



PEDESTRIAN QUALITY NEEDS
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Work plan

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PROJECT IDENTIFICATION

Project name:	Pedestrians' Quality Needs
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1 PROJECT DESCRIPTION

1.1 PQN Project backgrounds

Walking is such a basic way of travelling that one tends to forget its importance. One can forget its importance when the facilities are available and when the available facilities are adequate for a 'normal' person. Only when one becomes (temporary) handicapped, one discovers how crucial it is to be able to walk and that quality is not so good as one would expect it to be.

Transportation system trends

Because of increasing car dependency and consequent land use changes, perception and social changes, the nature of walking evolves. Door-to-door walking diminishes, whilst walking to and from other modes increases. In total, the amount of walking per person will decrease somewhat, but due to population growth the total distance travelled on foot will stay approximately constant. Generally the latter form of walking is statistically less visible than the former, creating the false impression that walking becomes less important. This false impression is further supported by a less intensive use of pedestrian facilities because more land is 'colonised' and the number of persons per housing unit decreases: this results in fewer pedestrians per square meter walkway.

Ageing of the population

Almost all countries will have to deal with an ageing population. For policy development regarding walking this has consequences:

- The elderly walk more than other groups. For the elderly the walking environment poses specific problems; they require better quality pedestrian facilities.
- With the ageing of the population public expenditure will rise. It will be much harder to find adequate budgets for pedestrian facilities¹.

The health issue

Health issues are becoming universal. For modern humans exercise is no longer a natural part of everyday life. Technical devices, like cars, elevators, bicycles made life easier, but pose new problems as well. Walking is a solution to many health problems. It is a simple and healthy form of exercise. Promoting walking is an effective strategy to keep the population healthy as well as a cost effective measure to counteract typically occidental diseases like cardiovascular and respiratory diseases, obesity, even cancer, ageing deterioration included. Even mental health related to environmental aspects and lifestyle, is positively influenced by regular walking while car use and hours spent in traffic jams represent an important stress factor, influencing both mental and physical wellbeing.

Policy development: focus on car

Up till now road transport policy development and (road) transport sciences focussed mainly on facilitating motorised traffic. Whenever there is a

¹ Public expenditure for pensions, health, transport and many other services will rise. The elderly will be more car dependent as well, causing demand for higher design standards for car traffic as well. All these foreseeable demands will compete with the urgent needs of a relatively small group (Methorst, 2005: 6.1% of the population in NL in 2000, 9.4% in 2030) of pedestrians that have mobility difficulties.

problem with or for non-motorised traffic, researchers, policy makers and designers generally look for solutions that do not inconvenience motorised traffic more than strictly necessary. Apart from some special projects, they feel that pedestrian and cyclists' needs can be satisfied by making improvements to the original situation or design. This practise leads to a suboptimal situation for pedestrians and cyclists: routes within the network that vary very much in quality, even to the point that some pedestrians (and cyclists) can not cope with it. A chain is as strong as its weakest link.

Hardly any support from technology & industry

Up till now walking is considered less applicable for technological developments than other modes. Thus progress could not be made to the extent in which progress for other road users was made. Industrial companies focussed on transport and traffic issues that can easily deal with by industrial applications and 'gadgets'. By consequence technology driven developments and demand driven challenges to the industry stayed away from the pedestrian sphere. Thus the care for pedestrian interests is more dependent on other fields such as urban planning, road design and traffic control. However, even for pedestrians roadside applications could have potential for pedestrian safety and pedestrian quality of life. Likewise advanced technological devices on the body of the pedestrian could have positive impacts. The potential of technology to satisfy pedestrians' quality needs has yet to be discovered.

Different situations in different countries

Conditions for pedestrians vary widely from country to country. There are differences in climate, in spatial conditions, quantity and composition of traffic, legal position, culture regarding walking and presence in public space etc. This asks for different solutions for different countries.

The position of the pedestrian in society and in the transport system changes over time.

In West European countries the current situation for pedestrians is the result of a gradual adaptation process over many decades. In the Central and East European countries the process of growth in the number of cars and car use is much more violent. Adaptation in such situations is much more difficult and may result in much more serious problems than experienced in the 'old' already very motorised countries. This project can help to feed those countries with knowledge that will make it easier and more efficient to deal with these problems.

In Europe motorisation did not yet lead to a bipartition of society where walking as a common travel mode is no longer feasible. Chances are that trends like the up-scaling of catchment areas of essential services, increasing car dependency and individualisation may lead to such a situation. Better pedestrian facilities might compensate for that.

Research on walking

Within the urban planning sector there is a movement with a long standing tradition of attention to pedestrian-friendly design². This is inspired by the fact that qualities or deficiencies of the physical environment are experienced more intensely by pedestrians than by other persons passing by in cars or even on bicycles. A classic study is 'The image of the city' by Kevin Lynch. In the recent COST Action C6 'A city for pedestrians: policy making and implementation' (Final report 2002) the position of the pedestrian within the urban environment and the State of the Art are highlighted. The COST Action C11 'Green structure and urban planning' (Final report 2005) offers further insight into pedestrian friendly design.

² This is not a mainstream movement, however. In most urban planning studies pedestrian friendly design is not the central issue.

In the 90's in many countries there was a rise in attention for sustainable transport. In this context effort was put into the promotion of walking and cycling. Guiding studies on the European level were the EU projects WALCYNG (How to enhance WALKing and CYcliNG instead of shorter trips and to make these modes safer; Final report 1998) and ADONIS (Analysis and Development Of New Insights into Substitution of short car trips by cycling and walking; Final report 1999) followed by research on walking in FP5 "City of Tomorrow and Cultural Heritage", the so called PROMPT study. Furthermore, in many countries handbooks on pedestrian facilities and facilities for the handicapped were published.

Since some years now the health sector stresses the importance of exercise and promotes that people walk at least 30 minutes daily; medical doctors increasingly often prescribe exercise instead of drugs; studies with regard to the ageing of the population reveal that a connecting, convenient, comfortable, conspicuous and convivial walking network will become a crucial factor enabling the elderly to grow old in place; research within the integrated framework approach by THE PEP: 'Transport, Health, Environment – Pan-European Programme' is carried out.

The Joint ECMT/OECD Transport Research Centre is planning to install a working group on Pedestrian safety, urban space and health (Programme of Work 2007-2009). This project will probably start in 2008 and be completed in 2009. The study will involve identifying key factors, benchmarking, improvements and conclusions regarding measures on the national level.

Systems thinking

For motorised traffic, system thinking has become more or less the norm. Whereas in the old days policy making was purely reactive ('we have a problem and we want to solve it'), nowadays the aim is to plan a flawless *system*, where traffic can move as safely and freely as possible³. Research based policy frameworks like Sustainable Road Safety in the Netherlands and Vision Zero in Sweden are examples of this new direction. The JRTC of the OECD and ECMT have a working group Achieving Ambitious Road Safety Targets that will publish a report on the state of the art of safety management.

For pedestrians, however, system thinking is music of the future. Most public space and transport authorities do not (yet) recognise the importance of systematically meeting pedestrians' quality needs. Research and traffic engineering are still largely confined to specific problems. Town planners and architects generally concentrate on aesthetics and investment costs, but generally do not think in terms of functional or Universal Design (design for all). Contributions from disciplines like psychology, sociology, philosophy, ergonomics, history, geography and law are still rather rare.

In relation to systems thinking, at present knowledge is fragmented, incomplete and to a large extent outdated. Statistics do not present a comprehensive picture of walking, its benefits and its risks. Most basic research was done decades ago, in situations that differ greatly from current situations. In systems terms there is no overview.

Political climate

In the western world, including Central European countries, the free market philosophy is becoming dominant. Policy is focussed on economic growth, which is to be attained by facilitating market participants, not by governmental guidance. Transport is seen as crucial for economic growth. In

³ Thus systems approach does *not* focus on fighting accidents, but on influencing risk factors within the process. The work is aimed at optimizing the process and reaching multiple targets: safe, healthy, agreeable mobility for all, 'ageing in place', community development etc. Knowing the citizen's *needs* is a prerequisite for an effective approach.

this walking plays only a marginal role. Leading politicians agree that social issues are best solved through a free operation of the market and that the governments' role is limited. In relation to this, governments retreat from policy sectors where they were the dominant force. In such a climate, when promoting interventions for improving walking conditions, one needs particularly well founded (economic) arguments. Since the citizen is assigned a larger role in creating adequate living conditions, low threshold tools are needed to substantiate this new role.

Why a COST Action on Pedestrians' Quality Needs?

The urgency of providing for walking and the changing pedestrians' needs is growing. Thus there is an increasing need for knowledge on the issue. Little has been done on the European level since the FP5 "City of tomorrow" and the COST Action C6 "A city for pedestrians: Policy-Making and Implementation".

Although there are many good examples of pedestrian friendly streets or areas, the general situation and context is far from ideal and not automatically getting better. The good examples are 'islands of quality in a sea of misery'. A more fundamental approach which also takes social and political trends into account is needed. With regard to such a systems perspective of the quality needs of pedestrians there are gaps in current knowledge.

In most countries there is no critical mass for a general interdisciplinary systems approach study on this issue. Although there are many researchers and policy developers interested in the issue, as yet it is difficult to get joint research and policy development funded nationally. A practical solution is to join forces internationally and benefit from individual qualities. COST offers an effective and - above all - efficient framework for international and interdisciplinary research. Since there are not many professionals working on the issue, the joining of forces also reduces chances of duplication of research. A COST Action implies a less heavy administrative burden than a Framework Programme project; this is a favourable condition for researchers to join the project.

One of the basic factors in effectiveness of dissemination is credibility of the source. A COST Action ensures that State of the Art knowledge will be disseminated and that the recipients attach credibility to the source of information, thus facilitating and stimulating more and better local interventions, based on scientific evidence.

Initiatives taken before the Kick-Off of the COST 358 project

In 2001 the Dutch Ministry of Transport and Public work commissioned the study on a knowledge base for development of an integrated and comprehensive systems approach regarding vulnerable road users. This study resulted in a report by AVV Transport Research Centre; currently policy development is under way. Within AVV it was felt that the accumulated knowledge on pedestrian issues should be secured. A PhD thesis was thought to be a good option.

Meanwhile at the ICTCT⁴ General Assembly in Tartu (Estonia, October 2004) it appeared that a majority of the delegates had affinity for vulnerable road users and the pedestrian issue in particular. It was decided to form a task force to gather the available knowledge on pedestrians' issues and come up with a work plan for a joint project on the matter. The task force included Zuzana Simonova (Italy), Dago Antov (Estonia), Hector Monterde I Bort (Spain) and Rob Methorst (The Netherlands). Methorst agreed to pull the project and develop a draft work plan.

⁴ ICTCT stands for International Co-operation on Theories and Concepts in Traffic Safety

In October 2005 a draft work plan was presented at the ICTCT workshop in Helsinki. At the following General Assembly a large majority of the delegates expressed their interest in participating. It was decided to release a Call for Participation via the ICTCT website and e-mail to known experts and. Within a month some 45 experts from 35 institutions in 20 countries reacted and expressed their interest and it was decided to send in a project proposal to COST. The proposal was formally approved for funding by the COST Committee of Senior Officials on 27 June 2006.

In the proposal a crude description of the scientific program was given. The scientific fundament is worked out in a (draft) report on the Conceptual Model for the Pedestrians' Quality Needs study⁵. The conceptual model is developed for ensuring that all relevant system components, determinants and interrelations will be considered in the study. In this Work Plan the model is used primarily for generating a comprehensive set of relevant questions research questions.

1.2 PQN Objectives

The *main objective* of the Action is to provide an essential contribution to systems knowledge of pedestrians' quality needs and the requirements derived from those needs, thus stimulating structural and functional interventions, policy making and regulation to support the walking conditions across the EU and other involved countries.

The research aims are:

A. Improve understanding

To improve the understanding of pedestrians' quality needs with regard to public space, the transport system and the social, legal and political context and their interrelations, thus developing an essential tool for the stakeholders (such as decision makers, politicians, planners and executive offers as well as NGO's) that can implement better conditions for walking and pedestrians' quality of life;

B. Advance effectiveness and efficiency

Describe the State-of-the-Art, identify an agreed set of requirements and develop a new paradigm (a coherent system of theories and models regarding adequate pedestrian facilities and qualities) that can be used by stakeholders for analysing and improving 'reality';

C. Provide Knowledge base

Provide an accessible knowledge base and easy to use auditing scheme that enables authorities and possibly interest groups to tackle, prevent and prioritise current and future problems regarding pedestrian mobility and presence in public space;

D. Stimulate innovation

To stimulate partners to innovate tools and disseminate knowledge that helps shedding new light on the issue and stimulates a new élan in providing for safe mobility of the pedestrian;

E. Provide recommendations for further research.

Indicate gaps in knowledge and provide recommendations for further research.

