Part C: Description of contribution to EU policies and socio-economic development, management and participants, the key personnel and the participant's individual and collective plans for dissemination and/or exploitation of the results.

C1. Title Page

Cultural Heritage And Sustainable Tourism: Analytical Tools For Managing Carrying Capacity

Acronym: CHAST
(**C**ultural **H**eritage **A**nd **S**ustainable **T**ourism)

A Proposal Submitted for the Environment, Energy, and Sustainable Development
City of Tomorrow and Cultural Heritage
October 2001

Proposal No.:

C2. Content list

C3. Community added value and contribution to EU policies

The project is best performed at a European scale, for four reasons.

1) The European Commission recognises that historical sites, and the environmental problems and development pressures they face, are diverse, and that national authorities are the logical and best levels of administration for solving environmental and development problems that impinge on sites of historic and archaeological interest. Still, there is a role for the EU in safeguarding historic and archaeological sites. Since it is clear that historical and archaeological sites in the European Union are facing a number of common problems, there are also opportunities at the European scale to share and facilitate potential solutions.

   This project is consistent with that aim - to provide tools and techniques that can be used throughout Europe to solve local problems and improve local conservation practices. An important aspect of this project is that the methodology developed will be applicable to historical and archaeological sites throughout Europe. Previous experience in international valuation studies has shown that survey instruments and protocols that work well in one country may need to be substantially revised before they can be used in a second country. Because the methodology developed in this project will be tested in over several diverse conservation sites, and site management practices in Europe, it will be portable and applicable to any European conservation situation.

   - Resolution of the Ministers with responsibility for Cultural Affairs, meeting within the Council of 13 November 1986 on the protection of Europe's architectural heritage (86/C 320/01) agreed to 'encourage the exchange of experience and transfer of information on the architectural heritage, in particular through the standardization of terminology and the establishment of a network of data bases prepared in this area in the Member States; Agree to promote awareness among public and private institutions and the general public about the economic, social and cultural aspects of Europe's architectural heritage, in consultation with the experts of the Member States and the Council of Europe, as well as other intergovernmental organisations concerned'.

2) The European Commission has encouraged, and in some cases required (for example in EC Directives 85/337/CEC and 97/11/EC) that environmental impact assessments be conducted for policies and projects, but has given little guidance in how those identified impacts should be used in decision making. Detailed studies of Environmental Statements have found these documents to be of generally good quality, although with considerable variation in the extent and quality of the environmental information that they contain. Further, while EIA is generally found to be good at identifying the various impacts of development, it was less successful in assessing their relative importance in relation to sites of historical interest. Judgements about the relative importance of different environmental impacts are left to decision makers. That process is often ad hoc, and may be influenced by pressure groups representing small minorities of the population.

   This project provides a method for assessing the relative importance of different environmental impacts and pressures on conservation sites, based on the preferences of visitors and residents. Information on public preferences and values for the management and conservation of sites will permit the EU to assess whether EIA or similar regulatory framework ought to be applied specifically to cover changes in conservation and

management practices at historic and archaeological sites; and how best conservation practice might be encouraged consistent with public preferences and values.

3) This project will adopt a cutting-edge methodology (stated preference valuation) to a new application (conservation of historic sites). That work requires the very best expertise on several different topics within the field on non-market valuation (e.g. survey instrument design, experimental design, measurement and description of conservation factors, statistical analysis). In addition, it must have expertise in conservation management processes. No single research institution in Europe has all of these areas of expertise. Because this project brings together researchers from several research institutions and conservation management agencies throughout Europe, each with their different expertise and experience, it will produce the best, most advanced methodology possible today.

- The Council of the European Union Resolution, 20 November 1995, on the promotion of statistics on culture and economic growth (95/C 227/01) promotes the voluntary exchange of information and statistics between Member States, establishing comparable statistical indicators and the possible alignment of cultural statistics. 'In the context of the emergence of the new information society, characterised by an accelerated process of technological change and the shift to a world-wide economy, the cultural dimension is of increasing importance, both qualitatively and quantitatively (its intrinsic economic value and the spin-off in other sectors such as tourism)'.

4) The value and usefulness of each case study application of the methodology will be greater because it is one of several such case studies. That the policy results of each case study will be useful to respective conservation agencies is clear. It is not known, however, the extent to which these results can be transferred to other conservation sites and issues. By comparing results from several case studies, performed over diverse conservation sites, it will be possible to determine whether broad policy results are consistent, and therefore broadly applicable, or case-specific, implying that new studies would be needed wherever this type of information is desired. Had this project been undertaken in only one country, the extent to which the results could be applied to other European countries would not be known. Second, because the survey instrument and protocol will be tested over several types of conservation sites in different European countries, it will be robust and applicable at any European conservation site. A survey method that was developed in only one country may not work well in a second country. Because this project is European in scale, the resulting methodology will be applicable throughout Europe.

- Decision 1419/1999/EC of the European Parliament and of the Council of 25 May 1999 establishing a Community action for the European Capital of Culture event for the years 2005-2019 (Article 1) to establish a Community action entitled 'European Capital of Culture'. Its objective shall be to highlight the richness and diversity of European cultures and the features they share, as well as to promote greater mutual acquaintance between European citizens.

