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## Assessing the Fitness-For-Purpose of strategic transport research in support of European transport policy

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The transport policy environment is changing, because of increasing mobility of people and goods, world wide use of ICT, a rising importance of the knowledge economy, etc. Future methods for transport policy assessments will have to integrate these emerging trends, but above all, the new research knowledge produced needs to be taken better into use within the policy processes. To tackle the problem, the paper presents a generic fitness-for-purpose (FFP) Assessment method for research projects in support of transport policy. Based on the results of a case study, the paper argues that by linking a systematic FFP Analysis of transport research projects with researcher-civil servant network building, a method for accepting, elaborating and applying the produced European transport research knowledge can be provided. By doing this, the paper contributes to a more systematic and integrative assessment of transport research in policy support, and hopefully enhances the integration of transport research and policy making while at the same time, initiating a better based policy process. We see that FFP Assessments could offer an essential element for the policy relevant transport research knowledge production in the future.

*Keywords:* fitness-for-purpose assessment; strategic transport research; policy networking; knowledge production; policy assessment tools

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## 1. Introduction

### 1.1 Background

Since the Transport White Paper, published in 2001 (Commission of the European Communities, 2001a), and somewhat even by its predecessor, the objective of a European Union (EU) sustainable transport policy has been that the transport systems in Europe should meet the economic, social and environmental needs of society. Effective transportation systems are seen as essential to Europe's prosperity, with significant impacts on economic growth, social development and the environment. The mobility of goods and persons is considered to be an essential component of the competitiveness of European industry and services (Commission of the European Communities, 2005a). Even if the policy objectives have remained valid for a long time, the policy environment for transport seems to be changing. The White Paper mid term review (Commission of the European Communities, 2006b) identifies notable changes at least in the fields of: The Spatial Dimension of the EU, mostly due to the enlargement; European Governance practices in general; Transport Industry, as it seems that transport is fast becoming a high-tech industry; and in many International Contexts, especially in Environmental Commitments. In addition, the review indicates something of a change in direction and focus in the European transport policy, e.g. referring to the 'need to re-adjust' policy measures and the need for 'a broader, more flexible transport policy toolbox' (Stead, 2006).

In order to support better based and informed transport planning/policy processes, extensive research has been conducted in the past Framework Programmes (FP) of the European Commission (EC) and also at national levels to develop appropriate assessment tools for practitioners and policy makers, and to help them reach the objectives of sustainable mobility (see European Commission, 2006). With the assessment tools we mean here methodologies and tools developed under the research themes of: Policy Instruments and Packages, Impact Assessment Methods, and Policy Appraisal Methods. Past and current research has developed such policy support and assessment methods and tools for the National and the European Transport Policies (e.g. Wolthuis, 2006; Extra project, 2001a; 2001b), and they will be further refined in future research, particularly on the research agenda of the EU FP7. Unfortunately, the actual use of these innovative methods and tools has, thus far, been rather limited.

Currently, the policy environment for transport is changing. A Ubiquitous Information Society is emerging, where people's ways of life and work are based on ICT services that are available at all times and in all places. This brings challenges to decision-makers in society, to businesses, and to individuals. Consequently, the roles of public and private parties within the design and production of transport system technologies and services are evolving, many new actors are emerging and new business and operating models will be needed to satisfy the new demands. This creates a demand for new arenas for transport policy design and assessments, as well. Furthermore, the development leads to the conclusion that arrangements supporting the interactions in and between the public and private sectors will become more significant in the future. Managing transport policy supporting knowledge production is one important part of these interactions. Hence, we see that there is a need to establish processes for the uptake of the policy relevant research knowledge produced, in order to best contribute to as well as improve the transport policy processes.

To be more precise, we find that to be effectively applied by practitioners and decision-makers, the capabilities of the developed tools need to be checked against factors like scientific consistency, transparency and inclusiveness, but also against acceptability and appropriateness in terms of the needs of the final users in policy development and policy making. Therefore, the

“fitness-for-purpose (FFP<sup>4</sup>)” of the tools needs to be assessed in order to enhance governance practices. A knowledge gap in establishing systematic recommendations as well as processes for their uptake alongside with the above tool developments has been identified also by the European Commission (Commission of the European Communities, 2001b; 2005a; 2005b; 2006a; 2006b). Policy Network thinking, which has grown strong both in European policy science and governance (e.g. Kickert et al., 1997; Marsh, 1998; Peterson, 2003), is one example of such developments, and the growing number of European research programmes in support of policies is another. Within the transport domain, the research on such processes has, thus far, been quite modest (e.g. Rietveld and Stough, 2002; Geerlings and Stead, 2003).

In this paper, we aim to tackle the problem of research results not being put to use in practice, e.g. in policy processes. Based on the results of our case study, we show that by linking a systematic FFP Analysis of transport research projects with researcher-civil servant network building we can provide a method for the “fitness-for-purpose assessment (FFPA)” of EU research projects. We claim that the method can alleviate the above problem by contributing to a more systematic and integrative assessment of transport research in policy support. We see that the method has the potential to enhance the transport research result uptake as well as integration with policy making practices while at the same time initiating better based policy process. The theoretical background of our work stems from the frameworks of Fitness-For-Purpose Assessment, Research Project Evaluation as well as Policy Networking brought into the context of Transport Policy and Impact Assessments research.

