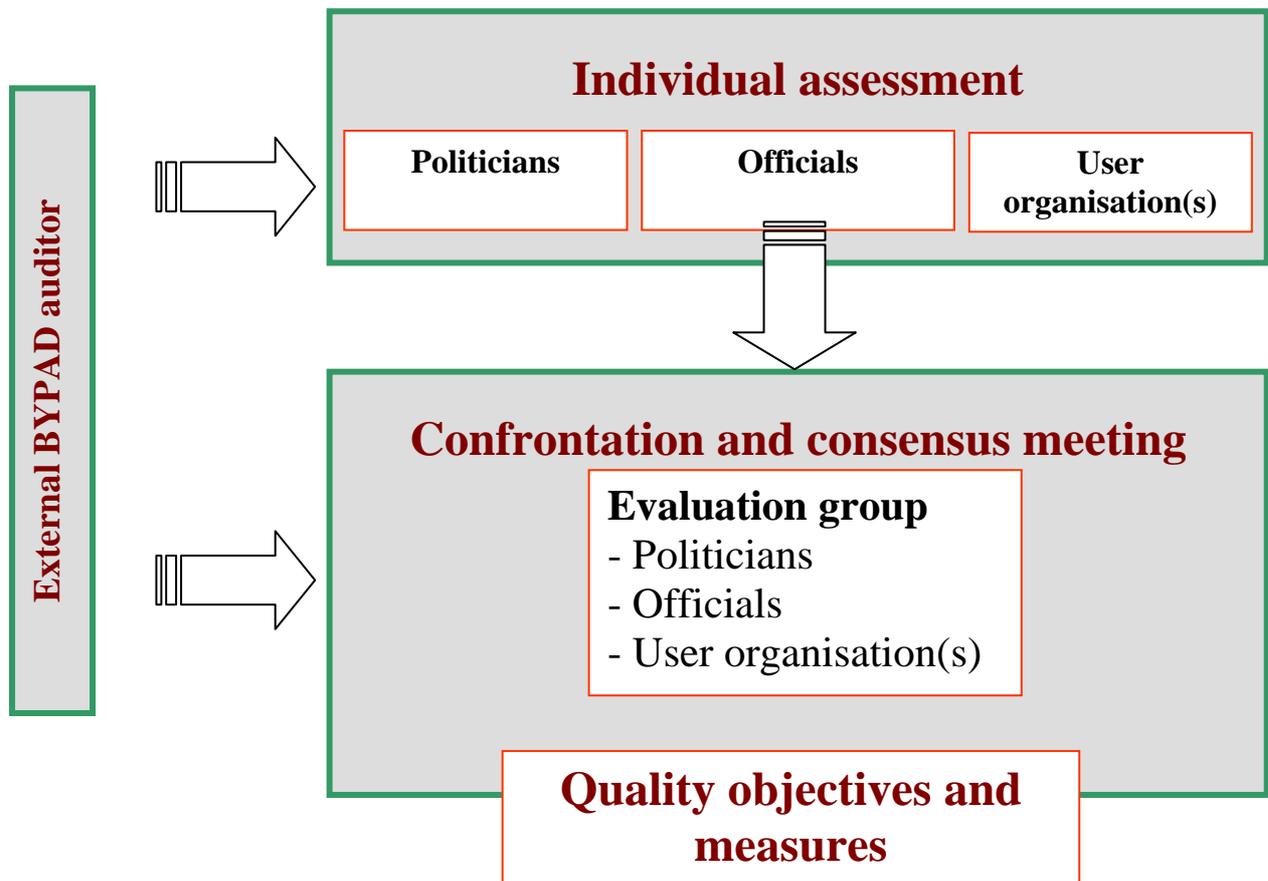
It is a specialty of BYPAD that the whole process of evaluation and quality improvement is carried out by a local evaluation group. This evaluation group consists of politicians responsible for cycling, policy makers and executive staff of the municipality dealing with cycling, and representatives of the local cyclists' user organisation(s), who use the 'product' of the local cycling policy. Bringing these three very different players together, BYPAD assures that the local cycling policy is examined critically from different perspectives.