⁵ Methorst, R. Pedestrians' Quality Needs - A conceptual model, draft of 2 June 2006, AVV Transport Research Centre, Rotterdam.

1.3 PQN Scientific programme

Research questions are:

- What are the (limitations in) travel and traffic task competences of pedestrians?
- What facilities and qualities do pedestrians need for their safe and agreeable mobility and staying in public space, now and in the foreseeable future?

Sub-questions are:

- What role has walking within our society? Which changes have occurred over time and which changes can be expected?
- Which tasks are pedestrians to perform? Which (implicit) requirements have to be met?
- To what extent is that possible?
- What facilities are needed to perform these tasks adequately and pleasantly?
- To what extent are the (implicit) requirements and provided facilities at odds? How can that be solved?

The scientific programme for the Pedestrian Quality Needs (PQN) Action is based on a comprehensive conceptual model, describing the general factors that influence the actual decisions by (potential) pedestrians, be it for a door-to-door trip, a trip to other modes or just staying in public space. This deductive 'back to basics' approach implies a study of the needs, tasks, competences, requirements of pedestrians, contexts and their performances in the various situations of the participating countries. Past research resulted in substantial knowledge on the requirements for promoting walking in city centres. This study will expand that knowledge to everyday walking, in particular in the outskirts of towns and villages, where in fact most of the walking is done.

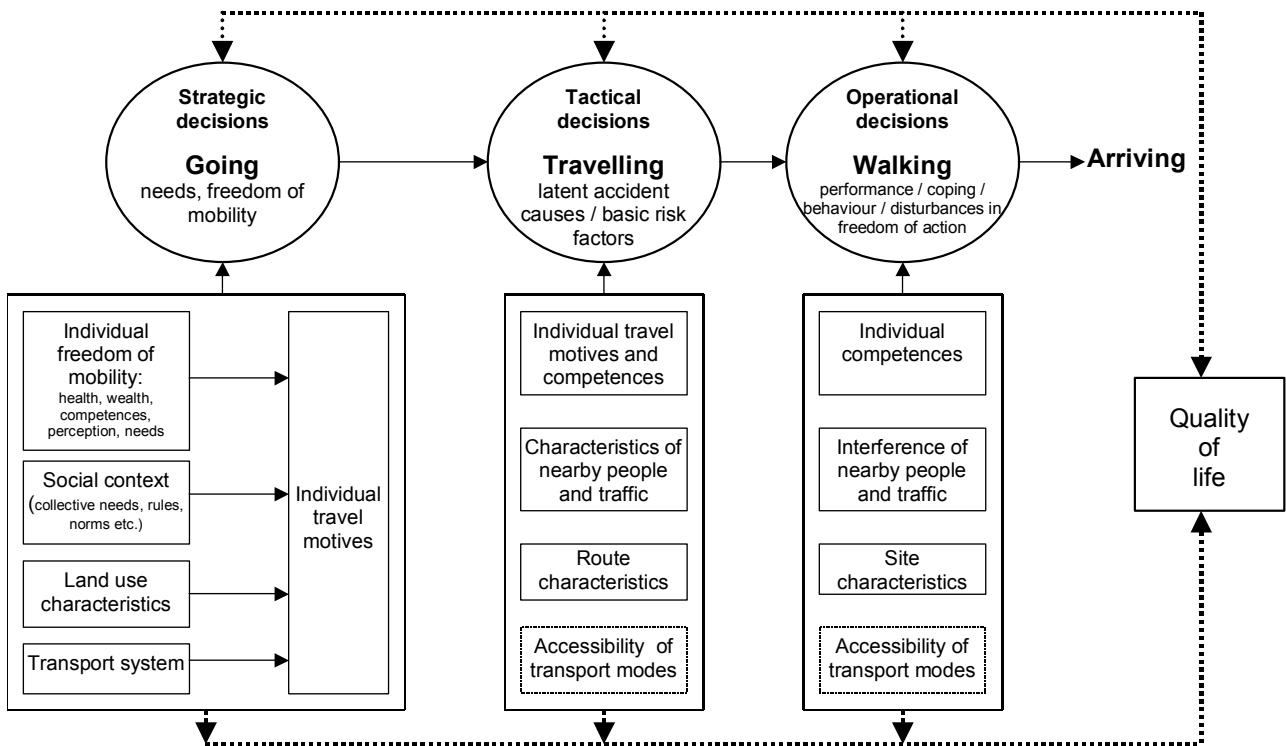


Figure 1 PQN Conceptual Model

The general approach of the study is defined by the view that quality is the sum of three kinds of valuations⁶ that together sketch a comprehensive picture of pedestrians' quality needs:

- *Functional perspective:*
usage value, what is being offered = intrinsic quality supply, looking at the system from the 'head'. With regard to urgency these needs can be seen as first order needs.
- *Perception perspective:*
what is being requested = subjective quality demand, looking at the system from the 'heart', including attitudes towards and of pedestrians. With regard to urgency these needs can be seen as second order needs.
- *Durability and Future Prospects:*
whilst # 1 and # 2 are static quality descriptions, # 3 refers to a dynamic perspective. With regard to urgency these needs can be seen as third order needs.

Quality needs can be identified at several abstraction levels⁷. The most concrete level is the *operational* level. On this level the pedestrian performs the physical task of walking or standing up and reacts directly to impulses, i.e. from other road users, and qualities on the spot.

The second level is the so called *tactical* level. On this level the pedestrian decides on the direction he takes, whether or not to cross, where to cross, walking speed and so on. For the physical environment this corresponds with connectivity; for the social context the level corresponds with norms of fellow road and public space users; for the transport system it corresponds with the abstraction level of transport concepts.

The highest level is the *strategic* level. Here the pedestrian decides whether or not he will travel (motive), where to (destination) and which modes will be used. For the physical context this level corresponds with Land Use and urban planning, including 'green' and 'blue' zones; the social context on this abstraction level implies social values; the transport system on this abstraction level is typified by facilities for accommodating travel and transportation needs, including information needs.

1.4 Overall working structure PQN

PQN will be a multi-disciplinary study, exploring the needs of pedestrians and developing models in context, based on evidence, and with measurable outputs. The project starts with an inventory of available statistics, national and international R&D publications with regard to pedestrians and documented policy statements of stakeholders on the various political and institutional levels. The outcome will be input for four work packages, following the above ideas of the scientific programme. There are three working groups dealing with the successive orders of needs and a fourth one dealing with the coherence and the integration of the results.

⁶ based on the RARO publication on Spatial Quality (Dutch Advisory Council on Land Use Planning RARO [Raad van advies voor de ruimtelijke ordening]) '*Naar ruimtelijke kwaliteit*', SDU uitgeverij, Den Haag 1990.

⁷ See: 'Dealing with dangers', J.A. Michon, Groningen 1979 and 'Vulnerable Road Users', Methorst, Rotterdam 2003 regarding the Pizza-model.

WG1 – Functionality needs

The most basic order of needs covers the 'rational' perspective of the current situation. This work package will focus on the physical and observable ('objective') needs of pedestrians, visible and objective behaviour and the 'technical' perspective of ergonomics with regard to the physical and social environment and the transport modalities.

Studies are expected to explore the presence of pedestrians in public space, the tasks pedestrians have to perform and the nature and extent of mobility, safety, physical health and exclusion.

Recommendations with regard to standards will include land use, public spaces, infrastructure, information, legislation and transport modes and will allow for the substantial different situations in the participating countries and sub-regions.

WG2 – Perceived needs

The second order of needs relates to needs as they are perceived by stakeholders. This work package will focus on the 'emotional' perspective on the current situation and includes the perception of walking and how attitudes, expectations and motivations influence behaviour of other road users, planners, policy makers and politicians, and of walkers themselves. Perceptions of physical and social environments, the transport system and their interrelations will be identified.

Studies are expected to explore the perception of accessibility, comfort, safety, security, health, social climate, aesthetics and spontaneous mobility in particular.

Appropriate interventions will be recommended to influence the determinants of current barriers, to breakdown institutional and social obstacles and improve the quality of life for pedestrians.

WG3 – Durability and future prospects

The third order of needs involves the dynamic perspective: how do functionality needs and perceived needs evolve over the years, from past to present and what can we expect? What new policy directions are needed? This work package will focus on the durability aspects of interventions, designs and policy measures and on forecasting future prospects concerning usability and perceived qualities.

Studies are expected to explore the long term qualities of interventions, designs and measures and to explore trends with regard to the pedestrians population, the physical and social environments and transport modalities.

Consequences of limits to durability and of positive and negative trends will be indicated and evaluated. Recommendations for mitigating adverse effects of individual findings will be given.

WG4 – Coherence and integration

This work package will focus on the interrelationships between the first three work packages. A model will be constructed to identify pedestrian needs and main influencers on quality and behaviour, and to identify an optimal policy mix for improving pedestrian quality.

The work package includes monitoring the intrinsic⁸ progress of the scientific the research programme, coordination of adjustments in the programme and the preparation of external communication.

At the conclusion of the project gaps in knowledge and processes will be identified. Attempts will be made to determine and justify the options for policy makers and practitioners to support both short and long term commitment to invest in the need for quality to support pedestrian activity.

In Table 1 examples of issues in relation to the working group perspectives are given. The Working Groups 1, 2 and 3 deal with the issues of their row ('horizontally'); Working Group 4 deals with the interrelation per column ('vertically') and between columns.

Table 1 Examples of issues in relation to the working group perspective/task

Direction of analysis	Perspective / task WG 4 Coherence and Integration		
	Operational	Tactical	Strategic
Functional perspective →	<ul style="list-style-type: none"> - Physical quality - Comfort - Action related risk for pedestrians in specific situation 	<ul style="list-style-type: none"> - Connectivity - Convenience - Accessibility - Tactic related risk for pedestrians in specific routes 	<ul style="list-style-type: none"> - Pedestrian mobility - Health - Strategy related risk for pedestrians for generalised situations
Perception perspective →	<ul style="list-style-type: none"> - Perception of quality and comfort - Amenity - Communication - Time/space specific subjective risk 	<ul style="list-style-type: none"> - perception of connectivity, convenience and accessibility - Convivial / security - Conspicuous - Space specific / time generic subjective risk 	<ul style="list-style-type: none"> - Mobility constraints - Security - Time/space generic subjective risk
Durability and future prospects →	<ul style="list-style-type: none"> - Site qualities - Potential objective and subjective risk in specific situation 	<ul style="list-style-type: none"> - Objective&subjective connectivity prospects - Convenience prospects - Potential objective and subjective risk 	<ul style="list-style-type: none"> - Technical and subjective mobility - Health - Potential objective and subjective risk in generalised situations

⁸ Management aspects will be dealt with by the Senior Management Group. This WG only deals with scientific content, irrespective of the person, money, timing aspects.

1.5 Research questions

Key question in the project, as mentioned in the Technical Annex of the COST 358 Memory of Understanding, is:

What facilities and qualities do pedestrians need for their safe and agreeable mobility and staying in public space, now and in the foreseeable future.

In the Technical Annex the following general sub-questions are asked:

- *What role has walking within our society? What changes occurred over time and what changes can be expected?*
- *Which tasks are pedestrians to perform? Which (implicit) requirements have to be met?*
- *To what extent is that possible?*
- *What facilities are needed to perform these tasks adequately and pleasantly?*
- *To what extent are the (implicit) requirements and provided facilities at odd? How can that be solved?*

The above questions relate to a number of key issues to be researched:

1. The nature, volume and relative scale of pedestrian activities
2. Pre-conditions in different contexts
3. Pedestrian needs and determinants
4. Tasks to be performed by pedestrians
5. Competences of pedestrians
6. Requirements in relation to tasks to be performed and competences
7. Risk factors, favourable factors
8. Quality determinants and requirements
9. Measures, interventions, policies and strategies that can improve the pedestrian situations
10. Integration of measures, interventions, policies and strategies in optimal policy programs.

All four Working groups will deal with the above issues and all will shed light on them:

- at the strategic, tactical and operational levels
- at the current situation and for historical developments
- at identification of relevant margins, critical situations and critical groups

The PQN project builds on earlier projects. Most of those projects focussed on the pedestrian qualities in the busier parts of the city (city centres) and on qualities relating to operational behaviour. Much less is known about walking in suburbia and peri-urban areas and about qualities on the tactical and strategic levels. Therefore special attention will be given to these rather neglected lines of approach.