The article is structured as follows: Section 2 discusses problems with the traditional way of producing policy relevant transport research knowledge. Section 3 explains the theoretical starting points of the paper in more detail, and discusses their suitability in our case study. Section 4 describes the case-study: the process for FFPA developed within the Transforum project. Next, section 5 shows the FFPA results through a project analysis and network building cases. Finally, section 6 discusses the potential of our method of FFP Assessment and presents the fields where more efforts are needed to fit the produced European transport research knowledge better for the purposes of policy processes. Section 7 concludes with final remarks on the importance of policy relevant knowledge production in the transport sector.

## 2. Formulation of the problem

The aim of transport research supporting policies is to produce knowledge for the use of policy processes, to help the policy process actors to make informed decisions. The conventional approach (“The Rational Central Rule Model”) to the processes of public policy making (e.g. Dunn, 2004; Meyer and Miller, 2001) focuses on the behaviour of a (rational) actor who would reach a decision within a situation of being fully informed and of complete and clear preference ranking (Braybrooke and Lindblom, 1963). The model originated from the economics. In the policy formulation phase of the policy process (for more information about public policy processes see e.g. Dunn, 2004; Birkland, 2001; deLeon, 1999; Parsons, 1995; Palumbo, 1987; Dye, 1976; Lasswell, 1956) consensus between the acting parties is reached regarding the problem formulation and scientific knowledge is used to design policy measures and an implementation programme. The critics of the conventional model (e.g. Van Gunsteren, 1976; Hanf and Toonen, 1985) see that the model fails in presupposing that the central steering agent has at his disposal the necessary information about existing public problems, preferences and the available solutions, which is im-

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<sup>4</sup>FFP = Fitness For Purpose, FFPA = Fitness For Purpose Assessment (the whole process, see Figure 1), FFP Analysis = Detailed analysis of research projects

possible given the agent's limited capacity and the uncertainties involved. The model also neglects the values and interests of implementing bodies and target groups.

An alternative approach, the network model, instead considers public policy making and governance to take place in networks consisting of various actors (individuals, coalitions, bureau, and organisations), none of which possesses the power to determine the strategies of the other actors (Kickert et al., 1997). Policy processes are not viewed as the implementation of ex-ante formulated goals, but as an interaction process in which actors exchange information about problems, preferences and means, and trade of goals and resources.

As we presented in the previous section, the transport policy environment is changing, particularly because of globalisation, with increasing mobility of people and goods, world wide use of communication technologies, a rising importance of the knowledge economy, high energy prices, and the enlarged Europe. Future tools for the transport impact and policy assessments will have to integrate these (and other) emerging trends. As the EC puts it, there is a need for 'a broader, more flexible transport policy toolbox' (see also Commission of the European Communities, 2006b; Stead, 2006). But above all, the new research knowledge produced needs to be taken into use within the policy processes. Currently, the appraisals in the European transport research and policy domains use diverse methods, they are performed by different teams, and the results are produced for different purposes. The wide range of policy assessment methods and applications makes the assessment of their "Fitness-For-Purpose" challenging and also prone to over-generalisation and failure to cover all cases. Further, very few arenas for interactions between research projects and civil servants or policy makers exist.

To tackle the problem of research results not being put to use in practice (i.e. the low effectiveness of research results), we adopt the ideas of Kickert et al. (1997) about the network model as an alternative approach to policy making and in our case particularly to policy relevant knowledge production and utilisation and combine the ideas with the FFP Analysis of research project results. Our paper presents a generic FFPA method for research projects in support of transport policy. The method aims to show how to systematically analyse the usability of the information produced in research projects concerning impact and policy assessments as well as how to build interacting networks around the assessments to support the use of policy relevant research knowledge in practice. In addition, the paper presents recommendations on how to promote the use of the new research knowledge in the transport policy process. Our data stems from the Transforum Coordination Action -project within the European 6th Research Framework Programme (FP). Transforum has facilitated networking and dialog among researchers, policy makers and stakeholders by establishing an innovative knowledge Forum, which has acted as an assessor of the usability of results in the fields transport indicators, transport modelling and transport policy assessment of strategic transport research.

### **3. The theoretical background**

The following sections present briefly the three theoretical starting points for our methodological development. There is clearly some overlapping in these theories, but at the same time each of them presents a different context for producing policy relevant knowledge. In our view they can complement each other and in doing so help in developing and understanding the method for transport research FFPA.

#### *3.1 FFPA*

The question of what defines a quality product or a quality service is always difficult to answer. One vision of a good product which is "fit for its purpose" is that it meets the needs of a changing style of planning or design in the next decade(s) as well as the demands of changes in the plan-

ning environment (Crow et al., 2000). The term "Fitness-For-Purpose" (FFP) has traditionally been used to describe the quality or the performance of a technical design, construction, programme or service in the fields of Product Management, Information Technology and Environmental Impact Assessment (e.g. Carvalho et al., 2005; Jakeman et al., 2006; METEOR, 2004; Raggamby, 2006). Established methods to assess whether a proposed solution can perform a task consist of design evaluation, testing, verification and validation, checking the proving properties or looking at how the final product structurally matches the requirements from the viewpoint of the final user. In the field of Transport, the Fitness-For-Purpose Assessment (FFPA) of policies, plans, projects or methods has not been common. In the context of transport policy research projects, the objective of Fitness-For-Purpose Assessments is to enable different actors within the policy processes to assess how suitable a developed model, appraisal tool or outcome is for a particular task.

