



**European Cooperation
in the field of Scientific
and Technical Research
- COST -**

Secretariat

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COST 257/06

MEMORANDUM OF UNDERSTANDING

Subject : Memorandum of Understanding (MoU) for the implementation of a European Concerted Research Action designated as COST Action 358 Pedestrians' Quality Needs (PQN)

Delegations will find attached the Memorandum of Understanding for COST Action 358 as approved by the COST Committee of Senior Officials (CSO) at its 165th meeting on 27/28 June 2006.

**MEMORANDUM OF UNDERSTANDING
FOR THE IMPLEMENTATION OF A EUROPEAN CONCERTED RESEARCH
ACTION DESIGNATED AS**

COST ACTION 358

Pedestrians' Quality Needs (PQN)

The Signatories to this 'Memorandum of Understanding', declaring their common intention to participate in the concerted Action referred to above and described in the 'Technical Annex to the Memorandum', have reached the following understanding:

1. The Action will be carried out in accordance with the provisions of document COST 400/01 'Rules and Procedures for Implementing COST Actions', or in any new document amending or replacing it, the contents of which the Signatories are fully aware of.
2. 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 walking conditions throughout the EU and other involved countries.
3. The economic dimension of the activities carried out under the Action has been estimated, on the basis of information available during the planning of the Action, at approximately 9 million EUR in 2006 prices.
4. The Memorandum of Understanding will take effect on being signed by at least five Signatories.
5. The Memorandum of Understanding will remain in force for a period of four years, calculated from the date of the first meeting of the Management Committee, unless the duration of the Action is modified according to the provisions of Chapter 6 of the document referred to in Point 1 above.

COST ACTION 358

Pedestrians' Quality Needs (PQN)

A. ABSTRACT

In research, policy making and implementation concerning the safe mobility and the quality of life of pedestrians is a rather neglected issue. Nevertheless, earlier research projects started to deal with the issue and have made it possible to get some grip on the topic. The difficulties arising from long neglect, however, are so substantial that new research activities are needed to build on the available knowledge and to further develop the insights gained from earlier projects in order to make a difference to pedestrian conditions in towns and villages in Europe and elsewhere.

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

In transport and traffic safety sciences a comprehensive, integrated systems approach is now the state-of-the-art. This COST Action will follow that path to determine pedestrians' quality needs (PQN) with regard to physical and social environments, the transport system, and policy making and implementation for a safe and healthy mobility of pedestrians.

This Action will be conducted from three perspectives: functionality; perception; durability and future prospects. Special attention will be given to the coherence and integration of these perspectives. The focus will be on pedestrians' quality needs with regard to the strategic, tactical and operational levels of travel and sojourn decisions of pedestrians, particularly in city outskirts.

The newfound knowledge will be disseminated through the dedicated networks of International Cooperation on Theories and Concepts in Traffic Safety (ICTCT), the network of the yearly WALK21 conferences and OECD/ECMT as well as relevant congresses and journals.

Keywords: pedestrians, road safety, mobility needs, accessibility, quality of life, health, systems approach, road and public space design, legislation, education, communication, enforcement.

B. BACKGROUND

Walking is basic

The fate of common things is oblivion. Walking is such a basic way of travelling that its importance is often forgotten, especially when the facilities for walking are available and adequate for a 'normal' person. Only when they are absent or one becomes (temporarily)

handicapped, does one rediscover how crucial it is to be able to walk or that the quality of the facilities are not as good as they ought to be.

Walking can be seen as the lubricating oil for the transport system; without it the system cannot function. Walking and pedestrians, however, are not associated with commercial profits. It is not a multibillion dollar industry such as the car industry that is capable of generating large sums of money for research and development. Although there is agreement on the importance of walking for the functioning of the transport system, research on walking and pedestrians' quality needs has proved to be commercially unattractive. Providing for pedestrians is universally perceived to be a public task, therefore reliant on government attention and funding.

It is universally agreed that it is important to have pedestrian facilities, but almost no one has it at the top of their political agenda. Most of the time other transport issues seem to be more urgent and waiting for action. The general public sees taking care of pedestrians as a public duty and does not want to make a fuss from a lowly position (who wants to be perceived as being vulnerable?). Central government sees the care of pedestrians as a local authority task, but at the local level pedestrian issues have to compete with other important transport issues. Providing for pedestrians ranks low on the transport scale, except in public areas where there is a dominant economic or social reason to care for pedestrians, such as in shopping areas or parks.