The evaluation group looks for strengths and weaknesses of the cycling policy in order to find jointly a consensus on fields where improvements are necessary and possible. The audit process is supervised by an external consultant, who is a certified BYPAD auditor.

### **2.4 BYPAD process**

At the begin of the evaluation process, each member of the evaluation group fills in the BYPAD questionnaire individually. For each single aspect of the cycling policy, each member of the evaluation group assigns a quality level between 1 and 4. In a following meeting where the whole evaluation group comes together, they are confronted with the judgements of the other members. It is the objective of this meeting that the evaluation group reaches a consensus of the strengths and weaknesses of the cycling policy and to assign jointly a quality level to each question of the questionnaire. Based on the results of this debate, the evaluation group develops a quality plan for the future cycling policy during a second meeting.

Figure 3 BYPAD process



## 2.5 BYPAD results

As a result of a BYPAD audit process, a city gets scores for each of the 35 questions, for each of the nine modules and for its cycling policy as a whole<sup>3</sup>. These scores indicate straightaway where the strengths and weaknesses of a city's cycling policy are (see figure 4). The interim and final reports of the audit, written by the auditor, are a detailed inventory of the cycling policy so far and a documentation of the audit process. The quality plan documents objectives, main fields of action and measures the evaluation group has agreed on.

<sup>3</sup> To avoid decimal points, the levels 0 to 4 are transferred to 0 to 100.

Figure 4 BYPAD results by module

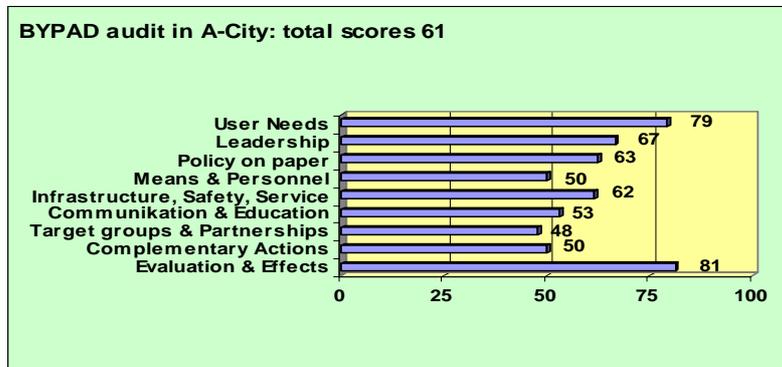
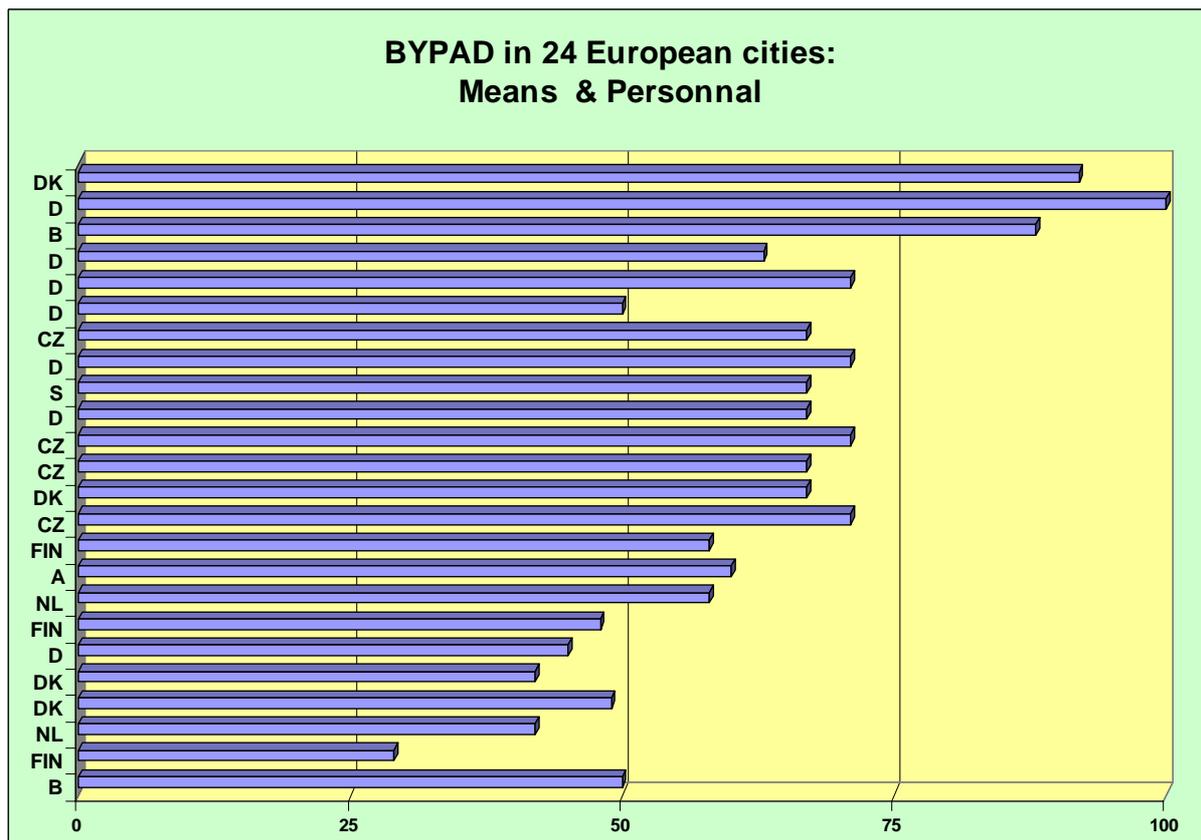