Conclusions of the Council of 10 November 1994 on the Commission communication concerning European Community action in support of culture (94/C 348/01) points out that Article 128 of the EC Treaty 'European Community action in support of culture', established the European Community selected cultural heritage as a priority field of action for the Community. It also points to the conclusions of the Council and of the Ministers of 12 November 1992 on the guidelines for Community cultural action, in which they indicated their interest in both movable and fixed heritage. It noted with interest the outcome of the various meeting of experts and

considered that the various aspects of the cultural heritage should be combined in one global action, highlighting the importance of:

- taking into account the cultural dimension of other Community policies and programmes;
- increasing the awareness of all those concerned, especially at local level;
- mobility of professionals, the exchange of experience and information;
- European networks and establishments devoted to conservation, training and research in the field of cultural heritage and cooperation with third countries and the international organisations concerned.

In support of these principles Community action is aimed at encouraging cooperation between Member States and supporting and supplementing their action in defined areas; it should provide clearly recognisable European added value in relation to national action.

The Council emphasises that action in the cultural field should be based particularly on the following criteria: transparency and ongoing consultation; facilitating access to the programmes; provision for thorough evaluation; overall balance between programmes set up in accordance with established priorities and funds available; modalities of cooperation with third countries. Subsidiarity and complementarity should be pursued in the cultural field.

C4. Contribution to community social objectives

The European Commission, in its communication "Sustainable Urban Development in the European Union: A Framework for Action (EC 1998)," identified four policy aims related to urban issues. This project makes substantial contributions to each of those aims.

1. Strengthening economic prosperity and employment in towns and cities. Tourism is a growth industry; and tourism to historic cities generates considerable economic activity, employment and economic growth in Europe. With the increased importance of the leisure and tourism and quality of life in Europe's economy, it is important for countries to maximise their tourist potential. Countries and areas that fail to address the demands of their citizens and visitors will lose jobs to those that provide better historical conservation experiences (as viewed by the visitors). This project provides a tool for identifying and quantifying visitors and citizen preferences, allowing local authorities to more efficiently provide the types of conservation that residents and visitors demand. Quality of life in the cities will improve, attracting new economic activity and jobs.

- The International Cultural Tourism Charter (Managing Tourism at Places of Heritage Significance) highlights the dynamic interaction between Tourism and Cultural Heritage '…. Tourism can capture the economic characteristics of the heritage and harness these for conservation by generating funding, educating the community and influencing policy. Tourism itself has become an increasingly complex phenomenon, with political, economic, social, cultural, educational, bio-physical, ecological and aesthetic dimension. The natural and cultural heritage, diversities and living cultures are major tourism attractions. Excessive or poorly-managed tourism and tourism related development can threaten their physical nature, integrity and significant characteristics. The ecological setting, culture and lifestyles of host communities may also be degraded, along with the visitor's experience of the place. Tourism should bring benefits to host communities and provide an important means and motivation for them to care for and maintain their heritage and cultural practices'.

- Principle 5 of the International Cultural Tourism Charter states that ' …. Tourism and conservation activities should benefit the host community'. Policy makers should promote measures for the equitable distribution of the benefits of tourism to be shared across countries or regions, improving the levels of socio-economic development and contributing where necessary to poverty alleviation. A significant proportion of the revenue specifically derived from tourism programmes to heritage places should be allotted to the protection, conservation and presentation of those places, including their natural and cultural contexts.

- However, Principle 6 of the International Cultural Tourism Charter 'Tourism promotion programmes should protect and enhance Natural and Cultural Heritage characteristics' would suggest that places and collections of heritage significance should be promoted and managed in ways which protect their authenticity and enhance the visitor experience by minimising fluctuations in arrivals and avoiding excessive numbers of visitors at any one time. 'Tourism promotion programmes should provide a wider distribution of benefits and relieve the pressures on more popular places by encouraging visits to experience the wider cultural and natural heritage characteristics of the region or locality.

2. Promoting equality, social inclusion and regeneration in urban areas. This project provides one mechanism for including currently excluded social groups into the decision process on conservation. Typically few members of the general public or visitors to conservation sites have any involvement in decisions about what to conserve and how the sites should be managed, and how managers should respond when external development impinges adversely on the environmental quality of the historic site; leaving unknown the direction and magnitude of preferences of the visitors and citizens. Pressure groups and experts with greater resources can wield disproportionate influence compared to the silent majority who are not so organised nor geographically concentrated, or who have fewer resources. Because the methodology developed in this project uses household surveys, it will include into the process whichever social groups are targeted in the survey protocol. The protocol could call for a random sample of the entire population of the city in which the historic site is located, or it could target certain social groups of particular interest, for example minorities or those with lower income who do not enjoy equality of access to cultural and historic sites.

- Council Resolution of 25 July 1996 on access to culture for all (96/C 242/01) aware that geographical, physical, educational, social and economic obstacles may make it more difficult for many citizens to gain access to culture and may increase the incidence of exclusion calls upon the Commission to '….. carry out a Europe-wide survey to ascertain more clearly the facts about access to culture and the needs felt by citizens, and, in particular, young people and those experiencing different forms of exclusion …'.