### 3.2 *Policy Networks*

The role of inter-organisational collaboration and networks has been of interest to political scientists since the late 1950's (Marsh, 1998; Kickert et al., 1997). Policy scientists started using the term 'Policy Network' in the mid-1970's as the debate on the openness of political processes recurred in Europe (Klijn, 1997). According to Klijn (1997) and Kickert et al. (1997), the Policy Network approach was an attempt to understand the "context in which policy processes take place". It illustrated the shift from understanding policy as an outcome of rational decision making proceeding in distinct stages (policy formulation, decision and implementation) to seeing it as a multi-actor process where the policy content is affected at all stages of policy making and where heuristic rules and routines have a strong influence on the behaviour of actors.

There is no generally accepted definition of the notion "Policy Network". Here, as in the German and Dutch tradition (e.g. Kickert et al., 1997), it is used to indicate patterns of relations between interdependent actors, involved in processes of public policy making. Interdependency is the key word in the network approach. Actors in networks are interdependent because they cannot attain their goals by themselves, but need the resources of other actors to do so (Klijn, 1997). In the case of public actors, such complementary assets can, for instance, be experiential knowledge of the field that is the object of policies, economic resources to implement policies, or societal influence that is crucial for the legitimacy/implementation of policies (Bruun, 2002). Furthermore, as Kickert et al. (1997) claim, Policy Networks can be understood as a new form of governance, which could successively replace top-down policy making in the form of state intervention as well as market oriented attempts to make government more businesslike ("new public management").

Our aim is to apply the network approach to the field of research projects in support of transport policy. We claim that research-policy network building around the project assessments, accepting, elaborating and applying the knowledge, is an essential supportive element in the FFPA of transport research in policy support. Furthermore, we see that FFPAs could offer an essential element for policy relevant transport research knowledge production in the future.

### 3.3 *Policy and impact assessment in the field of transport*

The analysed research projects in this paper belong to the research theme or tradition of transport policy and impact assessments. Different ex-ante (appraisal) and ex-post (evaluation) assessments have been a standard procedure for public bodies in many countries to develop their transport systems for a long time. The range of different assessment methods is wide including theoretical appraisals, modelling, simulations, empirical measurements, participatory methods, etc. However, in all cases the question being asked is: "How well does this scheme or strategy meet the objectives which have been set?"

Assessments in the transport sector have a strong technological basis and partly as a consequence, a strong institutional basis also (e.g. transport project Environmental Impact Assessments). The existing frameworks have typically been used for infrastructure assessments at project level, for ex-ante assessments (i.e. appraisals), and for prioritising purposes. They have focused primarily on economic efficiency. Distributional questions have been considered to only limited extent. Assessments have been mostly inter-urban, only rarely responsive to interactions outside the transport sector and hence not consciously oriented towards wider societal, e.g. sustainability concerns (e.g. ECMT, 2004; Giorgi et al., 2002; Pearman et al., 2001; 2003; TRANS-TALK, 2001; Nijkamp and Blaas, 1994). Wider, multidisciplinary approaches like Policy Analysis as a research field are quite new in transport where the terms 'planning' and '(impact) assessment', referring to infrastructure investments and project appraisals, have formed the reference frameworks for decades (De Rus and Nash, 1997; Giorgi et al., 2002). According to the European Thematic Network: 'Policy and Project Evaluation Methodologies in Transport' TRANS-TALK (2001) as well as Pearman et al. (2001; 2003), Giorgi and Tandon (2000) and Giorgi et al. (2002), currently there exist two views about what role transport assessments should have. One is simply that they are tools to assess value for money. An alternative view is that assessments are tools to help in negotiation and deliberation processes, through which socially desirable transport actions are identified. However, analyses or assessments of the usability of the developed impact and policy assessment tools have been modest.

#### **4. The case study: applying the FFPA method**

In this section, we present a FFPA method for transport research projects. It was developed and applied in the frame of the Transforum project, in the years 2005 to 2007. The method is comprised of three parts, which are described in the following subsections: (1) The Project Screening Process, which describes the data collection and selection concerning relevant transport policy support projects; (2) The FFP Analysis of research projects, consisting of four assessment phases; and (3) The transport researcher-civil servant network building through European wide meetings (Forums). Figure 1 presents these different parts of FFPA and their interactions, i.e. the time and place when information is shared, assessed and when collaborative learning can take place.

##### *4.1 The Screening Process*

The Screening Process presents a basic scheme for identifying the right, i.e. policy relevant, projects from the extensive number of projects carried out within a certain research theme. It describes the nine general steps needed to select relevant projects for FFP Analysis. The number of projects diminishes gradually as the screening process proceeds.

In our case study, the first step was to identify all potential projects falling under the theme "Transport Policy Assessment" from the EC Database (Cordis). A list of 23 projects was identified by project partners. A Screening Report (SR) #1, focusing on: (1) projects' significance in terms of transport policy assessment; (2) value of project results; and (3) dissemination and exploitation of project results was written for each of the projects. Basing on the results, the overall relevance (from 0 to 5) of the projects to FFPA was defined on the grounds of the project team expertise. Thirteen projects out of 23 scored 4 or 5 in the relevance assessment and were selected for further assessment. In order to obtain also a "self evaluation", a questionnaire was sent to the project coordinators of the 13 projects. The questionnaire was divided into 3 parts, namely: (1) technical questions; (2) Specific questions relating to transport policy assessment tools; and (3) Impacts of the research on European transport policy decision-making. Screening Reports SR #2 summarising the results of the questionnaires and proposing 7 projects to continue into detailed FFP Analysis were written by the project partners. Finally, the third Screening Reports SR #3 of the 7

projects were written to present the results of the discussions with Commission project officers (for a detailed description of the screening process, see: Aparicio et al., 2004).