Each of the Working Groups will study the issues at the various levels, regarding the various (historical and future) situations and the distinguishing critical levels from a different perspective. In the following sub-sections the perspectives and subsequent interests will be described. In Appendices 1 to 4 the key research issues are illustrated and worked out into detailed research questions.

1.5.1 Research questions WG 1 Functional Needs

Working Group 1 will deal with the functionality perspective of the research questions. This WG focuses on physical and observable aspects. The outcome will shed light on what is physically needed and what can be done to meet the physical needs.

With regard to the functional perspective the order of importance of needs and the urgency of quality demands relate to a hierarchy of needs that is comparable to Maslov's Hierarchy of Needs. The most basic need is the need for basic mobility, which just ensures that destinations can be reached. A slightly higher order need is the need for safe mobility, which means that destinations can be reached with relatively low risks. The third level is convivial and mobility and sojourn, where walking is cosy, pleasant to do and there is an option to meet people in a friendly atmosphere. The fourth and highest reachable level of needs is a Challenging Sojourn, where the situation is stimulating a to person to learn and improve himself, i.e. by doing sports or making poems. Of course, the highest level of needs is not reached often. Furthermore, the measure to which one's needs are thus satisfied are of an extremely personal and subjective nature. In the course of history however some 'objective' indicators⁹ and valuation methods have been devised. Their usefulness needs to be evaluated.

In Appendix 1 specific research questions for this Working group are described.

1.5.2 Research questions WG 2 Perceived Needs

For Working Group 2 key research questions deal with the experiences, motives, attitudes¹⁰, expectations, intentions, and negotiating position of the following groups of stakeholders:

- pedestrians (both actual and potential, critical groups)
- other public space users (bicyclists, drivers)
- providers (road and public space authorities, enforcement agencies, transport providers)
- policy makers ('guiders' such as politicians, governmental officials, legislators, interest groups).

Within the context of this work package the order of importance of needs and urgency of quality demands relate to the *perceived* impact on freedom of choice and movement. This perception must be seen in the context of the level of service that the stakeholders take for granted. This level of service varies over countries, regions and cities.

Attention will also be given to the mechanisms that influence the perception. Particularly important in this respect are the mechanisms that influence risk perception¹¹.

⁹ I.e. 'place legibility' (Kevin Lynch: The image of the city: paths, edges, districts, nodes, landmarks), the relative importance of the shadowed side of a street etcetera.

¹⁰ Examples of attitudes: willingness to change, competitiveness, acceptance of current situation, resignation, passivity, travel priorities

¹¹ like influence of the nature of the event: voluntariness, catastrophic potency, controllability, knowledge on the causes, distribution of benefits and burdens, collective benefit, number persons exposed to the risk, natural or human cause.

In Appendix 2 specific research questions for this Working group are described.

1.5.3 Research questions WG 3 Durability and Future Prospects

Working Group 3 will look at the key issues from the following perspectives:

- durability of measures and materials
- developments, trends and positive and negative consequences
- prognosis of trends in needs, qualities and context for improvements

This research will shed light on the importance of needs and the urgency of quality demands in a dynamic context. Some needs will 'evaporate' because of changes in the situation, others will become more important. Trends can make some paradigms and policies obsolete. By the time the changes are in motion a policy can be outdated. Furthermore, materials, measures and policy strategies have a life span and need to be managed, maintained or replaced at some moment in time.

Investments are made for decades and it takes a lot of time to change situations, particularly the position of the pedestrian. It is wise to start early. This research may identify clues for adequate policy development: what quality needs will be urgent in the future?

The work package also includes the development of practical (dedicated) prognosis models and tools.

In Appendix 3 specific research questions for this Working group are described.

1.5.4 Research questions WG 4 Coherence and integration

Working group 4 deals with the coherence and integration of the research strategy, the research findings, conclusions and recommendations.

The work package includes quality control and communication: evaluation of research designs, proposed and used methods and methodology, data quality and issues to be communicated externally.

The work package is to lead to:

- An overview and valuation¹² of the state of affairs (integration of the Country Reports)
- Identification of valid, reliable and quantifiable indicators for pedestrian quality
- Identification of changeable, constant and irreversible factors influencing the pedestrians' situation
- Identification of compensatory mechanism
- Identification of models, concepts and theories that can help advance effectiveness and efficiency of the systems approach regarding pedestrian quality improvement
- Identification of a (design) theory for integrating the functional, perception and durability and future progress perspectives into one persuading paradigm
- An overview of the State of the Art and relevant innovations, including the ones developed in the PQN project
- Practical audit instruments (development of guidelines for Pedestrians' Quality Needs Audit)
- Recommendations for Making It Happen: what strategies are feasible and how can strategies for implementation and innovation be improved?

¹² for example on level of service with regard to needs, preconditions, responsibilities and forgiveness of facilities and provisions.

-
- Identification of optimal dissemination strategies and methods, agenda for action
 - Recommendations on further research

In Appendix 4 detailed research questions and tasks for this Working group are described.

1.6 Relation to other projects and activities

Obviously some of the above questions have already been answered partly or fully in earlier projects on pedestrian issues, like WALCYNG, COST C6 or PROMPT. Furthermore the Country Reports will probably cover basic performance information on presence of pedestrians and on the mobility and safety characteristics of pedestrians in public space. With regard to the mechanisms and the actual needs this Working Group focuses on the basic needs: mobility and objective safety¹³.

1.7 Relation with other projects

- 1 ICTCT Workshops
- 2 Walk21 conferences
- 3 HEPA-network (WHO)
- 4 Various national projects with regard to pedestrians

¹³ defined as the absence of accident, casualty and fatality risk

2 PROJECT REALISATION

2.1 General approach

The PQN project can be typified as 'orchestrated research'. Progress will be monitored, evaluated by the PQN Senior Management Group, consisting of the Chair, Vice Chair and the Working Group Leaders. If significant changes in the scientific programme, strategy or organisation are needed, this committee will submit a proposal to the plenary Management Committee.

The **first** stage involves the setup of a conceptual and organisational structure, acquiring commitment for task division and execution of project activities.

In the **second** stage data will be collected, roughly analysed, discussed in a first series of workshops in Summer 2007 and summarised in preliminary reports. Within the context of the work packages of WG1, WG2 and WG3 gaps in knowledge will be identified.

In the **third** stage the available data will be further analysed and whenever possible completed by additional (empirical) research. The preliminary results of WG1, WG2 and WG3 from the second stage will be used as input for WG4. The WG results will be discussed in a second series of Working Group workshops in fall 2008.

At the end of this stage the first and fourth project objectives ('Improve understanding' and 'Tools innovation') will be substantiated.

The **fourth** stage covers finalising the research, reporting on the results in WP reports and compiling dedicated articles for the handbook. For WP4 and the thesis¹⁴ this means including and adjusting to the final WG1-3 results. The text of this thesis will be completed at the end of this stage. This stage will be concluded Summer 2009 by a third workshop or conference, where the WP reports will be presented and discussed.

With the reports a sound foundation will be laid for the realisation of second project objective ('Advance effectiveness').

The **fifth** stage of the PQN project focuses on the dissemination of the project results and developing 'aftercare' and courses. In this stage the Handbook will be compiled and produced. The project will be concluded by an international conference in Fall 2010, where the handbook and other follow-up activities will be presented.

This stage is designed to substantiate the second, third and fifth project objectives ('Advance effectiveness', 'Provide an accessible Knowledge base' and 'Recommend further research').

¹⁴ The PQN project also serves as a vehicle for writing a PhD thesis by Rob Methorst.

2.2 Activities per stage

Stage 1. Setup of conceptual and organisational structure

(ready March 2007)

For practical reasons this work has started some months before the formal plenary Kick-off meeting of the project on 13 and 14 November 2006. The first activity was to develop a dedicated common conceptual model. A draft of the model is pictured in figure 1 (page 10). The model is designed to be used as a means for deducing relevant specific research questions. In Appendix 1 an initial impetus to specific research questions, based on the conceptual model, are described.

Secondly a draft Country Reports Questionnaire is developed and first tested in the Netherlands. The draft questionnaire is included in Appendix 5.

At the Kick-off meeting working group members are asked to share information on current relevant research projects. Next they are asked to commit to attending to the questions relating to their individual expertise, focussing on the R&D findings in their own countries and to contribute by sharing results of relevant national research projects.

At the Kick-off meeting the foundation for the research and division of tasks will be discussed and decided on. The meeting should result in agreement on at least:

- the content and role of the conceptual model
- the general research questions
- general working methods and procedures
- the Country Reports Questionnaire.

Concrete activities:

- Development and finalisation of the PQN Conceptual Model
- Deduction of relevant research questions
- Development of a Country Report questionnaire
- Setting up the project organisation and management structure
- Drafting an integral project Work Plan
- Sharing of information on relevant national projects
- Division of research tasks
- Setting up Quality Control

Stage 2. Data/info accumulation

(March 2007 – September 2007)

In Stage 2 involves collecting both available generic information and national-specific data and information with regard to the agreed research questions at the Kick-off meeting.

A first step will be an overall internet and literature scan (Quick Scan). The individual findings will be documented and summarised in English. Per question the results will be summarised. Relevant summaries will be distributed to the other working groups.

Where possible National PQN research committees will be formed to do research within the framework of the project and to do research on pedestrian issues for national purposes. This may include acquiring additional funding and recruiting of researchers and students for (basic) research activities within the context of the PQN scientific programme.

As mentioned before, for the compilation a Country Reports questionnaire is developed (see Appendix 5). A country report will summarise national facts and figures, policy statements, developments, research activities etc. and possibly accounts of interviews of national experts and stakeholders and media accounts.

Adequate empirical data on pedestrian needs and activity are badly needed. Therefore efforts will be made to gather at least basic mobility data, data on time spent in public space, accident and/or hospital admittance (ER) data. As soon as possible after the Kick-off the Working Group 4 will develop common formats for collecting these data, thus ensuring that the data are cross-country comparable.

In early Spring 2007 a (WG 4 plus Senior Management Group) workshop will be organised to evaluate initial findings of a literature review and the Country Report activities, in particular with regard to the functionality of the general and specific research questions. Based on these findings the list of general and specific research questions will be finalised.

A dedicated website will be developed and managed. There will be a public part for general project information and approved results and a shielded section, where the participants can post intermediary result and exchange information.

The summaries of research findings and preliminary results of empirical studies will be discussed at a dedicated workshops in Fall 2007. At these workshops the results so far will be evaluated (to which extent are the research questions answered?) will gaps in knowledge be identified and additional research planned.

Concrete activities:

- Formation of national research committees and recruiting researchers and students for (additional) studies
- Acquiring additional funding for dedicated research projects within the context of the PQN scientific programme
- Document available information with regard to agreed general and specific research questions (what is known from earlier publications? = Quick Scan)
- Development of a Communication Plan
- Setting up internet communication channels
- Compilation of Country Reports on the current situation
- Comparison of countries with regard to the position and needs of the pedestrians, its context and lessons to be learned
- If possible basic empirical data will be gathered
- Discussion on research results so far and detection of gaps (in early Spring and in late Summer)
- Planning of additional research
- Exchange of information of intermediary results, plans and progress
- Organisation of Workshops in Spring and Summer 2007
- External communication on project objectives and progress

Products:

- Establishment of national PQN committees
- PQN website
- PQN Conceptual Model paper
- Literature reviews (summaries of relevant publications in English)
- Overview of current projects on the issue in (at least) the participating countries
- Country reports
- Assessment of similarities and differences of country contexts

- Assessment of gaps in knowledge
- Detailed research plans
- Overview of options and plans for collecting additional data and information
- Provisional reports on sub-projects
- Monthly WG progress reports (internal)
- 2007 PQN Progress reports (external)
- Internal Workshops on intermediary results and research planning in Spring 2007 and in late Summer 2007)
- External presentations on progress of the Action (ICTCT, Walk21)

Stage 3. Analysis of available data and additional research
(summer 2007 – September 2008)

In stage 3 the available data will be analysed more thoroughly. Special attention will be given to theories and models that explain mechanisms with regard to pedestrian needs, including SWOT¹⁵-analysis of interventions and policy implementation programs, actor analysis and identification of key players. The activities are aimed both at identification of promising strategies and best practises and of common misunderstandings, myths and sagas that impede improvement.

Based on the above insights new analysing, development, implementation and communication tools will be developed and assessed.

During the process much attention will be given to quality control and internal communication. In this context concept definitions, the data quality and comparability, used methods, models and theories will be monitored and evaluated internally.