Transport system trends

Because of increasing car dependency and consequent land-use changes, plus perception and social changes, the nature of walking has evolved. Origin-to-destination (door-to-door) walking has diminished, while walking to and from other modes of transport has increased. In total, the amount of walking per person will decrease somewhat, but because of 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 has become 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 has decreased: this results in fewer pedestrians per square metre of walkway.

Ageing population

Almost all countries will have to deal with an ageing population. For policy development relating to 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.
- Demands on the public purse will rise with an ageing population; it will be much harder to find adequate budgets for pedestrian facilities¹.

1. Public expenditure on 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. 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.

Health issues

Health issues are becoming universal. For modern humans, exercise is no longer a natural part of everyday life. Technical devices such as cars, elevators and bicycles make life easier but pose new problems. Walking is a solution to many health problems because it is a simple, inexpensive 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 western diseases such as 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 well-being.

Policy development: focus on the car

Until now, road transport policy development and (road) transport sciences focused mainly on facilitating motorised traffic. Whenever there is a 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 sub-optimal situation for pedestrians and cyclists: routes within the transport network that vary very much in quality, even to the point that some pedestrians and cyclists cannot cope with them. A chain is as strong as its weakest link.

Minimal support from technology and industry

Walking is considered less suitable for technological development than other modes of moving around; therefore progress has not been made to the same extent as for other road users. Industrial companies have focused on transport and traffic issues that can easily be dealt with by industrial applications and gadgets, so technology-driven developments and demand-driven challenges to the industry avoided the pedestrian sphere. As a consequence pedestrian interests are more dependent on other fields such as urban planning, road design and traffic control. However, roadside applications could have a potential for pedestrian safety and pedestrian quality of life. Likewise, advanced technological devices worn by the pedestrian could have a positive impact. 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, legislation and culture regarding walking and a person's presence in public space. This means there must be different solutions for different countries.

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

In western European countries the current pedestrian situation is the result of a gradual adaptation process over many decades. In central and eastern European countries the process

of growth in the number of cars and car use is much more extreme. 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 Action will help provide those 'newly motorised' countries with knowledge that will make it easier and more efficient for them to deal with pedestrian problems.

In Europe, motorisation has not yet led to a partition of society where walking as a common travel mode is no longer feasible. The chances are that trends such as 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 longstanding tradition of 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 drivers or even cyclists. A classic study is *The Image of the City* by Kevin Lynch (1960)³. In the 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.

In the 1990s, in many countries there was a rise in interest for sustainable transport. In this context, effort was put into the promotion of walking and cycling. Guiding studies at 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 the Fifth Framework Programme's 'City of Tomorrow and Cultural Heritage', the PROMPT Action. Furthermore, in many countries, handbooks on pedestrian facilities and facilities for the handicapped were published.

For some years the health sector has stressed the importance of exercise and promotes to walk for at least 30 minutes a day. Medical practitioners increasingly often prescribe exercise instead of drugs. Studies relating 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 WHO's Transport, Health, Environment – Pan-European Programme (THE PEP) is being carried out.

The Joint ECMT/OECD Transport Research Centre is planning to set up 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 at the national level.

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

3. Lynch, Kevin *The Image of the City*. Massachusetts Institute of Technology and Harvard University (1960).

Systems thinking

For motorised traffic, systems thinking has become more or less the norm. Whereas formerly, 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 possible. Research-based policy frameworks such as Sustainable Road Safety in the Netherlands and Vision Zero in Sweden are examples of this new direction. The Joint Transport Research Centre (JTRC) of the OECD and ECMT has 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 a dream 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 such as 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 focused on economic growth, which is to be attained by facilitating market participants, not by government guidance. Transport is seen as crucial for economic growth, but in 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 government's role should be limited. In relation to this, governments retreat from policy sectors where they were once 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 now assigned a larger role in creating his/her adequate living conditions, low-threshold tools are needed to support this new role.

Why a COST Action?

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 project '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 merely 'islands of quality in a sea of misery'. A more fundamental approach that 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 efficient framework for international and interdisciplinary research. Since there are not many professionals working on the issue, the joining of forces also reduces the chance 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 joining the Action.

One of the basic factors in effectiveness of dissemination is the 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.

C. OBJECTIVES AND BENEFITS

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

The research aims are:

1. 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 as well as NGOs) that can implement better conditions for walking and pedestrians' quality of life.
2. 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.
3. 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.
4. To stimulate partners to innovate tools and disseminate knowledge that helps in shedding new light on the issue and stimulates a new spirit in providing for safe mobility of the pedestrian.
5. To provide recommendations for further research.