- According to the International Cultural Tourism Charter (Managing Tourism at Places of Heritage Significance) '….. the natural and cultural heritage belongs to all people. We each have a right and responsibility to understand, appreciate and conserve its universal values'.

3. Protecting and improving the urban environment: towards local and global sustainability. The EC Expert Group on the Urban Environment, among others, identified several principles and methods for sustainable urban management (EC 1996). Some of those approaches are clearly consistent with the preferences of most citizens (for example improving cultural recognition and making conservation sites sustainable economically). This project provides a means for assessing which urban conservation goods are most highly demanded by citizens, and the degree to which citizens will support efforts to make cities more sustainable through the conservation of historic buildings. Documenting the demand for improved conservation will allow the benefits that the public derives from conservation sites to better compete, in the decision making process, with scientific conservation interests, and commercial interests where there are alternative-use pressures for conservation sites. Where public preferences are not consistent with actions aimed at making cities more sustainable, knowledge of those preferences will allow conservationists to revise their proposals, increasing their public acceptance. In these ways, the project will encourage and assist conservation agencies to protect and improve their historic building and archaeological sites, and promote sustainable development of cities.

- The European City Visions Workshop met in February 2001 to highlight the European perspective on the city and its cultural heritage. Their report European City Visions: Defining Research Needs, suggests that ' ….. to move towards sustainability, cities will have to recourse to a wide range of tools, approaches and technologies (not only New Information and Communication Technologies) which will have to be integrated into practical governance instruments. …… There is a need for cities to be flexible in their city planning to be more responsive to changing and local needs. The overall decision-making process should be more inclusive and allow different types of (pressure) groups to deliver inputs. The acceptability of the

measures taken by the local authorities will depend on the possibility offered to the citizens to be effectively involved in the decision-making processes. In that respect, the Key Action City of Tomorrow and Cultural Heritage has an essential role to play in defining the interfaces between decision-makers, researchers and citizens'.

4. Contributing to good urban governance and local empowerment. The methods developed in this project will provide important information, useful to local decision makers, on public preferences and demands. This information will improve the quality of the decision making process, leading to more efficient provision of conservation goods. Thus, conservation organisations can provide a higher quality of recreational experience to visitors, at a lower budgetary cost. The availability of information on citizen preferences will also encourage accountability in conservation organisations. Citizens can use the results of a valuation study to support their arguments in representations to conservation organisations, and decision makers will be called to justify their decisions when those decisions work counter to the demands identified in a valuation study. The existence of a valuation study will therefore encourage both improved decision making and accountability and transparency in conservation.

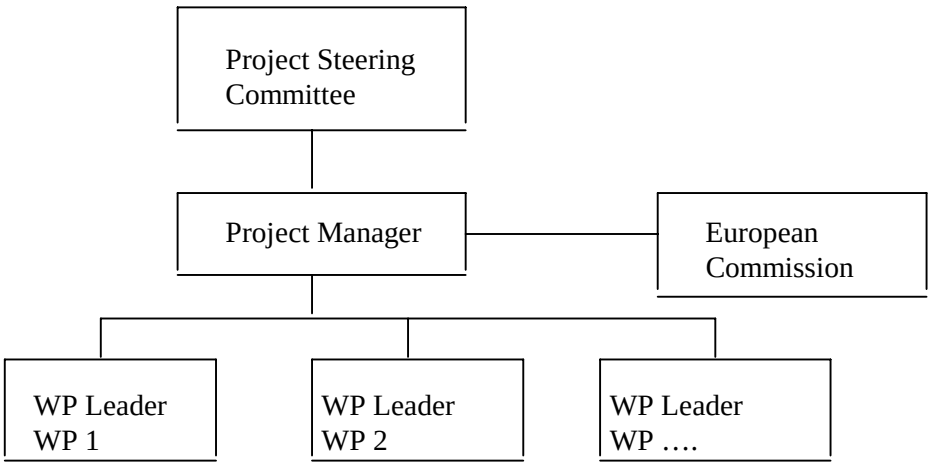
- As stated in the International Cultural Tourism Charter 'A primary objective for managing heritage is to communicate its significance and need, for its conservation to its host community and to visitors'. One of the objectives of the Charter is ' …… to encourage those formulating plans and policies to develop detailed, measurable goals and strategies relating to the presentation and interpretation of heritage places and cultural activities, in the context of their preservation and conservation'.

- The Sixth Environment Action Programme of the European Community 2001-2010 (Environment 2010: Our Future, Our Choice) suggests that a more effective use of legislation is sought together with a more participatory approach to policy making.

C5. Project management

Project Organisation and Management Structure
This section describes the project management techniques to be used and addresses the organisation and management structure, conflict resolution, the co-operation principles and meeting structure.