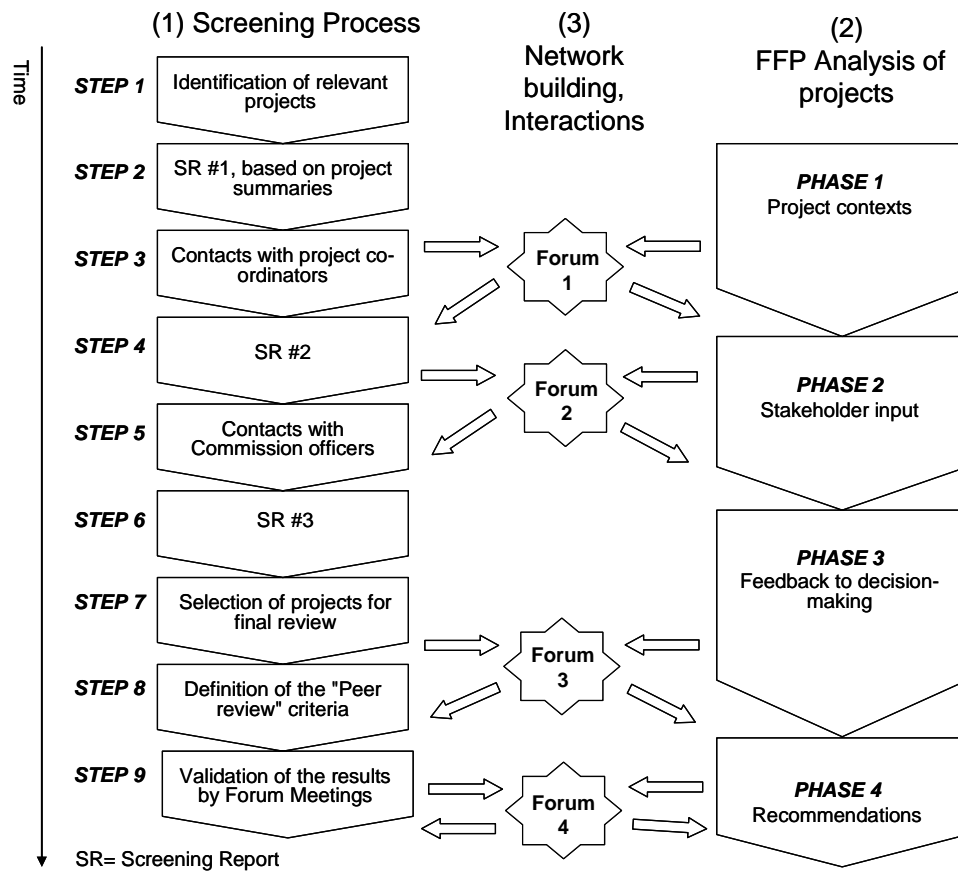


Figure 1. The FFPA method

#### 4.2 The FFP Analysis of research projects in the transport policy context

Phase 1 of the FFP Analysis, Clarification of prior circumstances, seeks to find out the kind of context the screened projects are embedded in: What kind of knowledge has been produced and has it been produced in the relevant context? In our case study, there were three research themes (Policy Instruments and Packages, Impact Assessment Methods, and Policy Appraisal Methods). The screening resulted in the 23 projects to be assessed that are listed in the first column of Appendix I. (Their research themes are shown in the second column.) FFP criteria testing the quality and comprehensiveness of the project approaches were prepared for each of the three research themes. The main contribution of phase 1 was to point out whether or not the approaches of the projects within a given theme were relevant and consistent with each other.

Phase 2, the role of stakeholders, studies the stakeholders' and end users' input into the screened research projects. In our case, the input was clarified by contacting the project co-ordinators of 13 projects (see Appendix I), either with questionnaires or by interviews, with the following questions: (1) Were the relevant stakeholders mapped out in your project?; (2) To what extent did the project include end users' priorities, needs and expertise?; (3) Were the projects results appropriately assessed during the research?; and finally (4) Did the project encourage any interactive processes of communication and learning? The main contribution of phase 2 was to find out whether the screened projects have succeeded in weaving the perspectives of various stake-



holders into a generative and coherent whole or not and consequently encouraged social learning.

*Phase 3*, the outcomes, looks at the actual feedback of the screened projects to European transport policy decision making. The aim of phase 3 is to determine the effectiveness of the screened projects in advancing understanding and co-operation between research and policy making. The overall question is: Have the projects succeeded in making the results of the projects directly usable and matching the needs of civil servants, policy makers or other end users? In our case, the methodological steps for the final seven projects (see Appendix I) included: (1) Extracting the main findings and advantages from the viewpoint of the end user were from the project reports; (2) Examining (in a peer-review manner) the Fitness-For-Purpose of the projects in terms of the FFP criteria presented in phase 1; (3) In case of the decision making support software tools, performing an additional quality check of their fitness-for-purpose; (4) Interviewing the project leader or key persons on potential weak points of the projects and how to overcome those (consolidation of the first evaluation results); and finally (5) sending the draft FFP Analysis report to the project leader for a final check and finalising the outcomes accordingly (consolidation of the outcomes).