European situation

The Action focuses on the current European situation and aims at providing useful information for policy development in European countries and to a lesser extent, North America, Australia and Japan. Conclusions may not be valid for other continents.

Human needs

The Action focuses on the pedestrian as a human being and his/her role in transport and traffic; the physical and social environments and the transport system should be there to support the pedestrian's needs. Safe mobility and being unthreatened while in a public space are basic needs.

Everyday walking

A pedestrian is anyone who walks or is present in a public space. The Action will highlight everyday walking, that is 'functional' or utilitarian walking: walking from an origin to a destination, which can also be a vehicle or a public transport stop. Leisure walking or just staying in a public space, such as talking to neighbours, enjoying the sun are also included, but using public space for sports (jogging, marathon walking) or parades is excluded in the Action. De luxe modes that are legally pedestrian, such as skates, stepping bikes, Segways⁴ are also excluded. On the other hand, walking aids (e.g. a walking frame), electric scooters and wheelchairs will be included. The Action explicitly includes multimodal walking. Walking to and from other modes of transport is seen as a basic transport link.

Walking in a public space

Public space is any space that is open for all citizens and includes the road infrastructure, sidewalks/pavements and footpaths, the access (intermediary) spaces to private space, but excludes gated shopping malls, private property and the interior of buildings.

Identify basic needs

This Action focuses on identifying the minimal ergonomic, perception and durability qualities that are needed for safe mobility and a safe presence in a public space for the vast majority of pedestrians, thus defining 'basic quality'.

Focus on prevention within the foreseeable political contexts

The Action focuses on 'organic' optimising of land use, the physical environment, the transport system, and the social and legal context, thus preventing problems for pedestrians within all foreseeable political contexts.

4 A Segway is a two-wheeled human electronic (gyrator) transporter. It is driven by balancing. See: <http://segway.com/>

D. 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 safe and agreeable mobility and presence in public space, now and in the foreseeable future?

Sub-questions are:

- What role does walking have within our society? What changes have occurred over time and what changes can be expected?
- What task does a pedestrian have to perform? What (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 this Action will be 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 journey to other modes of transport or just staying in a public space. This deductive ‘back to basics’ approach implies a study of the needs, tasks and competences of pedestrians, plus the contexts and pedestrian performance in various situations in the participating countries. Past research resulted in substantial knowledge on the requirements for promoting walking in city centres. This Action will expand that knowledge to cover everyday walking, in particular in the outskirts of towns and villages, where in fact most of walking is done.

The general approach of the Action is defined by the point of view that quality is the sum of three kinds of valuations⁵ that together draw a comprehensive picture of pedestrians’ quality needs:

1. *Functional perspective:*
usage value, what is being offered = intrinsic quality supply, looking at the system from the ‘head’
2. *Perception perspective:*
what is being requested = subjective quality demand, looking at the system from the ‘heart’, including attitudes towards and of pedestrians.
3. *Durability and future prospects:*
while No. 1 and No. 2 are static quality descriptions, No. 3 refers to a dynamic perspective.

⁵ 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.

Quality needs can be identified at several abstract levels⁶. 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 circumstances on the spot.

The second level is the *tactical* level. On this level the pedestrian decides on the direction s/he takes, whether or not to cross the road, 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 abstract 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 of transport 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 abstract level implies social values; the transport system on this abstract level is typified by facilities for accommodating travel and transport needs, including information needs.

In Table 1 a first provisional impression is presented regarding the valuations and the respective abstract levels.

With regard to the three abstract levels the following items will be studied:

1. The current situation and its context in the participating countries
2. Theories regarding mechanisms that can explain the current situation
3. Ideas, theories, concepts regarding the optimal situation
4. Requirement programmes, choices and arguments
5. Evaluation of (commonly used) models, theories and paradigms
6. Evaluation of common and best practices.

Whenever possible, the Action is based on current knowledge and available statistical data and literature. Specific gaps in knowledge can be filled by low-cost empirical studies.

⁶ See: 'Dealing with dangers', J.A. Michon, Groningen 1979 and 'Vulnerable Road Users', Methorst, Rotterdam 2003 regarding the Pizza-model.