Overview
To ensure an effective control of the project, the work programme is broken down into a number of work packages (WP) which in turn are divided into tasks. Individual partners have been allocated responsibility for technical co-ordination within the respective WPs and tasks (see section B6). The overall co-ordination and running of the project is the responsibility of the project manager who is appointed by the project co-ordinator. The Technical Committee, which consists of the 9 WP leaders, assists the Project Manager with the co-ordination between the WPs. The meetings of the Technical Committee usually coincide with work package meetings to co-ordinate the detailed work of the different partners within the WPs. The Project Steering Committee is responsible for monitoring the technical progress and deciding on the project strategies. All project partners are members of the Project Steering Committee. The Industrial Company GEODAN with dedicated research staff and with considerable resources was selected as to ensure continuity and uninterrupted attention to the WP management. Geodan is directly involved in the WPs defining the user requirements, for the validation of the results and for exploitation. The following organisational chart shows how the Management Structure will work:



Project Steering Committee (PSC)
The PSC is the highest management board of the project. It will consist of the senior staff representing the partners. Each partner will have one representative. PSC provides the overall policy, direction and management for the project. Furthermore, the PSC will approve all progress reports by the Project Manager as well as the deliverables. The PSC will be responsible for all formal decisions on the project and will take decisions regarding project strategy and amendments to the Project Programme. It will approve technical objectives for all subtasks and will co-ordinate the technical output from the proposed project, as well as being responsible for allocation of resources and conflict resolution. The decision making process is described in section B6 . The project co-ordinator's representative will chair the PSC.

Project Manager (PM)
The Project Co-ordinator will appoint a Project Manager who will be responsible for the implementation of the decisions of the Project Steering Committee and for the day to day management of the project. The Project Manager's work will include the following:

- Strategic management of the project, including negotiation with the Commission regarding contract conditions and budgetary aspects, negotiation of consortium agreement and review of resource status.
- Technical Management/Co-ordination of the project, which includes detailed planning and monitoring of technical work and deliverables, preparation of technical progress reports and publications.
- Preparation of a quality assurance programme for approval by the Project Steering Committee.
- Administrative support functions such as arranging meetings, provision of minutes, co-ordination of cost statements and transfer of funds from Commission to partners, maintenance of a project calendar, maintenance of project procedures, etc..

WP Management and Technical Committee
Individual partners have been allocated responsibility for technical co-ordination within the respective WPs (see section B6). Per each WP a competent and experienced member of staff is appointed, to perform the role of WP leader. The WP leaders, in co-operation with the Project Manager, will plan, co-ordinate and supervise in detail the technical work in the respective WP and will ensure adequate communication and interfacing with other WPs through the Technical Committee. The Technical Committee is made up of the WP leaders. It is responsible for co-ordinating the activities of all the WPs, reviewing the technical content of the research, and facilitating the communications between the WPs.

Exploitation Manager
The Exploitation Manager is responsible for:

- The development and execution of the Exploitation Plan
- Co-ordination of tasks related to the Exploitation Plan

Communication Strategy
Transparent and continuous communication will ensure that partners will be kept fully informed about any development during the project. All information will originally be sent to the Project Manager, who will then channel it to all members of the consortium. An important communication channel will be the project web site. E-mail, File Transfer Protocol and a standardised format for word processing files will be used for effective communication between partners. Administrative project procedures, including a document numbering system, will be used to keep track of the project information. Those project partners who are also members of related projects will establish efficient communication and interaction with these projects (e.g. SUIT).

Monitoring Project Progress and Reporting
Project Steering Committee meetings will be held at least once a year in order to review the overall project progress and outline the objectives and contents of the work for the future. The Project Steering Committee will also decide on corrective actions necessary to the work plan to ensure the overall success of the project. A number of Technical Committees and Technical Meetings will be held between WP leaders and other technical personnel in order to co-ordinate the detailed work of the different partners.

Consensus Finding and Conflict Resolution

The day to day management will be carried out by the Project Manager in collaboration with the WP leaders. Conflicts at this level will be settled by the participants with the intervention of the Project Manager, if necessary. Should this not lead to a consensus the matter will be resolved by the Project Steering Committee. Decisions in the Project Steering Committee will be made by simple majority of the votes present in the meeting, except any decisions on Project Programme amendments (75%), other contract changes (100%) or substantial breach of a partner (100% - vote of defaulting partner). Every project partner has one vote. In the event of a deadlock situation, the project co-ordinator will have a casting vote. Further structures will be defined in the Consortium Agreement.

1) The co-ordinator, **Dr Patrizia Riganti,** will make the major decisions regarding significant changes to the project plan, resources allocation;
2) The work-package leaders are responsible for decisions relating to work within that work-package.
3) Decisions relating to interactions between the work groups will be taken jointly between the interested parties. Such decisions will be taken during the intended national and European workshops as well as partners' meetings.
4) All partners will submit bi-monthly progress notes to the co-ordinator stating the status of the work indicating the fraction that has been completed for each task and any delays or difficulties encountered together with proposed solutions. Short visits to the participating members of the collaboration will also be undertaken to monitor progress on the tasks. The co-ordinator will liase with the commission and submit all periodic reports and the final reports. Working meetings will be arranged at the completion of milestones involved in each work-package. A WWW page will be set up that shall contain general and specific information regarding each activity, available reports and publications. A final meeting will be organised by the co-ordinator where the findings of the project will be presented and future developments discussed. For this final meeting, a final announcement will be issued to the scientific community that has an interest in the fields encompassed by the activities in the project.