In this stage WG1, WG2 and WG3 can conclude their research activities and start concentrate on reporting results. In WG4 however, the focus of the work lies on developing a model for the integration of the research finding with respect to functionality, perception and durability and future prospects into a coherent paradigm and coherent recommendations for policy development and future research.

At the end of this stage the compilation of the Handbook will be prepared and discussed and planned during the 2008 Workshop(s).

Concrete activities:

- In depth analysis of accumulated data and information
- Execution of additional (empirical) research; updating available statistical data
- SWOT analysis of methods, models and theories used in the project
- SWOT analysis of common working methods and practises, models, theories and the identification of best practises
- Actor analysis and identification of key players and their sensitivities and practical mobilisation strategies
- Differentiation in 'market segments'
- Development of new tools for research, communication and implementation
- Compilation of interim / first draft WG reports
- Development of a model for integration of the 3 research perspectives
- (Fraternal) review of intermediary products
- preparation of the compilation of the Handbook
- Organisation of Workshop(s) in Fall 2008

¹⁵ SWOT = Strengths, Weaknesses, Opportunities, Threats

-
- External communication on progress of the Action

Products:

- Description and evaluation of methods used in the project
- Interim reports on research findings
- Interim reports on common working methods, models, theories
- Interim reports on stakeholders' improvement options and policies
- An (annotated) outline of the Handbook
- Monthly WG progress reports (internal)
- 2008 PQN Progress reports (external)
- Internal 2008 Workshop
- External presentations on progress of the Action (ICTCT, Walk21).

Stage 4. Reporting on findings

(September 2008 – June 2009)

In Stage 4 the findings of the WG1, WG2 and WG3 will be described and summarised in WG reports. Draft findings available in spring 2009 will be input for WG4. The coherence of the findings will be discussed in a special WG4 workshop, involving a limited selection of involved experts and the Senior Management Group. In order to mitigate possible flaws, feedback on bottlenecks identified in this workshop will be used in the for the finalisation of the WG1, WG2 and WG3 reports.

The found knowledge will be used for developing practical instruments and tools for auditing and improving pedestrian quality. Ideas and suggestions from earlier stages will also be included.

It is to be expected that the project will result in special findings that can be used for scientific articles. It is also likely that dedicated (national) research projects within the framework of the PQN project will lead to interesting conclusions, to be described and made public by the individual experts.

At the end of this stage a last internal workshop will be organised. During this workshop the final research findings will be discussed and evaluated, conclusions will be drawn and recommendations formulated.

Concrete activities:

- Drafting and finalising WG1, WG2 and WG3 reports
- Organisation of a special WG4 workshop on coherence and integration of the research findings in Spring 2009
- Development of practical instruments and tools for auditing and improving pedestrian quality
- Drafting and finalising the WG4 report
- Drafting sections of the Handbook
- Developing and setting up dissemination activities
- Compilation of articles for (scientific) periodicals
- Development of abstracts and paper for various relevant conferences and congresses
- Fraternal reviewing of reports and papers
- Organisation of Workshop in Summer 2009 (finalisation of conclusions and recommendations)
- External communication on progress of the Action

Products:

- WG reports
- A special Coherence and Integration Workshop
- Monthly WG progress reports (internal)
- 2009 PQN Progress reports (external)
- Thesis on Pedestrians' Quality Needs
- Presentations of individual project results at various conferences and congresses
- Articles in (scientific) periodicals
- Internal 2009 Workshop
- External presentations on progress of the Action (ICTCT, Walk21)

Stage 5. Dissemination of findings

(June 2009 – October 2010)

In Stage 5 the activities are focussed on finalising the project and dissemination of the results. The project will be concluded by a Final Conference. Reactions this conference will be dealt with by the experts; follow up activities will be planned and organised on the national level.

Concrete activities:

- Finalising and production of the Handbook
- Organisation of the dissemination activities
- Organisation of International Conference in Fall 2010
- Development of dedicated dissemination methods and guidelines
- Setting up national follow-up activities, such as translation of project products, acquiring funding for national dissemination activities and recruiting instructors.

Products:

- Handbook on Pedestrians' Quality Needs
- Guidelines for a Pedestrians' Quality Needs Audit
- Final conference
- National courses

2.3 Risks and chances

Risks

(to be described)

Point of view	Risk	Consequences	Probability	Control
Politics				
Society				
Organisation				
Technique				
Finances				
Time				

Chances

P.M.

3 PRODUCTS AND PLANNING

3.1 Deliveries

PQN will specifically publish:

1. Report on the Conceptual framework of the PQN project
2. Country reports regarding the state of affairs, including the perception of institutional actors and available knowledge on PQN
3. A prognosis report (time horizon 2030)
4. Report on quality needs in relation to various contexts
5. State of the art reports regarding Functional perspective, Perception perspective, Durability and future prospects and knowledge on compliancy of institutional actors and options for citizens and interest groups
6. An integration and coherence report, displaying the interrelations between the qualities, various contexts and activities of institutional actors, interest groups and citizen groups.
7. periodical e-news letters on the progress and intermediary results of the project
8. Guidelines for a Pedestrians' Quality Needs Audit
9. Handbook on Pedestrians' Quality Needs.

3.2 Yearly progress reports

COST obliges Actions to make yearly progress reports. These progress reports will be compiled under the responsibility of the COST 358 Management Committee. The yearly progress report will be based on (short) monthly progress reports made by the working group leaders to the Senior Management Group; the Chair integrates these reports into a yearly report.

3.3 Planning

Starting date: November 2005
 End date: November 2010

	2006				2007				2008				2009				2010			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Stage 1				X	X															
Stage 2					X	X	X													
Stage 3							X	X	X	X										
Stage 4											X	X	X	X						
Stage 5													X	X	X	X	X	X	X	X

4 ORGANISATION & COMMUNICATION

4.1 Project structure

The COST 358 Pedestrians' Quality Needs project structure is based on the scientific programme and the requirements set by the COST-rules worded in the COST Vadamecum. In Appendix 7 the rules concerning the implementation of a COST Action are described.

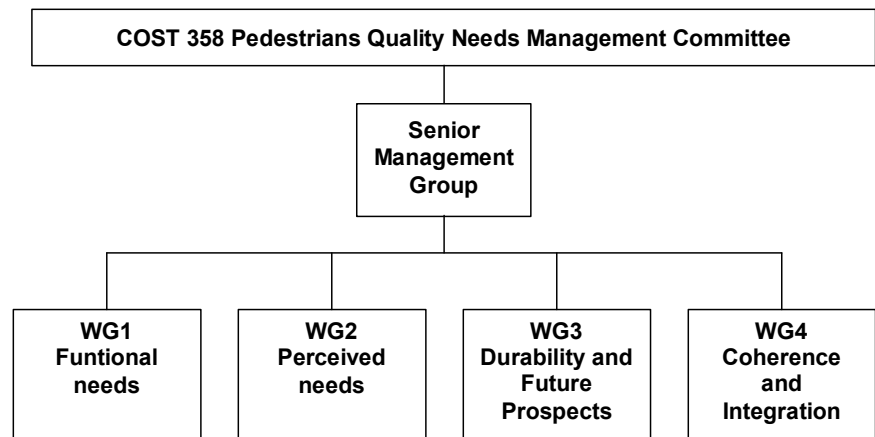


Figure 2 The PQN project structure

4.1.1 Management Committee

The COST 358 Pedestrians' Quality Needs Management Committee (MC) is the deciding authority of the project. The MC is the formal partner of the COST Office and rules within the framework of the project, as laid down in the Technical Annex of the Memory of Understanding and this general Work Plan.

The function of the MC is to:

- decide on significant changes in the scientific programme in dialogue with the COST Transport and Urban Development Domain Committee (through the COST Scientific Officer)
- decide on the general Work Plan and significant changes therein
- monitor progress of the Action
- deal with general management questions
- decide in conflicts between participants of the project.

The MC is made up of delegates representing countries that signed the Memory of Understanding for this Action.

Rules of Procedure for the Management Committee are laid down in Annex A of Appendix 7.

4.1.2 Chair and Vice-Chair

Task and responsibilities of the Chair and Vice Chair are:

-
- call and prepare meetings of Management Committee and Senior Management Group
 - External communications (COST-office, presentation of the project)
 - Chair the meetings of the Management Committee and Senior Management Group
 - Compile yearly Progress Reports
 - Management of the project's budgets

4.1.3 Senior Management Group

Day-to-day leadership and external communication of the project is delegated to the so called Senior Management Group, which is made up of the Chair, Vice Chair and the Working Group Leaders.

Tasks and responsibilities of the Senior Management Group are:

- Prepare Management Meetings
- Day-to-day management of the project
- Prepare yearly progress report
- Monitor progress and management of the Working Groups
- Manage external communication

4.1.4 Working Group leaders

The research work is broken down in 4 work packages, to be dealt with by 4 Working Groups. The Working Groups are lead by Working Group Leaders. The Working Group Leaders are appointed by the MC.

Tasks and responsibilities of the Working Group Leaders are to:

- Manage tasks division with respect to literature review, data collection and other research activities, specifically:
 - Actively stimulate and coordinate the compilation of Country Reports
 - Organise an overall internet and literature scan with regard to the general and specific research questions as agreed at the Kick-off meeting and thereafter; the WG Leader takes care that the individual findings are properly documented and summarised in English and that the findings are distributed to the relevant working Groups
- Monitor and coordinate of the agreed research and reporting activities and take care that agreed products are delivered in time, including also requests for information to other Working Groups
- Actively stimulate quality control (active encouragement and coordination of fraternal testing of products)
- Actively stimulate innovation of methods, concepts and approaches
- Monitor and coordinate internal communications between the experts of the Working Group on the dedicated website; distribute research findings within the Working Group and relevant other Working Groups, in principle via the concerned Working Group Leader
- Coordinate the integration of research findings brief progress reports, report monthly on progress to the Senior Management Group and the Management Committee.
- Represent the Working Group, specifically present progress and research findings at meetings of the MC an other agreed fora.
- Keep the Vice WG leader up to date.

4.1.5 Vice Working Group Leader

As the Working Group Leader, the Vice Working Group Leader is appointed by the MC. The Vice Working Group leader assists the Working Group Leader and is his substitute when needed.

4.1.6 Working Group participators

The PQN research work is done primarily by the experts that subscribed to the Working Groups. The experts are expected to contribute as individually agreed, to fraternally review other experts' work and to critically help advancing the quality and quantity of knowledge regarding the pedestrian issue.

4.2 Quality Control

4.2.1 Internal Quality Control

Internal quality control is seen as a key factor in the credibility of the outcome of the project. In the PQN project internal quality control is made up of the following elements:

- Fraternal review. As a rule publication of results is not allowed without proof of fraternal testing or external review. Official reports and publications (also on the web) have to be approved by at least the senior management committee, but preferably by the MC. Statements should always be verifiable.
- Star system for reliability and robustness of a statement, publication, research finding. Stars will be attributed by an internal committee of at least three participating experts or reviewers
- Monitoring of research activities by the Working Group Leader
- In principle yearly Work Package meetings, where the quality of results is discussed and group enforced
- 'Public' E-mail feedback on internal reports of the Working Groups by experts of other Working Groups.

4.2.2 External Quality control group

Major PQN products must be externally reviewed. For this an external Quality Control Group will be installed. The group will consist of reputed independent, but well informed scientists, such as Prof. Bert van Wee, Prof. Ezra Hauer, Prof. Christer Hydén.

4.3 Communication

Communication activities with regard to the PQN project will be described in a dedicated Communication Plan.

4.3.1 Internal communication

PQN will set up an accessible online area to help manage, share and promote information between partners to stimulate debate and develop translatable best practise.

For the participants a password protected website will be created, where interim results, working documents and draft papers will be posted. A shielded e-mail forum will be used for internal communication (comparable to the ictct e-mail group on Yahoo). There will be monthly progress reports made by the MC, based on information given to the WG leaders. At the end of each phase, meetings will be organised to discuss and evaluate the results. These meetings will also be used to discuss the planned activities in the next phase.

- Communication between Working Group leaders
- Communication between Working Groups
- Communication within the working group

4.3.2 Communication with the COST organisation

- Regular contact between the chair / Senior Management Group and the COST-office
- Yearly progress reports to the COST Office
- Keeping the National COST-Coordinators and TUD informed about progress made.

4.3.3 External Communication

The dissemination of the results of the project aims at:

- Providing practitioners with reports and other traceable information on pedestrians' needs
- Improving know-how in the scientific community
- Influencing policy making on the national level
 - Improved awareness of Pedestrian Quality Needs on the local level
 - Improved statistics on walking
 - (start of) public discussion on the issue
 - expertise transfer to local authorities and NGO's (local conferences and courses).