*Phase 4*, Guidance for future projects, draws conclusions from the results of the previous assessment phases. What is even more important than determining the quality of the assessed projects is to start answering the questions: What are the needs for further improvements and how could the fitness-for-purpose of the outcomes be improved? What kind of guidance has the assessment process provided for future projects, their facilitation and the interaction between European transport policy research and policy formulation (for Project Analysis method and results see: Tuominen 2005 and 2006, Leonardi and Tuominen 2006)?

#### 4.3 *Forum meetings as means for transport researcher – civil servant network building*

Modern governance analysts frequently seek to explain policy outcomes by investigating how the networks facilitating the bargaining between stakeholders over policy design and detail are structured in a particular sector (Peterson, 2003). A theoretically ambitious policy network approach has to, first, show that policy networks do not only exist but are relevant for the policy process and the policy outcome, and second, tackle the problem of the ambiguity of policy networks, which can both enhance and reduce the efficiency and legitimacy of policy making (Börzel, 1997). Our aim is to show that stakeholder meetings, organised by a policy support project, can function as transport policy networks in terms of the above definition. Furthermore, we will attempt to confirm the usability of the network building approach as a complementary part of research project FFPAs.

In our case, the transport research-policy network building took the shape of four Forum meetings with participating stakeholders of various backgrounds. The overall objectives of the meetings were to: (i) facilitate networking and dialog among researchers, policy makers and other stakeholders, and (ii) act as an assessor of the usability of the results in the field of strategic transport research in order to gain knowledge from other parties and initiate mutual learning. Figure 1 shows the linkages between project FFP Analysis and Forum meetings. The main themes of the Forum meetings were selected to illustrate the shift from the current state of affairs in transport policy support tools through the new needs for Europe, to the new ways of integrating research and policy making in future research agendas. All four Forum meetings were organised as 1 ½ day seminars, with plenary sessions at the beginning and at the end. Three parallel sessions on the fields of: (i) indicators, (ii) transport modelling, and (iii) policy appraisal were placed in-between the plenary sessions. The plenary sessions included general presentations, key presentations on the main topic of the meetings, and conclusions. The parallel sessions included more participatory elements and discussions. Our focus in this paper is on the field and the sessions devoted to policy appraisal.

The success of the Forum meetings was analysed using an evaluation form given to all participants after each meeting. The form (questionnaire) had two parts. The first part identified the background and the experience of the participants. It also posed general questions about the usefulness, quality of the presentations and documents, organisation etc. of the Forum meetings, on a scale of 0 to 5. The second part looked for (i) potential issues that were overlooked during the Forum, (ii) the greatest success of the Forum, and (iii) recommendations to improve future Forum meetings. Participants were asked to answer these questions by stating their individual opinions in writing.

## 5. Results

In the following two subsections, we present the results of our FFPA exercise in terms of (1) the analysis of the projects, and (2) the network building.

### 5.1 Project Analysis

This first subsection presents the results of the analysis of the projects within each of the four FFPA phases.

*Phase 1* of the project analysis concentrated on project contexts and showed that contributing to sustainable mobility has been the overall objective in European transport policy appraisal research projects. Our analysis focused on 23 projects, covering the following themes: (1) Policy Instruments and Packages, (2) Impact Assessment Methods and (3) Policy Appraisal Methods. The importance of the economic efficiency dimension of sustainability was highlighted in projects fitting under the theme "Instruments and Packages". Modelling tools for environmental and safety impacts were the core issues in the "Impact Assessment" projects. Close to all "Policy Appraisal" projects developed a wider framework to help decision making in policy/ project appraisal.

Basically, all the projects produced useful tools for transport policy processes. The emphasis was on ex-ante assessments. In addition to the mainly good outputs also some problems, which complicate the use of the developed tools in practice, emerged from the project assessments and Forum meeting discussions. First, there seems to be large uncertainties around the concept 'sustainable mobility' within the EU transport policy. Different transport policy stakeholders feel uncertain which environmental, social and economic issues should be guaranteed and balanced against each other in order to support sustainable mobility. Consequently, in the course of applying the developed policy instruments and tools it remains unclear against what objectives or targets their results should be assessed. Second, the research projects in the above themes were carried out quite separately, even though they could benefit from each other. Integration of the three research themes as well as policy evaluation (ex-post analysis) was highlighted as the most important fields for future transport policy research. Third and relating to the second point, interfaces between transport research, policy processes and other transport system stakeholders were seen unclear and (possibly) as a consequence dissemination of the research project results to wider audience was very challenging.

The main contribution of phase 1 can actually be seen in the clarification of the term "fitness-for-purpose" to mean the match between the capabilities of the research results (instruments and different assessment methods) and their purpose in terms of policy and most importantly, understanding this as the main focus of the FFPA exercise.