C6. Description of the consortium

The Consortium is composed by **three academic institutions —**Queen's University of Belfast, The Free University of Amsterdam and University College London — **three governmental bodies —** English Heritage in the UK, The Municipality of Venice and the Sovrintendenza Archeologica of Salerno (Ministry of Cultural Heritage) in Italy— one **non-profit organization** Fondazione Eni Enrico Mattei (FEEM) and one industrial firm, GEODAN, specialised in computer and particularly in GIS (Geographical Information Systems). The consortium has been designed to bring together a balance of more highly distinguished and **internationally renowned scholars** with **end-users**. We have decided to involve the possible end-users of the tool we are developing, so that their priorities and perspectives could be fully integrated with the research project process. Moreover, the quality of the consortium is guaranteed not only by the international reputations of the organisations but, in particular, by their expertise. The consortium is well established, since several links between the partners have been developed in recent years. This will ensure the capability of delivering on time, of providing an adequate communication flow within the consortium, and the reliability of the results.

Dr Patrizia Riganti, School of Architecture, The Queen's University of Belfast, will co-ordinate the project. She will also lead all the activities related to the dissemination and exploitation. Her research interests have encompassed urban design, cultural heritage conservation and management and urban planning. She has been engaged for several years in research activities with most of the partners forming the consortium, and these previous liaisons may facilitate her role. Beside co-ordinating and monitoring the whole project, she will be actively involved in all the work-packages relating to the scenarios definition, the general case studies implementation, and data analysis. She will coordinate WP 1,3,8,9.
Dr Christopher Tweed, School of Architecture, The Queen's University of Belfast. He is an expert of CAD and computer based systems. He will be heavily involved in all the workpackages related to the development of the IT tool.

Professor Peter Nijkamp, The Free University of Amsterdam, is an acknowledged scholar in Regional Science. His expertise in the area of public policy and environmental assessment and protection will be extremely valuable in many parts of the project. He will be leading work-package n 2 and 4 on the development of indicators to Prof. Nijkamp will also be involved in the work-packages dealing with, policy implication and model testing.

English Heritage will work closely with the Queen's University, being an assistant contractor to the project. David Miles, Chief Archaeologist of English Heritage, is an expert of British Roman archaeology. He will contribute to assess the currently used intervention strategies in England. He will take part to the workshops and help set the conservation criteria. He will be having a leading role in the case studies.

The **Soprintendenza Archeologica** of Salerno will work as an assistant contractor to Queen's University. Dr. Giuliana Tocco, as the Chief Archaeologist, together with the Ministry of Cultural Heritage, will contribute to assess the currently used intervention strategies in Italy. She will take part to the workshops and partners meeting.

The industrial partner **GEODAN** will help the exploitation and management of the digital tools developed during the research period. We envisage an important role that is only starting with the research project .

C7. Description of the participants

1. THE QUEEN'S UNIVERSITY OF BELFAST - SCHOOL OF ARCHITECTURE

The research team from the Queen's University of Belfast (QUB) is interdisciplinary and involves two schools: Architecture and Psychology. Staff from both schools is already collaborating in other research projects and have established a good working relationship based on shared interests in the built environment. The School of Architecture has a broad portfolio of current research projects and previous experience. Within this the application of Information and Communications Technologies (ICTs) to the built environment is a key area of research.

Previous experience

The staff involved in this proposal has extensive experience in relevant research. The School of Architecture led a collaborative project funded by the UK's Science and Engineering Research Council to develop an information system to assist with the authoring and interpretation of building regulations in the Scottish Office. A crucial component of this project was to develop techniques and system components, which would support the capture, browsing and retrieval of networks of argumentation surrounding the authoring and revision processes. The intention behind this work was similar to the one expressed above: to make the drafting of legislation more transparent such that future authors and those expected to comply with the legislation could understand why specific regulations had been authored. Once the reasons for specific regulations are clear it becomes much easier to develop suitable solutions.

The School of Architecture has also represented the UK in two key COST action committees, both in Urban Civil Engineering: C4, "Management and Information Application Development in Urban Civil Engineering"; and the current C8, "Best Practices in Sustainable Urban Infrastructure."

At a local level, the School of Architecture maintains close links with the architectural profession and the various public and semi-private agencies that have an interest in the future of the built environment of Northern Ireland.

Support for research – Present related projects & networks

The School is engaged in research, which has direct relevance to this proposal. Collaborative research, funded by the UK's Engineering and Physical Sciences Research Council (EPSRC), is developing an energy and environmental prediction (EEP) model to be used by local authorities to assist them in meeting their obligations under Local Agenda 21. A crucial component of this work is the study of how models are used in practice. It is now widely recognised that there is a significant gulf between research practices in universities and the research conducted to inform everyday decision-making in local authorities and other agencies responsible for aspects of the built environment. The work in progress aims to closely examine the precise role which urban models (in this case directed towards predicting energy consumption and environmental emissions) play in the larger context of decision making processes.

Of particular relevance, the School is also collaborating with other European partners on the SUIT (Sustainable development of Urban historical areas through Integration within Towns, EVK4-2000-00540) project which, as an alternative approach, will provide interesting points of comparison for the work described in this proposal.