Figure 5 BYPAD results from various European cities



Although ranking lists of different cities are not the objective of BYPAD – the instrument is developed for cities that want to improve its own cycling policy rather than to compare cities (see chapter 4), they can help to learn from each other. Taking into account the impossibility to compare cities from different countries because of different legal framework, culture, politics etc., it is worthwhile to look at the results from other cities. If a city wants to improve

in a certain module, it is worthwhile to put oneself in the picture about the concrete measures that those cities have taken which are scoring high. Figure 5 shows huge differences between cities for the module means & personnel, which does not automatically mean that the cities with the highest scores are having the biggest budget allocations for cycling. It can just mean that they are most creative ones in tapping additional financial resources.

### 3. Experiences with BYPAD

During the last three years, BYPAD audits have been conducted in about 50 cities and towns in 16 European countries. It was part of the BYPAD+ project that – per language region – BYPAD cities came together in workshops to exchange the experiences they have made with BYPAD and the lessons learnt from the audits so far. For the German speaking countries, such a workshop took place in Recklinghausen, Germany, on 25 November 2004. In a panel debate, representatives from the BYPAD cities discussed the effects BYPAD audits have had so far, whether it is worth while for a city to carry out a BYPAD audit, whether cities are ready to repeat it, under which conditions and when, and their wishes for the further development of BYPAD. As auditors from other countries confirmed that their experiences are similar to those discussed in Recklinghausen, it can be assumed that these experiences are representative for other countries, too.

- There was a unanimous opinion that the BYPAD process was very inspiring and that it has brought lots of insights and knowledge about cycling policy. Panellists confirmed that the audit process has lead to a more comprehensive understanding of cycling policy. Cycling policy is being regarded now as much more than providing infrastructure, whose complexity has been shown by the BYPAD audit. These opinions are being shared also by politicians and user groups, who had participated in the process.
- The fact, that BYPAD brought all those persons together who are involved in cycling - both within the municipality and outside – was estimated positively. For most of the cities it was the first time that these persons came together, and the very intensive discussions were regarded as very fruitful.
- It is regarded as a positive effect, that after the first meeting all persons involved in the local cycling policy are on the same state of knowledge and information of what is going on in the city. In several cities the BYPAD intermediate and final reports were the first profound documentation ever of the local cycling policy.
- The process has improved transparency about who is doing what in the various departments of the municipality. For the officials the BYPAD audit has delivered the justification of the work of the officials and it has provided the arguments why certain additional measures need to be part of the future cycling policy.
- At the first glance, the comprehensiveness of the questionnaire is felt to be a bit ‘shocking’, and especially politicians and user groups judged it sometimes as difficult (‘academic’). But once they had worked through the questionnaire, most readers assessed working with it as very enriching and the effort worthwhile.