*Phase 2* studied the stakeholders' and end users' input into the research projects. The traditional aims for involving different stakeholders in policy support research projects are basically: to ensure that the results of the projects are valid; to lend the projects the legitimacy they require to contribute to policy development; and to build support for the organisation in charge of imple-

menting the findings. However, we found out that identifying and "really" involving stakeholders at the beginning of the projects seems to be one of the main problems regarding stakeholder participation in policy support projects. It is not very clear who the end users of transport policy assessment project results are, and how their priorities, needs and expertise are incorporated into the projects. In the course of the projects, workshops, seminars and external reference groups have been used as the main instruments to involve stakeholders. However, looking at the past stakeholder practices within European FP projects neither project partners nor external stakeholders seem to have enough resources (time, money, interest, etc.) to ensure efficient stakeholder participation. Consequently, the added value of stakeholder participation in EC transport-related projects seems to be more or less missing and, thus, not fitting the purpose of serving European transport policy research and policy formulation.

*Phase 3* focused on project results as well as on feedback to the decision making. The analysis showed that most of the seven in-detail analysed projects (see Appendix I) actually were effective in interpreting their results and presenting them for civil servants or policy makers. For example, one project improved co-operation between research and policy making; another developed good assessment methods, and a third produced tools that were used years after completion. As one project officer from the European Commission stated:

"The main advantage of developed assessments for policy makers has been that they have helped in structuring the political problems that need to be tackled by the White Paper policy instruments and measures"

On the other hand, also some critique could be identified. For example: the main outcomes of the projects could have been summarised more clearly from the end user's point of view in order to better lead to practical applications; there is a lack of comparable data and criteria regarding both sustainability and competitiveness issues; and (local) equity should be considered as important criteria in assessment tools as (global) efficiency. Relating to the last point, the question: how can we define the common European interest (i.e. who pays and who gets the benefits?), created a vivid discussion.

In general, the FFP Analysis of research projects indicated that the conclusions were more useful and important to policy processes when they were more specific than generic. This is because generic conclusions, basically, concern more the framework or the methodology and less the substance of decisions. All assessed research projects produced results that are comparable with consultancy outputs like the mid-term assessment of the White Paper on transport (Commission of the European Communities, 2006b), but large differences of status and cooperation intensity with the Commission between the projects were observable. The effects of these differences on the project outputs were, however, difficult to identify.

Results from *Phase 4*, Lessons learned and recommendations are presented in sections 6 and 7 of this paper.

## 5.2 *Networking to support transport research and policy*

During our three-year case study project, four European wide Forum meetings were organised. The participants included civil servants from the national ministries, administrations and the European Commission, researchers from different institutes and universities, private transport consultants, and participants from other transport sector public and private organisations. Also, several national policy makers were able to participate. The workshop characteristics of these meetings allowed the emergence of innovative answers to the questions arising from the FFP of projects. The discussion on the screening process and on actual policy issues like sustainability, competitiveness, logistics, and Trans European Networks (TEN), led to new suggestions on potential solutions. The main strength of the performed network building approach appeared to be the exchange of ideas on different policy assessment methods and policy instruments between re-

searchers, civil servants and other participants, leading to complementing insights of the parties. From 70 to 90 participants took part in each of the Forum meetings. A Forum meeting evaluation form was distributed to all participants at the beginning of the meetings. The number of forms returned varied between 23 and 29, depending on the Forum meeting.

The following results are based on the evaluation forms. Figure 2 presents the backgrounds of the participants in the different Forum meetings. The original plan was to have a higher percentage of policy makers, civil servants and other stakeholders in the latter Forum meetings, as the actual feedback from the research projects to the decision making would start to take shape and, as we can see from Figure 2, that objective was reached.

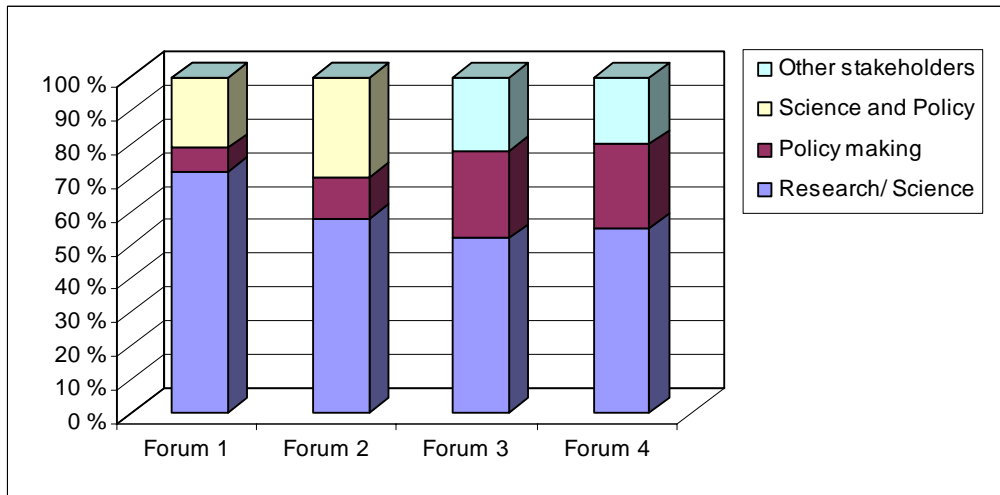


Figure 2. The backgrounds of Forum meeting participants

Figure 3 shows the participants' average degree of satisfaction with the Forum meetings, on two issues, namely: usefulness and overall impression, on a scale of 0 to 5. The participants' satisfaction can be considered very high regarding both issues. The usefulness of Forum 3 received the lowest score, 3.3.