Key persons

Dr **Patrizia Riganti** is a Lecturer in the School of Architecture. She holds a Ph.D. in "Valuation Methods In The Integrated Conservation Of Architectural, Urban And Environmental Heritage", as well as an M.Phil in urban design. During her research career, she has pursued a variety of interdisciplinary research topics relating to Environmental Economics, Architecture and Urban Planning. In recent years, her research career has focused on the use of Environmental Valuation Techniques for the assessment of intervention strategies in conservation areas. Her work has been presented in several world and international conferences and published in specialised books as well as the World Bank and World Monuments' Fund. She has also been visiting professor at the University of Naples and visiting scholar at the University of Maryland.

Dr Riganti's main research interest is the role of economic valuation in urban planning decisions for the assessment of alternative projects, using the Contingent Valuation method (CVM) and Stated Preferences approach. She has carried out a series of research programs, funded by Governmental Agencies, on the economic valuation of archaeological heritage to assess sustainable management strategies.

Dr **Christopher Tweed** is a Senior Lecturer in the School of Architecture and was previously a Director of EdCAAD (Edinburgh Computer Aided Architectural Design) research unit in the University of Edinburgh. He has an established track record of funded research both from the UK's Engineering and Physical Sciences (EPSRC) Research Council and from the European Union. Dr Tweed has previously worked on ESPRIT (ACORD p393) and JOULE (COMBINE) projects and has served on two COST Urban Civil Engineering (UCE) committees: C4, "Management and Information Application Development in Urban Civil Engineering" and, currently, C8 "Best Practices in Sustainable Urban Infrastructure." He was appointed a Visiting Professor at Carnegie Mellon University, Pittsburgh, in 2000 where taught courses on designing for specific cultural contexts and on computer-aided evaluation of designs. Dr Tweed is currently a partner on the SUIT project funded by the EC (EVK4-2000-00540) which is addressing related issues, using a different methodology.

Lawrence Johnston is a Chartered Architect and a Member of the Chartered Institute of Arbitrators. He has experience of the application of planning legislation to Conservation Areas in Northern Ireland and has conducted research into the understanding and application of United Kingdom Building Regulations. Approved Document Part 'B' Fire Safety was undertaken in 1996 with part funding by the Construction Sponsorship Directorate of the Department of Environment, London. This work was developed to assist building professionals in the application of Fire Safety Regulations in building design. Lawrence Johnston is currently Head of the School of Architecture in Queen's University of Belfast.

2. ENGLISH HERITAGE

English Heritage, or to give it its formal title, the Historic Buildings and Monument Commission for England ("HMBCE"), is a body corporate established on 1st April 1894 by the National Heritage Act 1983. HBMCE consists of up to 17 Commissioners appointed by the Secretary of State for Culture, media and Sport. HBMCE is an Executive Non-Departmental Public Body sponsored by the Department for Culture, Media and Sport.

English Heritage is the national body charged with the identification and protection of the historic environment and with promoting public understanding and enjoyment of it. We advise

Government on all aspects of the Conservation of England's historic fabric. We provide funding for archaeology, for conservation areas and the repair of historic buildings.

We are also responsible for over 400 of the nation's most important historic properties.

Key person

Dr **David Miles** is Chief Archaeologist at English Heritage, responsible for a staff of 270 people carrying out national surveys, archaeological excavations, archaeo-science and advising government on policy and preservation for the historic environment. Previously as Director of the Oxford Archaeological unit, he conducted projects in France, Ireland, Greece, Italy and the West Indies.

David Miles is a Research Fellow of the Institute of Archaeology, Oxford University, a Fellow of Kellogg College Oxford and was previously an Associate Professor of Stanford University, California.

He is the author of many papers and books, principally, Roman-British rural economy and settlement, aerial photography and historic landscapes.

3. FONDAZIONE ENI ENRICO MATTEI (FEEM)

FEEM is a non-profit, non-partisan research institution established to carry out research in the field of sustainable development. Recognised by the President of the Italian Republic in July 1989, it has since become a leading international research centre. One of its principal aims is to promote interaction between academic, industrial and public policy spheres in order to comprehensively address concerns about economic development and environmental degradation.

The Fondazione's activities are guided by four fundamental criteria: i) to analyse relevant and innovative research areas ii) to focus on "real" world issues; iii) to integrate multi-disciplinary approaches; iv) to create and foster international research networks.

Research is organised into five main areas: Corporate sustainable management; Climate change,modelling and policy; Privatisation, regulation and antitrust; Knowledge, technology and human capital; Water and natural resources management; Sustainability indicators and impact assessment.

In those fields FEEM has worked with and for several policy institutions, such as IPCC, the Italian Ministry of Environment, several Italian regions and local municipalities. The European Commission has financed around fifty research projects. FEEM has collaborated with the World Bank, the NBER, Resources for the Future, the CEPR, the European Association of Environmental and Resource Economists, the Beijer Institute of Ecological Economics, and several European and US Universities.