Information from the project will be interpreted and published in a variety of formats targeted towards different audiences to have maximum influence on increasing the effectiveness of national and local policies.

Four individual work package reports will be published and a periodical e-news letter will promote the progress of the project.

Conferences and courses may be organised nationally and internationally to disseminate the findings of the project. At the conclusion of PQN a special conference will be organised by ICTCT and WALK21 as part of the annual WALK21 International Conference Series.

PQN will specifically publish:

1. A conceptual framework and action plan for the life of the project
2. An analysis of the effectiveness of relevant social, legal and political statistics, research and policy in participating countries
3. A handbook on the needs of pedestrians
4. An easy to use auditing tool for measuring the quality of pedestrian needs

-
5. A consistent qualitative and quantitative methodology for recording pedestrian activity
 6. Guidance on national and local procedures for monitoring the effectiveness of pedestrian investment
 7. A system model, responsive to the needs of pedestrians, to steer effective investment which supports and encourages the quality of walking
 8. Recommendations for future research

Popular versions of the scientific reports, if possible translated into national languages, will be made for the use by local authorities, interest groups and the media. These popular versions will be distributed to decision makers and interest groups through the appropriate national channels (seminars, national and regional conventions of local authorities, relevant NGO's).

4.4 After care

After the final conference after care will be given: courses for practitioners and NGO's will be given, the publications will be promoted locally by the participants and relevant NGO's, and questions regarding the project results will be answered.

Appendix 1 Specific research questions WG 1

WG 1 Functionality Needs

The key questions with regard to this work package are:

- A. What is known about presence, mobility and safety characteristics of pedestrians in public space
- B. To what extent do initial choices regarding residence, work place, recreation and social relations influence walking options?
- C. What 'objective' factors and mechanisms determine the pedestrians' travel and/or sojourn motives?
- D. Which physical and safety needs do they relate to?
- E. What 'objective' factors and mechanisms determine the pedestrians' routing and sojourn decisions and safety precautions taken?
- F. What tasks are pedestrians to perform?
- G. To which extent are individuals able to perform these tasks and what groups can be distinguished?
- H. Which facilities and provisions are (implicitly) required for performing the tasks adequately?
- I. What are the risks?
- J. What are the (basic) risk factors and what are favourable factors?
- K. What factors determine pedestrian quality from a functionality perspective?
- L. What measures, interventions, policies and strategies can improve the pedestrians' situation?
- M. What integral policy programs need to be recommended in relation to their context?

A	What is known about presence, mobility and safety characteristics of pedestrians in public space?	
	A.1	How much time is spent as a pedestrian in public space (on average, specific groups, specific situations)?
	A.2	How many trips are made as pedestrian, both as door-to-door trip and as multi-modal trip (to and from other travel modes) on average and for specific groups and situations?
	A.3	Which distances are covered on foot?

B	To what extent do initial choices regarding residence, work place, lifestyle and social relations influence walking decisions?	
	B.1	How do residence decisions influence wealth, health and walking options?
	B.2	How do employment decisions influence wealth, health and walking options?
	B.3	How do lifestyles influence health and walking options?
	B.4	How do social relationships influence health and walking options?

C	What 'objective' factors and mechanisms determine the pedestrians' travel and/or sojourn motives?	
	C.1	Which (individual) physical health & competences factors and mechanisms determine the outcome of strategic decisions with regard to walking? To what extent are people in this regard free in their travel and sojourn decisions?
		C.1.1 Which groups can be distinguished with regard to those factors and mechanisms? (i.e. health, wealth, competences on the strategic level)
		C.1.2 To what extent is their mobility suppressed?
		C.1.3 What physical and safety needs are involved? What are the consequences?
		C.1.4 What does it take to improve or deteriorate the situation (significantly)?

	C.2	To what extent does one's social context determine travel and sojourn decisions?	
		C.2.1	Which fundamental groups (of pedestrians) can be distinguished with regard to social context (i.e. employment situation, family situation, collective needs, formal rules and formal norms)?
		C.2.2	To what extent is their mobility demonstrably suppressed?
		C.2.3	What does it take to improve or deteriorate the situation (significantly)?
	C.3	Which Land Use and Physical Environmental characteristics determine travel and sojourn decisions with regard to walking (i.e. distance, building density and type, barriers, slope, height differences, atmospheric conditions)?	
		C.3.1	What are the most important factors?
		C.3.2	How strong is this relationship?
		C.3.3	Is the outcome related to other factors and mechanisms?
		C.3.4	What are the 'threshold values' with regard to go - no go decisions?
	C.4	Which transport system characteristics determine the outcome of strategic decisions regarding walking (i.e. quality of road network, public transport system, distance to PT stops, traffic flow, comfort, speed, travel time, travel, transportation and traffic information)	
		C.4.1	What are the most important factors?
		C.4.2	How strong is the relationship?
		C.4.3	To what extent can adverse transport systems characteristics impede the pedestrians' safe mobility?
		C.4.4	Is the outcome related to other factors and mechanisms?
		C.4.5	What are the 'threshold values' with regard to go - no go decisions?
	C.5	To what extent can ITS improve pedestrians' mobility options and safety?	
		C.5.1	What practical experiences are there?
		C.5.2	Under what conditions can ITS help?
		C.5.3	What would be the requirements?

D	Which physical and safety needs do the above factors relate to?	
	D.1	Health
	D.2	Wealth
	D.3	Freedom of movement and sojourn (mobility)
	D.4	Safety (road safety, public safety, security)
	D.5	Relatedness
	D.6	Growth

E	What 'objective' factors and mechanisms determine the pedestrians' routing and sojourn decisions and safety precautions taken?	
	E.1	Which (generic) personal characteristics determine one's tactical travel and sojourn decisions and safety precautions? What are the risk factors?
		E.1.1 To which extent do travel motives determine the pedestrians' tactical behaviour (including mono and multi modal trips)
		E.1.2 To which extent do fitness, abilities and impairment (drugs, alcohol, fatigue) determine the pedestrians' tactical behaviour
		E.1.3 To which extent does available time / time pressure influence tactical behaviour, i.e. substandard route, speed and safety precautions choices
	E.2	To which extent do social environmental factors influence route, sojourn and safety precaution decisions? Or, how do characteristics of nearby people interact with the pedestrians' tactical behaviour?
		E.2.1 To which extent does general information (incl. street signs, signposts, billboards and ITC) determine tactical behaviour?
		E.2.2 To which extent does legislation and formal norms influence tactical behaviour?
		E.2.3 To which extent does social organisation (including employment) influence tactical behaviour?

	E.2.4	To what extent does the presence of other social groups influence the pedestrians' tactical behaviour. What observable factors determine this influence?
	E.2.5	How do traffic characteristics interact with the pedestrians' tactical behaviour?
E.3		Which physical environmental factors determine one's routing and sojourn decisions and safety precautions?
	E.3.1	How do route characteristics interact with the pedestrians' tactical behaviour
	E.3.2	How do characteristics of the built environment influence the pedestrians' tactical behaviour (i.e. Kevin Lynch's <i>Place Legibility</i> factors: paths, edges, districts, nodes, landmarks)?
	E.3.3	How do ICT options, chances and requirements influence the pedestrians' tactical behaviour?
E.4		How and to what extent does accessibility of transport modes influence the pedestrians' tactical behaviour?
	E.4.1	Availability and accessibility of personal modalities (bicycle, moped, motorcycle, car, ...)
	E.4.2	Availability and accessibility of collective modalities (Public transport modes, taxi, touring cars,...)
E.5		To which needs do the found determinants relate?
	E.5.1	Health
	E.5.2	Wealth
	E.5.3	Freedom of movement and sojourn (mobility)
	E.5.4	Safety (road safety, public safety, security)
	E.5.5	Relatedness
	E.5.6	Growth

F	What tasks are pedestrians to perform?	
	F.1	Tasks on the strategic level
	F.2	Tasks on the tactical level
	F.3	Tasks on the operational level

G	What are humans functionally able to do (observed behaviour) and what groups can be distinguished?	
	G.1	Mental abilities concerning walking (i.e. observed differences in competences and substandard acts, observed attention)
	G.2	What functional preconditions are necessary for (acceptable) safe mobility with respect to physical and social environment and transportation access? (i.e. observed differences in competences and substandard acts, functional needs. How do they connect? What makes them connectable? When is a person 'fit' to be a pedestrian? What are the critical levels?)
	G.3	What are the consequences of limitations and functional impairments (i.e. medical assessment of physical and mental abilities on the strategic, tactical and operational levels)
	G.4	Which populations can be distinguished, how large are these populations and how severe are their impairments with regard to their safe mobility?
	G.5	How does the groups' health situation interact with strategic, tactical and operational mobility (observed behaviour)? How do groups perform?
	G.6	Interference of nearby people and traffic; operational disturbances
	G.7	Reaction to site characteristics; operational disturbances
	G.8	Accessibility of transport modes; operational disturbances
	G.9	Crossing behaviour
	G.10	Conflicts with other road users and people in the vicinity

H	What facilities and provisions are (implicitly) required for performing the tasks adequately?	
	H.1	What facilities and provisions are required for adequate decisions on the strategic level?
	H.2	What facilities and provisions are required for adequate decisions on the tactical level?
	H.3	What facilities and provisions are required for adequate decisions on the operational level?

I	Actual risks, accidents and victims	
	I.1	Number and types of accidents
	I.2	Number and types of accidents per million trips
	I.3	Number and severity of injuries and fatalities
	I.4	Other safety issues

J	What are the (basic) risk factors and what are favourable factors?	
	J.1	What are the (basic) risk factors due to the pedestrians' choices and behaviour on the strategic, tactical and operational levels?
	J.2	What are the (basic) risk factors due to choices and behaviour of the social environment on the individual, group and societal level, including norms and values?
	J.3	What are the (basic) risk factors due to characteristics of the physical environment?
	J.4	What are the (basic) risk factors due to characteristics of transportation facilities
	J.5	How do the factors and characteristics interact?

K	What measures, interventions, policies and strategies can improve the pedestrians' situation?	
	K.1	What education and communication measures can improve the pedestrians' situation? To what extent? Under which conditions?
	K.2	What changes in formal norms and values (legislation, recommendations, guidelines etc.) help to improve the pedestrians' situation? To what extent? Under which conditions?
	K.4	What changes in infrastructure, public space design and land use features can help to improve the pedestrians' situation? To what extent? Under what conditions?
	K.4	What changes in transportation can help to improve the pedestrians' situation? To what extent? Under which conditions?
	K.5	What ITS measures can improve the pedestrians' situation? To what extent? Under which conditions?
	K.6	How do the above measures interact?

L	What integral policy programs need to be recommended in relation to their context?	
	L.1	What issues should be targeted by local authorities, private companies, regional authorities, national authorities, European Commission and other stakeholders?
	L.2	What elements should be included in the development of policy plans?
	L.3	How can measures – from a functionality point of view - best be prioritised?

Pedestrians' Quality determinants

M	To what extent do the various dimensions determine the pedestrians' quality of life?	
	M.1	To what extent do the various dimensions ¹⁶ determine the pedestrians' quality of life?
	M.2	What are the best indicators for the pedestrians' Quality of life? How can walking be valued objectively? ¹⁷
	M.3	What (fundamental) needs do these parameters relate to?

¹⁶ See Risser, 2003: social, environmental, economical and political dimensions

¹⁷ see for example Heuman (2005), *Valuing Walking - evaluating improvements to the public realm*

	M.4	Which items should be included in (minimum and optimum) requirement programs? Which standards should be met?
	M.5	To what extent can ITS applications be effective in fulfilling the pedestrians' needs?
	M.6	What is known about determinants for pedestrian quality in suburban and peri-urban situations? What is the role of city and land-use planning?

Appendix 2 Specific research questions WG 2

WG 2 Perceived Needs

The key questions with regard to this work package are:

- A. What is the perception of presence, mobility and safety in public space?
- B. To what extent do initial choices regarding residence, work place, recreation and social relations influence perceived walking options?
- C. What 'subjective' factors and psychological mechanisms determine the pedestrians' travel and/or sojourn motives?
- D. What 'subjective' factors and mechanisms determine the pedestrians' routing and sojourn decisions and safety precautions taken?
- E. What tasks are pedestrians perceived to perform?
- F. To which extent are individuals perceived to be able to perform these tasks and what groups can be distinguished?
- G. Which facilities and provisions are perceived to be required for performing the tasks adequately?
- H. What are the perceived risks?
- I. What are the perceived risk factors and what are perceived favourable factors?
- J. What factors determine pedestrian quality from a perception perspective?
- K. What measures, interventions, policies and strategies are perceived to improve the pedestrians' situation? What measure can people believe in?
- L. What integral policy programs need to be recommended in relation to their context?