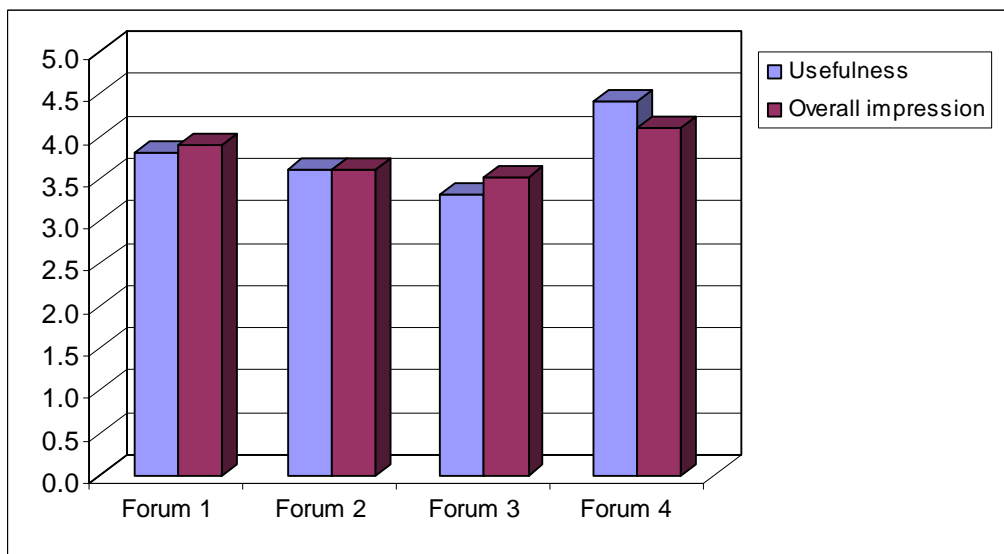


Figure 3. The participants' average degree of satisfaction.

In addition, the level of experience (new information and ideas, interaction, etc.) at the Forum meetings was regarded as extensive by 57% or more of the participants in all of the meetings. As

the participants were asked for the greatest success of the meetings, the discussions between different participants were explicitly considered as the success number one. Depending on the Forum meeting, 54% to 88% of the respondents mentioned the dialog between various partners as the greatest success.

The results show that policy networks can be built around European transport research project evaluations and they are considered important, especially the societal influence (e.g. discussions), but not too ambiguous. The research knowledge produced in the European FPs is one of the key resources to legitimate and implement policies. That is why we see it is important to include and constantly elaborate the network building as a part of the FPPA method to enhance the use of research results in policy practices now and in the future.

## 6. Discussion

In the following, we discuss the potential of our method in assessing the FFP of European transport research. The method aimed to integrate traditional transport research project evaluation with network building around project assessments, in order to help in accepting, elaborating and applying the produced research knowledge in policy processes. Furthermore, we present the implications of our case study to the European research supporting transport policies, i.e. the field of transport policy analysis.

### 6.1 *FFPA in the context of Transport Policy and Impact Assessment*

In our view, the contribution of our assessment exercise can not be found in developing the transport policy assessment methods themselves in a traditional sense, but in assessing the applicability of the produced methods in policy processes to help making informed decisions. We see that the FPPA as presented here could be seen as a simple additional quality criterion that could be performed for every new research theme, project, software or model developed by a European research consortium. This kind of fitness-for-purpose assessment delivers a much higher degree of analysis than a project's internal quality check or external expert evaluation because it is performed simultaneously for several EU policy assessment projects and includes interviews as well as an open consultation. Consequently, the method can be determined as a collective output of project analyses, expert interviews, and meetings. In addition, the conclusions of each Project Analysis give answers to specific feedbacks of the screened projects on European transport decision making, proposing both actual and potential solutions for the future. During the methodological development, objectivity, transparency and data availability were identified as potentially problematic, but not fundamental (intrinsic) methodological weaknesses of FPPA method's project analysis part. However, none of the critiques seemed to constitute a barrier that would hinder the wider use of FPPA method in the future. Basically, the method was easy to apply and led to positive results and innovative conclusions.

Applying the method revealed that at least in the following four fields more efforts are needed to fit the produced European research knowledge better for the purposes of policy processes. The first one is the understanding of the systemic nature of transport in policy and impact assessment research supporting policy processes. Basically, the ultimate purpose of the transport system is to serve the needs and expectations of its users, who in turn shape the system by their behaviour and actions. The system is, thus, both socially constructed and society shaping. This requires putting transport research and policies at the service of more general goals. Hence, the coherence of the transport system should be analysed and policy relevant knowledge produced with various goals in mind, with constant monitoring of the edges of transport projects within a larger societal context. At these edges lie the richest opportunities for transport innovations and success. In ad-

dition, there seems to be a lack of visionary thinking in the transport sector. As some experts stated in the course of the case study:

“There seem to be too few success stories on the impacts of research on policy making and a lack of innovation in using policy assessment methods for developing new visions for transport.”