Table 1 Quality-related issues

	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"> - Amenity - Communication - Time/space specific subjective risk 	<ul style="list-style-type: none"> - 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 projects - 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

Products

In relation to the objectives of the Action the following deliverables will be prepared:

Intermediary projects (public, but mainly for internal use):

1. Report on the conceptual framework of the Action
2. Country reports regarding the state-of-the-art, 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 the 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

Deliverables (for the general public):

7. Guidelines for a pedestrians' quality needs audit
8. Handbook on Pedestrians' Quality Needs, in which the secondary aims of the project are met.

Basic principles and preconditions

Multidisciplinary action

The Action is not limited to a certain discipline such as traffic engineering or town planning, but is set up as a holistic multidisciplinary approach. Pedestrian needs and qualities will be studied from various points of view: traffic engineering, town planning, architecture, design, ergonomics, psychology, sociology and (human) geography, economics, etc. Road safety, although an important element, is not necessarily the common umbrella.

Evidence-based 'helicopter view'

This Action aims at a comprehensive covering of the pedestrian issue at 'helicopter-view'-level. Conclusions must be evidence based.

Currently, academic knowledge is incomplete, rather fragmented and partly outdated. A systems approach will be used to trace gaps in knowledge; in some cases new evidence must be gathered.

Transcending 'What you don't count, does not count'

Developments that are not monitored are usually not noticed: what you don't count does not count. In statistics and other (research-based) signals to the managers of public space, pedestrian issues are not properly represented. Better data can place the issue higher on the political agenda; in time this will lead to better facilities. In other words: there is a relationship between the quality of data and the quality of facilities.

Placed in context

Pedestrian safety and other needs will be compared with risks and needs of other road users and public space users. A situation will be regarded as relatively unsafe or inadequate for (groups of) pedestrians when they are more often involved in accidents per trip, per time unit or per distance travelled, or when they are disadvantaged in comparison with the average for all groups of road or public space users.

Universal Design principle

The Universal Design principle⁷ implies that the spatial system, the transport system and the social system are designed to enable (almost) any pedestrian to function adequately. Design, in the broadest sense, must be directed at including those who have the most trouble coping with the system, i.e. children, the elderly and the handicapped. In other words: quality does not depend only on the average user but also on the small part of the population that deviates most from the mean.

Road safety is about exceptions

7. Universal Design is also known as Design for All (D4A).

Like quality, road safety is about exceptions and not about averages, but road safety is also about the mismatch between the components of the system: road users, vehicles and the environment. Accidents rarely happen because of average circumstances, but because of an exceptional coincidence of events and critical behaviour. People with marginal competences and high fragility are more at risk than highly competent and alert road users. Fortunately most of the trips made by the less competent can be made without accidents or serious incidents. Most road users behave safely in traffic most of the time, while only a small minority violates safety rules on a regular basis, creating potentially dangerous situations. The latter group is however involved in a disproportionately large number of accidents and conflicts with pedestrians. Remedies are to be found in all components and relations within the system, such as vehicle design, the characteristics of the transport system, the physical environment (place, network and land use), social environment (other road users, social context, norms and values, legislation and enforcement), road users (equipment, training and education, organisation and representation)⁸.

E. ORGANISATION

The managing body of the Action is the Management Committee. The Action work will be divided into four working groups:

- WG1 Functional perspective
- WG2 Perception perspective
- WG3 Durability and future prospects
- WG4 Coherence and integration

The WG participants will communicate through the WG leaders and not directly to the Action chairperson. The WG leaders will make regular WG progress reports and present a brief Programme Decisions Paper for the MC. The MC will decide on those programme issues and will post regular Action progress reports on a (secure) internet site.

For special tasks, such as organising meetings, workshops and other events, reviewing reports and papers, ad hoc task force consisting of WG leaders will be formed, working under the responsibility of the MC. For quality control a special external group will be set up.

The working groups will produce a work plan that describes how the key questions will be answered. The project will start with a questionnaire survey amongst all participating countries on the current pedestrian situation (i.e. mobility, safety, legislation, policy and attitudes of (institutional) actors).

WG1. Functional perspective

- Focus on visible ('objective') behaviour of pedestrians
 - What is known about presence, mobility and safety characteristics of pedestrians in public space?
- 'Technical' perspective of ergonomics
 - What tasks does a pedestrian have to perform?

8. A system of options for interventions is worked out in the Conceptual Model Paper for the project.

- To what extent are (groups) of people impeded in their safe mobility?
- Which items should be included in (minimum and optimum) requirement programmes? Which standards should be met?
- To what extent can intelligent transport system (ITS) applications be as effective as other types of countermeasures?
- Comprehensive: includes valuation of infrastructure, land use, information, legislation, relation to transport modes, etc.