- The effort linked to an audit is several hours for each person involved. It would help if the estimated effort was announced more clearly.
- The BYPAD questionnaire and process help to find out the essentials of the cycling policy, to find the effective adjusting screws.
- All panellists from BYPAD cities agreed that it is essential that audit processes should be supervised by an external auditor, because an external auditor has a neutral sight on the city's cycling policy ("A prophet is without honour in his own country"). A second, essential reason is that the external auditor has experience from other cities and other audits and can thus give lots of inspiration and advice (she/he helps to open eyes).
- Audits should be regular part of a professional project management. All panellists agreed that the BYPAD audit should be repeated after 4 – 8 years.
- There is a strong need for best practice examples. Cities want to enforce learning from each other.
- By the BYPAD audits local cycling policies have gained momentum.

## 4. What BYPAD does achieve and what not

BYPAD has been developed for cities that strive to improve their cycling policy and therefore decide for an audit process. Rotational repetitions of the audit enable a city to monitor the evolution of its cycling policy on the long term.

BYPAD supports the integration and co-ordination of programmes, planning and measures. It helps to improve the co-operation between the various actors and helps to identify potential partners for co-operation. The audit process helps to improve the transparency of the actions of the municipality. In several BYPAD cities, the audit meetings were the first time ever that politicians, officials and user groups came together in this composition, which were mostly found as clearing and fruitful.

BYPAD strengthens quality oriented ways of thinking and acting, and makes people aware of the necessity to evaluate their own actions. That's why BYPAD initiates a process of continuous quality improvement.

Since BYPAD identifies strengths and weaknesses of the cycling policy of a city, cities can learn from each other by looking where other cities – compared with them - are strong or weak, to take up the corresponding measures in these fields or just to avoid them.

BYPAD is not made for the beauty contest between cities. Although as a result of an audit scores are assigned to each of the 35 questions of the questionnaire, to each module and to the cycling policy as a whole, it doesn't make sense to make ranking lists of the best cycling cities. Particular emphasis has to be put on the fact that BYPAD is a qualitative method and not a quantitative one. The results of an audit depend to a high degree of the estimations of the members of the local evaluation group. This can lead to the result, that a rather advanced, but very self-critical cycling city comes off (relatively) worse than a city on a low level of development, but with a less critical evaluation groups. The expert opinion of the auditor can to some degree have a correcting effect.

Comparing cities from different countries, not only the different general framework (e.g. political, cultural, legal) has to be taken into account, but also the different backgrounds of the auditors.

## 5. The future development of BYPAD

Experience with BYPAD audits so far and feedback from both cities and auditors have shown that there is awareness for the necessity of an instrument for the quality management of local cycling policy, with a strong need for learning from each other. There is also a need for using BYPAD both in small communities and in territorial authorities such as metropolitan areas, cantons, federal states, counties.

To promote the application of BYPAD in order to improve cycling policy and by this stimulate cycle use and contribute to a more sustainable transport system, a European BYPAD quality centre is being established. It is the aim of this BYPAD quality centre

- To train auditors, especially in those countries where BYPAD isn't applied so far;
- To promote the application of BYPAD, especially in those countries;
- To develop a BYPAD maxi for 'regions' such as metropolitan areas, agglomerations, cantons, federal states, counties;
- To adapt BYAD for small towns (BYPAD mini)
- To set up a good practice database on cycling policies
- To organise the exchange of experience between BYPAD users per language region and on an international level
- To safeguard quality and topicality of the BYPAD method by processing feedback from auditors and cities and organising exchange with architects of similar instruments on a regular basis.
- To certify auditors and BYPAD users.

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