The second field is the functionality of stakeholder participation and dissemination within European transport research projects. Currently, the impact of the research results on policy decisions and implementation is rather low. To increase the effectiveness, guidance is needed at least in the following areas: (1) identifying the key stakeholder/end user groups for research projects and also securing their involvement; (2) using the correct tools for efficient stakeholder participation within the projects; (3) ensuring efficient dissemination of the research results beyond the research community. In addition, reserving extra funding for project activities after the completion date (for maintaining web pages, organising policy makers' meetings/ seminars etc.), could assist the project dissemination activities with reaching beyond the research community. Also local transport authorities often play an important role in policy implementation and, therefore, best-practice knowledge transfer should be supported from the European level. Furthermore, public consultations should be conducted in most of the fields of transport research activities and at different geographical levels, with members of the research community as one of the participating stakeholder groups. Some of these consultations should consider the applicability and topicality of the FP research results for the transport policies of the EU and the member states. The public consultations are currently based on EC policy documents, like the “mid-term review”, and not on the underlying scientific assessments, which are more complex.

Third, transport policy research projects might have more impact on policy decisions if their main assessment outputs were presented to decision makers in a simple and concise form that clearly communicates the key issues. There should be no room for doubt or misinterpretation in the results. The same advice also concerns the transparency of the transport model or impact assessment tool assumptions and outputs. In most of the projects analysed in the case study, transparency was lacking. Furthermore, major efforts should be put in the future into integrating methodological developments of transport related indicators, modelling tools, as well as assessment and evaluation methods, in terms of developing these tools together.

Fourth, mixing theoretical and practical knowledge as well as people (e.g. researchers and civil servants) within the research projects may give the research results a great advantage in their implementation phase. Systematic ex-ante assessments followed by an ex-post evaluation of economic, social and environmental impacts, performed in collaboration with research and civil servant communities, should be a normal part of policy processes. However, the use of ex-post evaluation in the past transport policy has been modest. Preferably, the assessments should be transparent and publicly accessible, which would increase their validity. The diversity of assessment methods and expectations is always richness and it should be maintained as much as possible. Different methods supply policy makers with different perspectives of the same issue or problem, and help perceive the systemic nature of the transport system.

## 6.2 *Policy networking as a part of the FFPA method*

Following the network model (e.g. Kickert et al., 1997) as a new approach to transport policy relevant knowledge production, we claimed that there exists a need for building networks supporting the use of transport research results in policy processes. The networks could take the role of exchanging scientific and experiential knowledge as well as gaining mutual understanding regarding of the problems, means and the targets within the transport policy processes in order to make informed decisions. The networks could also enhance the currently poor dissemination of the research results.

Our FFPA revealed (and Forum evaluation results in particular) that research-policy network building, organised in our case in the form of Forum meetings, is relevant for both the research community and policy planning. The findings suggest that networking enables the formulation of recommendations and best practices based on the project results, as well as shaping of future research and policy agendas collectively by all participating parties. This kind of process strengthens the commitment to apply the recommendations in future activities, and hopefully urges different parties to work together in future policy planning activities. As we have claimed earlier in this paper, the roles of public and private parties within design and production of contemporary information or knowledge society's transport technologies and services are evolving very fast. We see that in this complex context, exploitation of knowledge requires participation in its generation, which means that communication and networking are crucial elements and organisation of this distributed knowledge production becomes the essential factor. The FFPA method we have presented and tested in this paper provides good premises for the further elaboration of such organisation.

## 7. Concluding remarks

OECD governments and the media today remind us at almost every turn that we live in "the knowledge society", and that the conduct of science (research) has an enormous, foundational role in that enterprise. Given the nature of the claims presented in this paper, we deem it appropriate to consider the "fitness-for-purpose" as an important characteristic of the knowledge produced to support policies. The general challenge taken up in this paper was to show that linking a systematic analysis of transport research projects with researcher-civil servant network building can provide tools for the "fitness-for-purpose assessment (FFPA)" of EU research projects in support of policies, and consequently bring transport research closer to policy processes.

The presented method, we hope, provides an inroad into understanding the importance of fitting transport policy research for its purpose and speaks to the realities of researchers as well as civil servants and policy makers. We see that policy makers and civil servants can benefit from this method by learning how the new practices might be diffused more deeply and broadly in the public sector. All the participants in the research-policy networks, in collaboration with other actors involved in the emerging transport policy environment, can benefit from discussions and mutual learning, which can lead to creating new options for the future, playing with different solutions to problems, and implementing new ways of doing things, faster, cheaper, and more effectively than in the past.

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## Appendix I

Phase I projects		Phase II projects	Phase III projects
Project	Theme	Stakeholder Input	In-detail FFP Analysis
CANTIQUÉ	Policy Instruments	X	X
CODE-TEN	Impact Assessment	X	
COMMUTE	Impact Assessment	X	
FANTASIE	Impact Assessment		
INTERNAT	Impact Assessment		
MAESTRO	Policy Assessment	X	
MEET	Impact Assessment		
MINIMISE	Policy Instruments	X	
	Impact Assessment		
RECONNECT	Policy Instruments	X	
SAMI	All	X	X
SORT-IT	Policy Instruments		
SUMMA	All	X	X
TRANSINPOL	Policy Instruments		
ARTEMIS	Impact Assessment		
FORESIGHT	Policy Instruments		
	Impact Assessment		
POET	Policy Instruments		
	Impact Assessment		
RECORD IT	Policy Instruments		
	Impact Assessment		
ROSEBUD	Impact Assessment	X	X
SPECTRUM	Policy Instruments	X	X
SPRITE	Policy Instruments	X	
	Impact Assessment		
TIPP	Policy Assessment	X	X
TRANS-TALK	Policy Assessment	X	X
TRANS VISION	Policy Assessment		
Total	23	13	7