A	What is the perception of presence, mobility and safety of pedestrians in public space? How important is walking?	
	A.1	How do pedestrians perceive their presence, mobility and safety in public space? How important is walking? What for? What is important? How far can one be expected to walk?
	A.2	How do other space users perceive the pedestrians' presence, mobility and safety in public space? How important is walking? What for? What is important? How far can one be expected to walk?
	A.3	How do providers perceive the pedestrians' presence, mobility and safety in public space? How important is walking? What for? What is important? How far can one be expected to walk?
	A.4	How do policymakers perceive the pedestrians' presence, mobility and safety in public space? How important is walking? What for? What is important? How far can one be expected to walk?
	A.5	How do opinion leaders/makers (i.e. the media) perceive the pedestrians' presence, mobility and safety in public space? How important is walking? What for? What is important? How far can one be expected to walk?

B	To what extent do initial choices regarding residence, work place and social relations influence perceived walking options?	
	B.1	What factors and mechanisms determine the outcome of choices regarding preconditions influencing perceived walking options? Which factors make people decide not to walk?
	B.2	idem, point of view of providers, policy makers and opinion leaders.

C	What 'subjective' factors and psychological mechanisms determine the pedestrians' travel and/or sojourn motives? What groups can be distinguished?	
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	C.1	Needs
	C.2	Motives
	C.3	Intentions
	C.4	Restraints and counterforces

D	What 'subjective' factors and mechanisms determine the pedestrians' routing and sojourn decisions and safety precautions taken?	
	D.1	How do (the various groups of) stakeholders perceive their situation and environments on before and during their stay in public spaces (strategic, tactical and operational levels)? What is known with respect to 'objective' indicators as found in WG1?
	D.2	Which psychological (perception) factors and mechanisms determine the outcome of strategic decisions with regard to walking? (N.B. points of view of all different groups of stakeholders)
	D.3	To what extent feel people free in their travel and sojourn decisions?

E	What tasks are pedestrians perceived to perform (for all stakeholders)?	
	E.1	Tasks on the strategic level
	E.2	Tasks on the tactical level
	E.3	Tasks on the operational level
	E.4	What fundamental differences are there with respect to the perception of the various groups of stakeholders

F	To which extent are individuals perceived to be able to enjoy and perform these tasks and what groups can be distinguished?	
	F.1	What are the perceptions of stakeholders with regard to what humans are able to do?
	F.2	What are the perceived consequences of limitations and functional impairment on the strategic, tactical and operational levels? How does one's health interact with one's strategic, tactical and operational decisions?
	F.3	How do the various groups think they perform?
	F.4	To what extent can physical activity support one's (extended) safe mobility and agreeable sojourn in public space?
	F.5	How does the group's health situation interact with strategic, tactical and operational mobility? How do the groups perform?
	F.6	What are the consequences for the critical individual's and the general population's perception of quality of life?
	F.7	Given human and mental competences, what requirements are there with respect to the physical and social environments and access to transportation on the micro, meso and macro levels?

G	Which facilities and provisions are perceived to be required for performing the tasks adequately?	
	G.1	What are the consequences for the critical individuals' and the general populations' perception of pedestrian quality?

H	What are the perceived risks compared with other risks?	
	H.1	How do the various groups of pedestrians perceive the risk they bear compared with other risks?
	H.2	How do other users of public space perceive the risks of various groups of pedestrians compared to their own risks? What are the consequences?
	H.3	How do local authorities, the police and other 'providers' perceive the pedestrians' risks compared to other users?
	H.4	How do policymakers perceive the pedestrians' risks compared to other users?
	H.5	How do the media perceive the pedestrians' risks compared to other users?

I	What are the perceived risk factors and what are perceived favourable factors?	
	I.1	Which factors determine risk perception?
	I.2	What factors are believed to influence risks (all stakeholders views)

J	What factors determine pedestrian quality from a perception perspective?	
	J.1	What are the perceptions of stakeholders with regard to walking and pedestrian qualities?
	J.2	How does this image affect transport and public space related policies of 'consumers', providers and policy makers

K	What measures, interventions, policies and strategies are perceived to improve the pedestrians' situation? What measure can people believe in?	
	K.1	Measures on the local level
	K.2	Measures on the regional level
	K.3	Measures on the national level
	K.4	Measures on the European level
	K.5	Measures by non-governmental institutions

L	What integral policy programs need to be recommended in relation to their context?	
	L.1	Programs on the local level
	L.2	Programs on the regional level
	L.3	Programs on the national level
	L.4	Programs on the European level
	L.5	Programs by non-governmental institutions

Pedestrians' Quality of life determinants

M	To what extent do the various dimensions determine the pedestrians' quality of life?	
	M.1	To what extent do the various dimensions ¹⁸ determine the pedestrians' quality of life?
	M.2	What are the best indicators for the pedestrians' Quality of life? How can walking be valued?
	M.3	What perceived needs do these parameters relate to?
	M.4	Which items should be included in (minimum and optimum) requirement programs? Which standards should be met?
	M.5	To what extent can ITS applications be effective in fulfilling the pedestrians' needs?

¹⁸ See Risser, 2003: social, environmental, economical and political dimensions

Appendix 3 Specific research questions WG 3

WG 3 Durability and Future Prospects

The key questions with regard to this work package are:

- A. Can an adequate model for forecasting the future of walking be developed? What will it look like?
- B. What is known about trends in presence, mobility, safety and health characteristics of pedestrians in public space
- C. What trends are there with respect to initial choices regarding residence, work place, recreation and social relations influence walking options?
- D. What factors and mechanisms determine trends in the pedestrians' travel and/or sojourn motives?
- E. What trends are there with respect to mobility and safety needs?
- F. What factors and mechanisms determine trends in the pedestrians' routing and sojourn decisions and safety precautions taken?
- G. What trends are there in tasks to be performed?
- H. Which trends are there with respect to task performance regarding the distinguished groups?
- I. What trends are there with respect to the facilities and provisions required for performing the tasks adequately?
- J. What are the trends with regard to risk (push) and favourable (pull) factors?
- K. What factors determine trends in pedestrian quality?
- L. What measures, interventions, policies and strategies can help improve the pedestrians' situation on the longer term (2030)?
- M. What integral policy programs need to be recommended in relation to their changing context?
- N. How durable are the used definitions and concepts? Why do they grow or change in time?
- O. How durable are the identified and recommended measures and materials?

A	Can an adequate model for forecasting the future of walking be developed?	
	A.1	What models are there with regard to predicting the future of walking?
	A.2	What are the requirements for an adequate model?
	A.3	If needed, how can a practical model be built? What can the various disciplines contribute in this respect?

B	What is known about trends in presence, mobility, safety and health characteristics of pedestrians in public space	
	B.1	Developments in general internationally, groups of countries and deviant countries
	B.2	Developments for specific risk groups
	B.3	Developments with regards to city centres and to sub-urban and peri-urban areas
	B.4	Developments with regard to the relative importance of walking

C	What trends are there with respect to initial choices regarding residence, work place, recreation and social relations influence walking options?	
	C.1	How durable are structures and policies with regard to residence, work place and essential destinations?
	C.2	To what extent will choices evolve?

D	What factors and mechanisms determine trends in the pedestrians' travel and/or sojourn motives?	
	D.1	Factors relating to social context (inc. employment, social motives)
	D.2	Factors relating to the physical environment and land use
	D.3	Factors relating to transportation options
	D.4	Factors relating to ICT
	D.5	Interrelations

E	What trends are there with respect to mobility and safety needs on the strategic, tactical and operational levels?	
	E.1	National and regional trends (country or situation specific trends)
	E.2	European trends
	E.3	Global trends

F	What factors and mechanisms determine trends in the pedestrians' routing and sojourn decisions and safety precautions taken?	
	F.1	Factors and mechanisms on the strategic level (i.e. preconditions, experiences)
	F.2	Factors on the tactical level
	F.3	Factors on the operational level (i.e. perceived competences with regard to tasks to be performed)

G	What trends are there in tasks to be performed?	
	G.1	Trends in general
	G.2	Trends with respect to specific groups, groups of countries, deviant countries

H	Which trends are there with respect to task performance regarding the distinguished groups?	
	H.1	Trends in general
	H.2	Trends with respect to specific groups, groups of countries, deviant countries

I	What trends are there with respect to the facilities and provisions required for performing the tasks adequately?	
	I.1	Trends in general
	I.2	Trends with respect to specific groups, groups of countries, deviant countries

J	What are the trends with regard to risk (push) and favourable (pull) factors?	
	J.1	What are trends with respect to risk factors?
	J.2	What trends are there with respect to factors that support walking, sojourn in public space and pedestrian safety and health?

K	What factors determine trends in pedestrian quality?	
	K.1	Demographic factors
	K.2	Social and Cultural factors
	K.3	Economic factors
	K.4	Health factors
	K.5	Political factors
	K.6	Interrelations between above factors

L	What measures, interventions, policies and strategies can help improve the pedestrians' situation on the longer term (2030)?	
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M	What integral policy programs need to be recommended in relation to their changing context?	
	M.1.	How durable are the recommended measures, materials and policies?
	M.2	What should be the role of legislation in maintaining and updating quality?

N	How durable are the used definitions and concepts? Why do they grow or change in time?	
	N.1	Which of the definitions and concepts have changed over time?
	N.2	What factors cause a definition change?
	N.3	What changes can be expected?

O	How durable are the identified and recommended measures and materials?	
	N.1	What are the failure types with regard to durability of materials, measures, policies, strategies?
	N.2	What makes a material robust, durable, sustainable?
	N.3	What makes a measure robust, durable, sustainable?
	N.4	What makes a policy robust, durable, sustainable (success factors)?

Appendix 4 Research questions and tasks WG 4

WG 4 Coherence and Integration

Key research issues for this work package are:

- A. An overview and valuation¹⁹ of the state of affairs (integration of the Country Reports)
- B. Progress with regard to the scientific programme
- C. Identification of valid, reliable, just and quantifiable indicators for pedestrian quality
- D. Identification of changeable, constant and irreversible factors influencing the pedestrians' situation
- E. Identification of compensatory mechanism
- F. Identification of models, concepts and theories that can help advance effectiveness and efficiency of the systems approach regarding pedestrian quality improvement
- G. Identification of a (design) theory for integrating the functional, perception and durability and future progress perspectives into one persuading paradigm
- H. An overview of the State of the Art and relevant innovations, including the ones developed in the PQN project
- I. Practical audit instruments (development of guidelines for Pedestrians' Quality Needs Audit)
- J. Recommendations for Making It Happen: what strategies are feasible and how can strategies for implementation and innovation be improved?
- K. Identification of optimal dissemination strategies and methods, agenda for action
- L. Recommendations on further research

A	Overview of the state of affairs	
	A.1	What are the common and distinguishing features in the Country Reports?
	A.2	What data are used? Are the data comparable?
	A.3	How can the situations in the participating countries be valued? What conclusions can be drawn with respect to the position of the pedestrian and the effectiveness of policy procedures for pedestrian quality?
	A.4	What additional questions need to be asked?

B	Progress with regard to the scientific programme	
	B.1	Development and improvement of the PQN Conceptual Model
	B.2	Are the general and specific research questions relevant, coherent and covering the research objectives (comprehensive, system approach)? Do they need to be adjusted?
	B.3	Planning and prioritising research
		What research questions are most urgent and what questions can be left for later projects? Are there urgent additional questions?
		Is the expertise available within the PQN participants group or is outside expertise needed?
		Can the question be answered within the allocated time span?
		Updating the research programme
	B.4	Monitoring and methodology quality control
	B.5	Results quality assessment
	B.6

¹⁹ for example on level of service with regard to needs, preconditions, responsibilities and forgiveness of facilities and provisions.

C	Identification of valid, reliable, just and quantifiable indicators for pedestrian quality (how can quality be valued?)	
	C.1	What is pedestrian quality? What aspects can be distinguished? How can quality be assessed and valued? Within what context?
	C.2	What indicators are mentioned in literature? What is their (scientific and societal) value? Do they relate to Universal Design / Design for All / Social inclusion?
	C.3	What data are needed for the indicators? Can they be made available?
	C.4	What can be said about the (political) acceptability of the found indicators?
	C.5	How do the indicators interrelate? Are there compensating mechanisms?
	C.5.1	What interrelations are there?
	C.5.2	To what extent are walking, mobility, health interrelated?
	C.5.3	What is the importance of environment and transport-related physical activity seen in the light of pedestrian quality
	C.5.4	What lessons can be learned with regard to inter-sector partnership & cooperation?
	C.6	What data on walking and the use of public space are needed? Why?
	C.6.1	Minimum requirements, optimal situation,, depending on country situation?
	C.6.2	Levels of quality?