WG2. Perception perspective

- Focus on the perception of the current situation, behavioural attitudes, motives and desires
- Human Factors perspective
 - Which human factors influence the safety and freedom of walking?
 - What is known about the needs and expectations of pedestrians?
 - To what extent do pedestrians experience inter- and intrapersonal conflicts in relation to their mobility and movement in a public space?
 - What is known about the effects of communication on the perception of qualities and shortcomings of facilities for pedestrians (in the broadest sense, including ITS applications)?
- Comprehensive: includes perception of physical and social environments, transport system and communication aspects
 - Which interventions are needed and possible to improve the pedestrians' quality of life?

WG3. Durability and future prospects

- Focus on durability aspects of design and materials used and on trends in walking, its context and consequences for quality needs
 - What trends are there regarding the mobility and safety of pedestrians?
 - Which factors influence the presence and safe mobility in public space?
 - Which design and organisational issues need (constant) attention?
- Future prospects concerning usability and perceived qualities
 - Which interventions are needed to prevent degradation of the quality of life or to ensure the safe mobility of pedestrians?

WG4. Coherence and integration

- Focus on identifying interrelations and improvement options among the three valuations and best practices on the various policy levels.
 - How do the three valuations of quality for pedestrians interrelate and interact?
- Integrative perspective:
 - What gaps in knowledge are there? What developments need to be monitored?
 - What improvements are needed and are in theory politically feasible?
 - What best practices and experiences are there?
 - What policy strategies are needed for improving the safe mobility of pedestrians and their unthreatened presence in public space?
- **Coordination of the working groups, web site communication (both within the research group and for the public) and organisation of meetings.**

F. TIMETABLE

The Action will last for four years

Phase 1. Forming working group study groups

- Kick-off meeting

- collecting the literature
- compiling a references database for each of the sub-questions
- searching for sources (statistical data, expert networks, relevant institutes etc.
- preparing a questionnaire – active search for funding for total or specific working groups
- formulate practical (empirical) data collection projects, filling in important gaps
- formulate working group project plans
- formulate outline of working group reports
- identify (empirical) data collection projects
- identify minimum and optimum scenarios
- formulate communication plan
- consultation with the Joint ECMT/OECD Transport Research Centre regarding their additional requirements for their (planned) project Pedestrian Safety, Urban Space and Health.

Phase 2. Data collection

- data/information collection
- try for additional funding and perhaps extend the project
- preliminary data/information analysis
- define gaps to be filled in
- (if possible) international (ICTCT⁹) workshop for partners of the project; exchange information regarding outlines and practical options

Phase 3. Analysis, evaluation and filling in gaps

- formulate need for additional data/information
- collection of additional information
- draft report per working group
- **international (ICTCT and/or WALK21¹⁰) workshop for partners of the project**
- consultation with the Joint ECMT/OECD Transport Research Centre regarding their additional requirements for their (planned) project Pedestrian Safety, Urban Space and Health.

Phase 4. Compilation of working group reports

- additional research

9. ICTCT stands for International Cooperation on Theories and Concepts in Traffic Safety. ICTCT is an association developed out of an international working group of safety experts with the aim to identify and analyse dangerous situations in road traffic on the basis of criteria other than past accidents, analogous to the methods of air and industrial safety. International cooperation in the identification and analysis of potentially dangerous situations in road traffic, and their causes, on the basis of relevant safety data derived from observations and surveys.

The aim of ICTCT is to achieve a deeper understanding of problems in the area, to harmonise future research activities, and to provide means for an optimal use of research results from different countries. To fulfil these aims ICTCT has been involved in a number of cooperative research efforts (workshops, calibration studies, formulation of international guidelines, clearing house for reports, etc.). ICTCT organises at least one workshop (70-100 delegates) per year. See also: www.ictct.org

10. WALK21 started as a UK framework for walking officers. Since 1999 WALK21 (large) yearly conferences on walking throughout the world. WALK21 has created a worldwide network of walking advocates, researchers, designers and policy makers.