FEEM research programmes have achieved important results, including the development of methodologies for environmental and social company reporting, models of evaluation of climate changes, databases for the analysis of privatization processes, new theories in the field of environmental voluntary agreements, new systems of indicators for environmental monitoring, the development of a unified framework for analysing economic incentives for the diffusion and the creation of knowledge

Empirical research has been devoted to evaluate environmental externalities in the production of energy, to analyse the environmental behaviour of European companies, to study the relationships between economic growth and the environment, to quantify the costs associated with policies of greenhouses emission reduction, to analyse methodologies of participation of

people to the elaboration of local Agenda 21 programmes for the elaboration of sustainable paths of economic growth, to examine the institutional features of world-wide privatisation programmes and the main characteristics and performace of research joint ventures in Europe..

FEEM has a large experience in the **dissemination** of theoretical and applied research. In ten years FEEM has organised 107 scientific *workshops* (over 3000 participants) and nine major *conferences*, including the first Congress of European Environmental and Resource Economists (Venice, 1990) and the first World Congress of Environmental and Resource Economists (Venice, 1998), has published over 500 *working papers* and thirty *books* with Kluwer Academic Publishers, Cambridge University Press and Oxford University Press.

FEEM has been involved in several project financed by the European Commission in the field of economic evaluation, among which:

- **GARP I : *Green Accounting Research Project*** (DG XII, Joule Programme, JOU2-CT93-0316)

- **GARP II : *Green Accounting Research Project II*** (DG XII, Environment Programme, ENV4-CT96-0285)

- **EVE: *Concerted Action on Environmental Valuation*** (DG XII, Environment Programme, ENV-CT97- 0558)

- **ExternE: *The National Implementation of the ExternE Accounting Framework*** (DG XII, Joule Programme, EU n. JOS-CT98-0025) and ***Concerted action for an External Costs Discussion Group*** (DG XII, Joule Programme, JOS3-CT98-0025). This concerted action consists in a series of workshops for disseminating and promoting of the ExternE data and methodology.

- **CRITINC: *Critical Natural capital and the Implication of a Strong Sustainability Criterion*** (DG XII, Environment Programme, ENV-CT97- 0561)

Key persons

Carlo Carraro

He is Professor of Econometrics and Environmental Economics at the University of Venice and FEEM Research Director. He has also taught at the University College of London, the Universities of Paris I, Paris X, Udine, Aix en Provence/Marseille, Nice, and at the Clemson University MBA School. He is also fellows of the CEPR (Centre for Economic Policy Research) of London. His research activities include the econometric evaluation of environmental policies to control global warming: the micro-analysis of environmental policies and of their impact on the market structure, the analysis of international negotiation and of formation of international economic coalitions. He is currently leading FEEM' contribution to the following EU projects: ACACIA-A Concerted Action on Climate Impact Assessment in Europe (Environment and Climate); CAVA – A Concerted Action on Voluntary Approaches (Environment and Climate); EFIEA – A European Proposal for an Integrated Assessment Forum (Environment and Climate); EU LEADERSHIP – Strategies for an European Leadership in International Climate and Sustainability Regimes (Environment and Climate).

Marialuisa Tamborra

She is co-ordinator at FEEM of the research unit "Sustainability Indicators and Environmental Evaluation". She has graduated in Economics and Business Administration at the University of Bergamo; in 1997 she specialised in Environmental Economics during her master course and her graduate course in Environmental Economics at the Harvard University. Moreover, she is scientific co-ordinator for FEEM of the ANSEA (Towards an Analytical Strategic Environmental Assessment) projected of SEA and of the EVE (Environmental Valuation in Europe) concerted action both financed by DG Research, as well as Health Indicators for Large Airport System (financed by DG Health). She is also involved in research projects on voluntary agreements (NEAPOL, financed by DG Research), Environmental Management Systems, Trade and Environment (Workshop, co-financed by DG Environment) and energy and climate change (CFEWE, financed by DG Research). Since November 2000 she has started to work part-time at the University of Milan, in the field of Trade and Environment; she is also lecturing at a Master course in Environmental Economics and Policy.

Paolo Rosato

Paolo Rosato has graduated at the University of Padova in Agricultural Sciences; has got his PH.D in Rural Areas Economics and Management at the Reading University (UK). He has joined FEEM in October 2000. At present he is involved in FEEM research unit "Cost and benefit of preservation of the morphology of Venice Lagoon", with a particular focus on environmental evaluation. He is also involved in MULINO (Multi-sectoral, Integrated and Operational Decision Support System for Sustainable Use of Water Resources at the Catchment Scale), research financed by the European Union. He is also Associate Professor of Economics and Appraisal at the University of Trieste and Istituto Universitario di Architettura of Venice. From 1990 to 1998 he was also researcher at the University of Padova, Department of Territory and Agro-forestry Systems, Faculty of Agriculture, on Agricultural Economics.