D	Identification of changeable, constant and irreversible factors influencing pedestrian quality	
	D.1	What factors can be influenced by which stakeholder (stakeholder responsibility)?
	D.2	Which 'external' or autonomous factors are there (out of range on any stakeholders influence)?
	D.3	Which relevant factors can be influenced? To what extent? How much energy and costs are needed for change? Can cost-effectiveness be made plausible? What factors are hardly changeable and must be side-tracked?
	D.4	How do the factors interrelate?
	D.5	What common of mutual interest are there?

E	Identification of compensatory mechanisms	
	E.1	How do pedestrian qualities interrelate with other qualities (positive of negative)?
	E.2	What self enhancing factors and what self reducing factors are there?

F	Identification of models, concepts and theories that can help advance effectiveness and efficiency of the systems approach regarding pedestrian quality improvement	
	F.1	What concepts, models and theories are there in literature? Which ones are developed and used in one or more of the 3 work packages?
	F.2	What are the characteristics, limits of operation, pro's and cons of (design) concepts, models, theories and notions that were come across in the work packages?
	F.3	What is known about their effectiveness and efficiency?
	F.4	Can the concepts, models, theories and results be integrated?
	F.5	How and to what extent can design concepts and notions be improved?
	F.6	What prejudices and 'false' theories can be detected? How can they be mitigated?

G	Identification of a (design) theory for integrating the functional, perception and durability and future progress perspectives into one persuading paradigm (How can the results of the 3 work packages be integrated?)	
	G.1	What makes a paradigm (politically) persuading? Within what context?
	G.2	What integration (design) theories are there? Which ones can help integrating the 3 perspectives into one comprehensive paradigm?

H	An overview of the State of the Art and relevant innovations, including the ones developed in the PQN project	
	H.1	What is needed to improve pedestrian quality in suburban and peri-urban situations? What can be the role of city and land use planning? What other policy measures are needed?

	H.2	What is the influence of pedestrian quality, design and use, on social inclusion/exclusion, co-existence and separation? To what extent is Design for All feasible? What are the consequences of 'counter' concepts like 'shared space'?
	H.3	What kinds of (active) policies and policy approaches are there on the various governmental levels? What is known about their effectiveness and efficiency?
	H.4	What kinds of policies stand out (State of the Art policy programs)
	H.5	Partnership - best practises

I	Practical audit instruments	
	I.1	What elements need to be included in practical pedestrian quality audit instruments? What should be included in the terms of reference (programme of requirements)?
	I.2	What audit instruments are already available? How good are they with respect to the terms of reference?

J	Recommendations for Making It Happen	
	J.1	What different methods will be needed for different cultures and target groups?
	J.2	What strategies and tools are needed for this?
	J.3	What barriers are there for policy making and implementation?
	J.3.1	What barriers are there on the local authority level? How can that be mitigated?
	J.3.2	What barriers are there on the regional and national levels? How can that be mitigated?
	J.3.3	What barriers are there on the European level? How can that be mitigated?
	J.3.4	What barriers are there with respect to improvements facility providers (design, management, maintenance)? How can that be mitigated?
	J.3.5	What barriers are there with respect to helpful media coverage? How can that be mitigated?
	J.4	What instruments and tools are lacking; what instruments and tools need to be developed?
	J.4.1	Research tools
	J.4.2	Tools for policy making
	J.4.3	Auditing tools
	J.4.4	Implementation tools
	J.4.5	Communication Tools

K	Identification of optimal dissemination strategies and methods; Agenda for Action	
	K.1	What are, in relation to the content, the most adequate methods to disseminate the project results? What strategies and tools are needed for this?

L	Recommendations for further research	
	L.1	What are the gaps in knowledge?
	L.1.1	pedestrian behaviour
	L.1.2	the pedestrians social environments (including social norms and values, legislation requirements)
	L.1.3	The pedestrians' physical environment (site, network, land use)
	L.1.4	Relation to / accessibility of transportation system
	L.1.5	Interaction between elements
	L.1.6	Data
	L.1.7	Policy options
	L.1.8

Appendix 5 Questionnaire Country Reports

The PQN study aims to build on current knowledge. A first step in the project must be to make an 'quick scan' inventory of the current state of affairs in each country with regard to available statistical data, issued policy statements and recent (academic) publications on pedestrian issues. At a later stage the data from the participating countries can be compared to assess similarities, differences and trends. The significance, reliability and validity of the available data and models for each country must be considered. These tasks will be performed by the Working Group Coherence and Integration. The results will have to be disseminated to the other three Working Groups, who can build on that aggregated knowledge.

A Country Reports on pedestrian issues in The Netherlands is being developed by Koen Knippenberg at AVV Transport Research Centre in the Netherlands. The example of the Netherlands can probably be used as model Country Report. The work started in April 2006. Data collection includes various available digital, printed reports and interviews (experts and policy makers); sources will be compared to assess representativeness, reliability and validity. The Dutch Country Report will be available in August 2006. The report will include a description of the methods used and choices made for collection the data. For transparency reasons all sources will be given.

The Dutch Country Report will be converted into a questionnaire for the participating countries. With regard to statistical data a spreadsheet will be made including standardised population data²⁰. The Management Commissions for the participating countries will be responsible for delivering the Country Reports and datasets.

In the Country Report the current situation will be described using easily available reports and statements.

A provisional list of data to be included is:

- Available statistics²¹ (Facts and figures) with regard to:
 - Mobility of pedestrians (absolute and relative figures)
 - Accident data
 - Data on activities / time spent in public space
 - Data on number of physically handicapped
 - Definition files with regard to the used statistics (for comparability purposes)
- Recent (academic) publications on pedestrian issues²²:
 - Reports on the position of the pedestrian in public space
 - Reports on the relative position of pedestrians in traffic
 - Reports on changes in transport and traffic influencing the position of the pedestrian,
 - Reports on perception of the pedestrians' mobility and safety
 - Forecasting studies
- Policy statements on the national, regional and local level in various policy fields:

²⁰ For this purpose US Bureau of Sensus data can be used. This bureau collects and distributes population data and forecasts for almost all countries. See <http://www.census.gov/ipc/www/idbagg.html>.

²¹ in 5-year intervals 1990 – 1995 – 2000 – 2005 to 2030

²² reviewed papers in national journals, relevant (scientific) reports in national language

Conference/congress/workshop papers (conference proceedings) and research programs with regard to pedestrian issues

-
- Current issues regarding the pedestrian
 - Future prospects
 - The measures that are taken to guarantee safe mobility and other qualities for pedestrians
 - The motives that are used
 - Investment levels, management and maintenance budgets
 - R&D initiatives with regard to walking and pedestrians
 - Milestones with regard to pedestrian policy in the past.
 - Legal position of pedestrians
 - Articles in road traffic legislation
 - Traffic rules with regard to pedestrians
 - Land use and town planning rules affecting pedestrians' freedom of movement
 - Miscellaneous legislation and guidelines
 - General atmosphere with regard to the pedestrian and pedestrian facilities
 - Positions taken in the media
 - Positions taken in advertising
 - Reports on the position of the pedestrian in public space and in relation to other modalities
 - Reports on changes in transport and traffic, that changed the position of the pedestrian

Appendix 6 Draft outline of WG Reports

Part 1 Introduction, theory and research methods

1. Introduction
 - a. Context
 - b. Objectives
2. Research questions
3. Theory and definitions
4. Methods and data used

Part 2 Research findings

5. Relevant research
6. Current situation
7. Functional needs mechanisms and determinants
 - a. Equipment and position of the pedestrian
 - a. Preconditions
 - b. Strategic level
 - c. Tactical level
 - d. Operational level
 - b. Social and societal context
 - a. Strategic level
 - b. Tactical level
 - c. Operational level
 - c. Spatial context
 - a. Strategic level
 - b. Tactical level
 - c. Operational level
 - d. Travel options
 - a. Strategic level
 - b. Tactical level
 - c. Operational level

Part 3 Interrelations with regard to functional needs

8. Interrelations and interactions between determinants
 - a. Documented interrelations
 - b. Gaps in knowledge
 9. Pedestrian Quality - what does it look like?
 - a. Optimal situation and preconditions
 - b. Best practises
 - c. Do's and Don't's
 10. Practical implications
 - a. Process; roles of stakeholders
 - b. Indicators and monitoring
 - c. Tools
 - d. How to prioritise
 - e. ...
 11. Recommendations
 - a. Policy recommendations
 - b. Further research
- Epilogue

Appendix 7 COST Procedures

REV 040706

Section 1.3. Rules and procedures for implementing COST Actions.

1.3.1 - Basic definitions

I. COST Member Country

A **COST Member Country** is a country that either participated in the Ministerial Conference held in Prague on 27 May 1997 or has since then been approved by the COST *Committee of Senior Officials* (CSO) as a full member of the COST Framework.

II. Cooperating State

A **Cooperating State** is a State that has been approved by the CSO to participate without voting rights in the COST governing committees (CSO) and fully in *Domain* and *Management Committees*, unless otherwise decided. (See 1.1 - Annex B: *Memorandum of the Status of the Cooperating State of Israel*)

III. COST Action

A **COST Action** is a European Concerted Research Action based on a Memorandum of Understanding (MoU) signed by the Governments of the *COST Countries* or *Cooperating States* wishing to participate in the Action. Each COST Action is identified by a number and a title.

IV. COST Secretariat

The **COST Secretariat** refers to the General Secretariat of the Council of the European Union when it carries out the tasks referred to in 1.3.5 - *Obligations of the Council COST Secretariat* or otherwise takes part in the administration of COST cooperation.

V. COST Office

The **COST Office** refers to the implementing agent of COST/ESF when it takes part in the administration of COST cooperation. See also 1.1.7 - *COST Structure*

1.3.2 - Memorandum of Understanding and Starting of an Action

Within two weeks of the *Committee of Senior Officials* (CSO) approval, COST Countries that have indicated an interest to participate in the Action communicate to the COST Secretariat, with copy to the COST Office, the declaration of the intention to sign the MoU of the Action. They also communicate the names of up to 2 nominated participants at the *Management Committee* (MC) of the Action via the remote on-line nomination tool.

Within a period of twelve months after the approval by the CSO, the MoU is open for signature to any *COST Country* or *Cooperating State* without any conditions being imposed. After this period of twelve months, other *COST Countries* or *Cooperating State* may sign the MoU only after having received the permission of the *Management Committee*.

After having been signed by at least 5 countries, the MoU takes effect and the Action **enters into force**. This is a prerequisite for the formal commencement of an Action. (see below)

The signatory countries commit themselves to make every effort to ensure that the necessary funds for participating in the Action are made available under their internal financing procedures.

Signing the MoU will not create any binding legal effect in public international law, the provisions in the MoU as well as in the "Rules and Procedures" being of a strictly recommendatory nature.

After receiving notification of the intention to sign an Action and the related nominations by more than 5 countries, the COST Office convenes the ***kick-off meeting*** of the Management Committee of the Action. The date of the MC ***kick-off meeting*** is the ***start date*** of the Action, unless the Action has not yet ***entered into force***. In that case the date of the MC meeting following the ***entry into force*** becomes the ***start date*** of the Action.

1.3.3 - Obligations of the Council COST Secretariat

The COST Secretariat will inform all Signatories of the signing dates and date of entry into effect of the MoU and will forward to them all notices received under the MoU. The COST Secretariat will provide, on receipt, all data regarding signatories and nominations to the COST Office. Signatories are asked to copy communications to the COST Office.

The MoU will be deposited with the COST Secretariat, which will transmit a certified copy to each of the Signatories.

1.3.4 - Changing the framework of a COST Action

I. Withdrawal from an Action

A Signatory country which intends, for any reason, to terminate its participation in the Action will notify the Council COST Secretariat with copy to the COST Office of its intention as soon as possible, preferably not later than three months beforehand.

II. Modification to the duration of an Action

The duration of a COST Action is defined in the MoU (normally 4 years) calculated from the first meeting of the Management Committee. The period may be shortened or extended by the CSO under the circumstances set out below:

- a) The COST Action may be terminated by decision of the CSO before its originally intended date of expiration:
 - if the number of signatory countries participating in the COST Action falls below 5, or
 - if any other circumstances make the benefit of continuing the COST Action questionable.