- finalising draft reports
- recommendations for integrated report on communication
- **presentation of working groups results at ICTCT 2007 and/or WALK21**
- communicate provisional results of the working groups to the JTRC working group on Pedestrian Safety, Urban Space and Health

Phase 5. Compiling and editing the handbook

- integration of papers for state-of-the-art report
- writing final report

Phase 6. Dissemination

- **organisation of a final conference**
- press releases
- fundraising for dissemination at local level in the participating countries
- articles in relevant periodicals including national, regional and local media
- presentations at relevant conferences
- organisation of courses and demonstrations of use of developed tools at local levels in the participating countries

Phase 7. Aftercare

- disseminate conference reactions and planned follow-up activities
- attend to questions related to the deliverables and other products of the project
- initial stimulation and supporting of dissemination at the local level

Table 2. Timetable of the Action

Timetable PQN project																	
year		year 1				year 2				year 3				year 4			
quarter		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Phase 1	Forming working groups	K															
	MC	K															
Phase 2	Data collection																
	MC, WG1, WG2, WG3																
Phase 3	Analysis								X								
	MC, WG1, WG2, WG3								X								
Phase 4	WP reports												X				
	MC, WG1, WG2, WG3												X				
Phase 5	Compiling Handbook																
	MC, WG1, WG2, WG3																
Phase 6	Dissemination																C
	MC, WG4																C
Phase 7	Aftercare																

K= Kick-off meeting (experts only)

X = Workshop (open to all experts, NGO's and politicians)

C = Final Conference (Open to all experts, NGO's and politicians)

- Working Groups 1, 2 and 3 start at the beginning of the project and end after Phase 4

- Working Group 4 starts at the beginning of the project and ends after Phase 7

G. ECONOMIC DIMENSION

The following COST countries have actively participated in the preparation of the Action or otherwise indicated their interest:

Austria, Belgium, Croatia, Czech Republic, Estonia, Finland, France, Hungary, Germany, Greece, Israel, Italy, Latvia, Macedonia, Netherlands (proposing country), Norway, Portugal, Romania, Serbia & Montenegro, Spain, Sweden, Switzerland, United Kingdom.

On the basis of national estimates provided by the representatives of these countries, the economic dimension of the activities to be carried out under the Action has been estimated, in 2006 prices, at approximately 9 million EUR.

This estimate is valid on the assumption that all the countries mentioned above but no other countries will participate in the Action. Any departure from this will change the total cost accordingly.

The following non-COST countries have also expressed their interest: Australia, India, and Jordan.

H. DISSEMINATION PLAN

Dissemination aims

The dissemination of the results of the Action aims at:

- Providing practitioners with reports and other traceable information on pedestrians' needs
- Improving know-how in the scientific community
- Influencing policy making at the national level
- improved awareness of pedestrian quality needs at the local level
 - improved statistics on walking
 - (start of) public discussion on the issue
 - expertise transfer to local authorities and NGOs (local conferences and courses).

Internal communication

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.

External dissemination

Dedicated fora websites receive more visitors than an independent website. General information will therefore be posted on a public website related to the dedicated ICTCT and WALK21 fora as well as on the websites of the partners of the Action (either as link to the dedicated websites or as specific pages in the language of the country):

1. Report on the conceptual framework of the Action.
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 pedestrian 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 Action.

For the same reason, the existing ICTCT and WALK21 networks, meetings and workshops will be used for dissemination of results of the projects. The meetings will be open for all experts, NGOs and politicians at a reasonable conference fee. In 2006 the Action will be promoted during the WALK21 conference in Melbourne, the ICTCT workshop in Minsk and various other conferences. In 2007 and 2008, progress will be communicated in the same fora and collaboration will be sought with the Joint ECMT/OECD Transport Research Centre. The latter is a renowned source to policy makers at the national level in the ECMT/OECD countries.

The final results will be presented at the WALK21, ICTCT and other relevant congresses (e.g. TRB, TRANSED, Road Safety on Four Continents).

Final dissemination

At the end of the project various reports published and articles will be submitted to scientific journals such as *Accident Analysis and Prevention* and *Transportation Research*. Deliverables will be:

1. Guidelines for a pedestrians' quality needs audit
2. Handbook on Pedestrians' Quality Needs.

Furthermore, the topic of this Action is expected to be researched in the context of some PhD theses.

Popular versions of the scientific reports, if possible translated into national languages, will be produced for 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 NGOs).

The Action will be concluded by a special conference, organised in cooperation with ICTCT and Walk21. This will ensure a larger audience than can be expected for a solo event. The conference will be open to all experts, NGOs and politicians at a reasonable fee. At the conference the deliverables will be presented and discussed.

After the final conference, after care will be offered: courses for practitioners and NGOs will be given, the publications will be promoted locally by the participants and relevant NGOs, and questions regarding the Action results will be answered.