- b) The COST Action may be extended beyond its originally intended date of expiration although this is not desirable:
 - if, during the course of the Action, the Management Committee notes that it is, for technical reasons, impossible to bring the work under the Action to a satisfactory conclusion within the originally envisaged period of duration, or
 - if the implementation of the Action has opened up promising new research topics, not envisaged at the outset of the Action, and if there are very strong reasons to pursue these new research topics in a new round of the same Action rather than in a new COST Action.

Every effort should be made to accommodate such events within the original planned duration of the Action.

III. Other

Any other substantial change in the framework of a COST Action, proposed by the Signatories or the Management Committee, will be brought to the attention of the *Committee of Senior Officials* (CSO) or to the relevant *Domain Committee* if it has received authority from the CSO.

1.3.5 - Participation of non-COST institutions

In addition to *COST Member Countries* or *Cooperating States*, the CSO may admit international organisations or research establishments in countries outside the COST framework (hereafter referred to as "*non-COST institutions*") as participants in specified COST Actions, on an Action by Action basis, under the provisions set out below.

An application from a *non-COST institution*, addressed to the President of the CSO, will be dealt with by the CSO on the basis of the opinion of the Management Committee, if already established, and by the relevant Domain Committee.

The main criteria for admitting a *non-COST institution* as a participant in a COST Action is mutual benefit.

The CSO may attach special conditions to this participation. The rights and obligations of the institution are regulated through an exchange of letters between the institution and the President of the CSO. *Non-COST institutions* participate in the Action on the same base as the signatory countries, with the single exception that it has no right to vote in the Management Committee.

At the outset of an Action, proposed participation by a *non-COST institution*, if it has been associated with the proposing group, may be accepted, in principle, by the CSO coming into effect once the MC and DC confirmation has been obtained.

For the COST “*Near Neighbour*” countries (*Albania, Bosnia & Herzegovina, Belarus, Moldova, Russia, Ukraine, Armenia, Azerbaijan, Georgia, Kazakhstan, Kirghizstan, Uzbekistan, Tadjikistan, Turkmenistan, Morocco, Algeria, Tunisia, Libya, Egypt, the Palestinian Authority, Syria and Lebanon*) there is a provision for supporting attendance at Action meetings for one appointed participant.

1.3.6 - the Management Committee

I. Introduction

The *Management Committee* (MC) supervises and coordinated the implementation of a COST Action.

II. Procedures

The secretariat of the MC will be provided by the COST Office or by a competent authority or research institute in one of the Signatory States unless provided by the Action through Annual Grant support.

The MC will be composed of up to two representatives from each signatory country and one representative of a *non-COST institution*

In the MC, each signatory country (not individual) has one vote. Observers and representatives of *non-COST institutions* have the right to express their views but do not vote.

COST Member Countries and Cooperating Countries that have not signed the MoU may send observers to the first meeting of the MC as well as to any subsequent meeting of the MC taking place within the twelve months period after approval of the MoU by the CSO. After this period has elapsed, observers may attend the meetings only with the permission of the MC.

The European Commission may also send an observer to a MC meeting.

The MC establishes its own rules of procedure but should follow the “Standard Rules of Procedure” (See *Annex A: Rules of Procedure*).

III. Kick-off meeting and first MC meeting

Provided at least five sets of nominations have been received, the COST Office will arrange a kick-off meeting to bring representatives together and start Action planning. The COST Office may invite and reimburse additional experts and will endeavour to communicate the launch of the new Action as widely as possible in order to stimulate optimal participation.

If five signatures of participating countries have been received, the meeting becomes the first MC meeting. If not, the Action operates on a provisional basis until the first MC is convened which is the formal date for commencement of the action.

Before the election of a Chair, the Chairmanship is taken by the Science Officer dealing with the Action. In the case where there are less than 5 signatory countries represented, the nominated MC delegates can elect an acting MC Chair until the quorum (5) is reached.

Kick-off/first MC meetings are normally held in the COST Office in Brussels.

IV. Action Coordination

The MC will be responsible for coordinating the Action and, in particular, for:

- choosing the research topics on the basis of those provided for in the Technical Annex of the MoU, including any modifications submitted to the Signatories by the competent public authorities or bodies;
- advising on the direction which work should take;
- drawing up detailed plans, arrangements for the distribution of tasks, and defining methods for the different phases of execution of the Action, which may also include the creation of specialised working groups. This includes the planning and follow up of the Actions budget;
- coordinating the contributions of all participants;
- keeping abreast of the research being done in the territory of the Signatories and in other countries;
- liaising with international bodies, when appropriate;
- exchanging research results among the Signatories, and disseminating these results, as appropriate, to a wider public, to an extent compatible with adequate safeguards for the interests of Signatories, their competent public authorities or bodies and research contractors in respect of industrial property rights and commercially confidential material;
- providing for the evaluation of the research carried out during the Action when drawing up the annual progress reports and the final report;
- formulating recommendations for the future use of the results achieved by the Action;
- deciding on possible special conditions to be attached to a permission to sign the MoU after it has been in force for more than twelve months;
- formulating an opinion on an application for participation by a non-COST institution including a possible recommendation to the CSO to attach certain special conditions to its approval;
- bringing to the attention of the CSO or the appropriate Domain Committee any proposed substantial change in the Action framework.

1.3.7 - Reports

Normally, each Domain Committee convenes an Annual Meeting of the Action Chairs to discuss the progress of their Action documented in an Annual Report.

For further information on the monitoring and evaluation process, see *1.4 - Guidelines for assessment, monitoring and evaluation of COST Actions approved by the CSO*.

1.3.8 - Intellectual Property rights

Neither COST nor the ESF or the EU retain property rights which are deemed to belong to the individual participants in an Action. The following conditions also apply:

Article 1

In order to facilitate the exchange of results referred to in Section 8, paragraph 9 (g), and subject to national law, Signatories intend to ensure, through the inclusion of appropriate terms in research contracts, that the owners of industrial property rights and technical information resulting from work carried out in implementation of that part of the Action assigned to them under the Technical Annex (hereinafter referred to as "the research results") will be under obligation, if so requested by another Signatory (hereinafter referred to as "the applicant Signatory"), to supply the research results and to grant to the applicant Signatory or to a third party nominated by the applicant Signatory a licence to use the research results and such technical know-how incorporated therein as is necessary for such use if the applicant Signatory requires the granting of a license for the execution of:

- *work in respect of the Action;*
- *research and development work within the framework of the applicant Signatory's projects in the same field;*

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- *research and development work within the framework of any associated European project undertaken subsequently and in which all or several of the Signatories may be prepared to take part.*

Such licences will be granted on fair and reasonable terms, having regard to commercial usage.

Article 2

Signatories will, by including appropriate clauses in contracts placed with research contractors, provide for the licence referred to in paragraph 1 to be extended on fair and reasonable terms, having regard to commercial usage, to previous industrial property rights and to prior technical know-how acquired by the research contractor insofar as the research results could not otherwise be used for the purpose referred to in paragraph 1.

Where a research contractor is unable or unwilling to agree to such extension, the Signatory will submit the case to the MC, before the contract is concluded; thereafter, the MC will state its position on the case, if possible after having consulted the interested parties.

Article 3

Signatories will take any steps necessary to ensure that the fulfilment of the conditions laid down in the present Chapter will not be affected by any subsequent transfer of rights to ownership of the research results. Any such transfer will be notified to the MC.

Article 4

If a Signatory terminates its participation in the Action, any rights of use which it has granted, or is obliged to grant, to, or has obtained from, other Signatories in application of the MoU and concerning work carried out up to the date on which the said Signatory terminated its participation will continue thereafter.

Article 5

The provisions of paragraphs 1 to 4 will continue to apply after the period of operation of the MoU has expired and will apply to industrial property rights as long as these remain valid, and to unprotected inventions and technical know-how until such time as they pass into the public domain other than through disclosure by the licensee.

It is strongly recommended that if the possibility of IPR being generated by a COST Action is recognised then the individuals concerned within MCs and Workshops should come to an IPR-sharing agreement at the earliest possible stage in the development and implementation of an Action. This will avoid possible disputes occurring at a later stage.

Annex A: Rules of Procedure for the Management Committee

Article 1

The Management Committee(MC) for COST Action ... has been set up in accordance with the provision of 1.3.7 - the Management Committee. The MC shall consist of no more than two representatives for each Signatory and no more than one representative for each non-COST institution admitted to participate in the Action.

The members of the MC shall be appointed for the duration of the Action.

The COST Office shall be notified of any amendments to such appointments.

Article 2

The main responsibilities of the MC are defined in particular in 1.3.7 - the Management Committee with some additional provisions in 1.3.8 - Reports and 1.3.9 - Property rights.

Article 3

Each Signatory shall have one vote in the MC. If a member representing a Signatory is unable to attend, this power is delegated to an officially appointed deputy. Members representing non-COST institutions have the right to express their views but not to vote.

Article 4

The members of the MC, with the agreement of both the relevant CNC and the MC Chair, may appoint experts or advisors to accompany them or substitute for them in case of absence. Attendance at the meeting shall be strictly limited to members and their appointed experts or advisors as well as to specialists invited in connection with specific items on the Agenda. Only MC members and officially invited experts will be entitled to be reimbursed. The names of the experts, advisors or specialists shall be communicated to the COST Office before each meeting.

Subject to the approval of the MC, any member may also invite representatives of international organisations or experts from non-signatory Countries to participate as observers in some of its activities in accordance with requirements.

Article 5
The MC may decide that some of its discussions or certain Minutes of meetings and other documents be considered confidential. Documents are not considered confidential unless this is clearly stated on the front page. The information supplied by the members of the MC shall not be published without their agreement.

Article 6

If in the course of this Action results are obtained or expected, which could give rise to intellectual (industrial or non industrial) property rights, the MC shall take the necessary steps, be it by written agreement among the participants or otherwise, in order to protect these rights, with respect to the principles set out in section 11 of this Part.

Article 7

The MC shall appoint from among its members representing Signatories, by a simple majority vote, a Chair and a Vice-Chair the duration of the Action. If the Chair is unable to attend, his/her place shall be taken by the Vice-Chair.

In the event of the premature termination of the appointment of the Chair or Vice-Chair, they shall be replaced for the remainder of the term of office in question, again by a simple majority vote.

Article 8

Meetings of the MC shall be officially held only if at least two-thirds of the Signatories are represented.

The decisions of the MC shall be taken by a simple majority of the Signatories present and voting. If appropriate, a secret ballot may be carried out and the votes shall be counted by the COST Office representative. In the event of a tie, the procedure may be repeated.

Article 9

The MC shall be convened by the Chair as often as required for the performance of its tasks, and should meet at least once per year. It may also be convened at the request of members representing at least three Signatories.

Article 10

Support for the MC shall be provided by the COST Office, according to section 8, paragraph 5 of the Rules and Procedures or directly by the Action MC in the case of support through the annual grant system. In the latter case, a grant holder institution is appointed (normally that of the Chair or Vice-Chair of the MC) provided it can demonstrate appropriate competence in administrative and financial matters (see Article 11)

Article 11

Correspondence shall be dealt with by the COST Office, which shall be responsible for all contact with the Chair, Vice-Chair and members of the MC other than in the case of the annual grant system (see Article 10).

The COST Office will receive copies of all correspondence.

Documents to be distributed by the COST Office or the grant holder at the meetings should be sent at least three weeks before, for their duplication. For last minute documents to be distributed during meeting sessions, a sufficient number of copies should be brought, in order to avoid duplication

on the spot. Whenever possible, documents should be duplicated and mailed by the authors directly to the participants and the COST office/grant holder.

The COST Office will maintain master copies of all documents when it provides the secretariat. In the case of annual grants, this is the responsibility of the grant holder.

Article 12

Meetings shall be held where the MC considers it advisable to meet at the invitation of an institution in a signatory State. The COST Office shall, however, only undertake the organisation of the meetings held in Brussels. The cost of organisation of meetings elsewhere shall be borne by the host country.

Article 13

The working language of the MC is usually English. Documents from the COST Office will be issued in this language.

Article 14

The travelling expenses incurred by and allowances due to a maximum of two members and for a maximum of three meetings per year of the MC will be borne by the COST budget for representatives of a Signatory eligible for reimbursement. Details of the reimbursement are covered by the "Rules for reimbursement of expenses for experts eligible for reimbursement".

Article 15

These rules of procedure may be amended by the MC following a valid vote as long as the changes do not contravene the basic principles set out in these Articles nor the "Rules and Procedures for implementing COST Actions" or adversely affect the functioning of the Action. Proposals for the amendment of these rules shall be circulated one month prior to their discussion to the members of the MC and to the COST Office.

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