Anna Alberini

Anna Alberini graduated from the University of Venice, Italy with a BA in Economics in November 1987, completing her MA in Economics two years later. She obtained a PhD in Economics (Thesis title: The Informational Content of Binary Responses) at the University of California, San Diego in December 1992. After working as both Research Assistant and Research Fellow, Anna was appointed Assistant Professor in the Department of Economics, University of Colorado, Boulder. From January 2000 Anna has been Assistant Professor at the Department of Agricultural and Resource Economics, University of Maryland, College Park. Her areas of specialization include: natural resource and environmental economics; Valuation of Natural and Non-market Resources; Estimation and Valuation of Health Effects of Environmental Quality; Mobile Sources of Emissions; Transportation Policy; Hazardous Waste Policy; and Econometrics and Statistics. She is involved with FEEM, having obtained a grant in 1993 to support research on the design of contingent valuation surveys. Her professional activities include: Co-Editor of the Journal of Environmental Economics and Management since January 2001; Reviewer for the Journal of Environmental Economics and Management, Land Economics, American Journal of Agricultural Economics, The Journal of Agricultural and Resource Economics, The Review of Economics and Statistics, The Journal of Human Resources, The Journal of Industrial Economics, Journal of Environmental Behaviour and Organisation, The Journal of Developing Areas, Water Resources Research, Journal of Development Economics, Forest Service, Environmental and Resource Economics.

4. MUNICIPALITY OF VENICE

The Municipality of Venice protects its own civilisation, recognises its territory's cultural, historical, physical, environmental and economic characteristics, and assumes the relevant administrative articulations. It plans and promotes with democracy, according to principles of participation, transparency, solidarity and programming, the quality of citizens and hosts life, becoming a guarantor of person, family, pluralism, pacific cohabitation and differences of sex, race, language and religion values. **It also concurs, through the twinning relationships with other national and international municipalities, to the promotion of peace policies and co-operation for the economic, social and democratic development.** It protects environment and living species and promotes sustainable development. **It exercises administrative actions, within its own functions, and manages the services, the activities and the procedures concerning: culture, social attendance, sport, tourism, environment, city vigilance, commerce, local rates, public and private building, education.**

The Municipality of Venice is participating in the project with the following departments: Cultural Heritage and Activities Department, Tourism Department and International Relations and European Affairs Department. The Cultural Heritage and Activities Department has two main tasks: to protect and promote cultural heritage and to develop cultural events and spectacles. Particular attention is dedicated to communication, research, innovative languages and expressions. This department is responsible for the system of Musei Civici Veneziani, Venetian libraries and the Candiani Cultural Center. The system of the Musei Civici Veneziani is constituted by an organic complex of buildings and collections of immense artistic and historical value. Its function is to elaborate and produce culture. The Venetian Civic Museums are: Palazzo Ducale (The symbolic seat of Venetian power), Museo Correr (Born from the collection left to the city in 1830 by Teodoro Correr. It has various areas of interest, like the neoclassical rooms with A. Canova's sculptures), Museum of 18th century – Ca' Rezzonico, International Gallery of Modern Art, Museo Fortuny (Transformed by Mariano Fortuny into his own atelier of photography, stage-design, textile-design and painting. It also contains notable photographic collections), Museo di Palazzo Mocenigo (18th century furnishings and paintings), Goldoni's house, Glass museum, Lace museum, Civic museum of Natural history, Clock Tower.

The Tourism Department aims at promoting tourism in the City of Venice respecting popular traditions, environment and its maritime vocation. It organizes the most important Venetian events such as the "Regata storica" and the "Festa del Redentore".

The European Affairs Department has a wide experience in managing EU funded projects and it is responsible for some projects dealing with culture, tourism and urban regeneration developed within the following EU programs: Culture 2000, Eumedis, Interreg II, Urban I, V° Framework Program for RTD-subprogram EESD-KA4, Objective 2 (FESR, FSE). This projects are implemented in cooperation with the Culture and Tourism Departments. It also participate in two networks of European cities, Eurocities and Quartiers en crise, that promote European debate and projects on urban problems and policies.

Key persons

Giandomenico Romanelli, born in 1945, since 1979 is the director of Venetian Civic Museums. He is Director of the Cultural Heritage and Activities Department of the Municipality of Venice, since 1999. He is professor of History of Architecture at IUAV. and, in particular, he is a specialist of Historical Art and Architecture of 16^{th} - 19^{th} centuries, in particular of the Venetian area. He has been the coordinator of the most important expositions that took place in Venice since 1979.
Education: Degree in Literature, Università di Padova.

Andrea Del Mercato is the Director of the Department of International Relations and European Affairs of the Municipality of Venice.
Education: Cambridge University, United Kingdom, Master of Arts in Social and Political Sciences (1994), Degree in Philosophy, Università La Sapienza di Roma.
Previous working experiences:
Secretary General of Venice International University (1999-2000) and General Manager in charge of the start up of Venice International University (1996-1998)
He has been assistant to the managing Director of MARGI Ltd and MARFO Ltd in Rome(television production for RAI and Mediaset, advertisement, montage) (1995-1996) and tutor in professional training course for socially disadvantaged youngsters organised by Centro italiano di Solidarietà, Rome (1994-1995)

Mattia Agnetti, born in 1969, is the official in charge of European Policies Office of the Municipality of Venice and has a wide experience in the management and follow-up of projects presented in the framework of the EU and UN programmes. He follows the activities of the city within some European networks (Eurocities, Quartiers en crise). He has been technical official in charge of the EU Projects Unit of the International Relations Office of Cà Foscari University of Venice (May 1997 – July 1998) where he managed some projects presented under the IV° Framework Program of RTD and he has been chancellor representative in the board of directors of CISAI (Italian Universities' Consortium for the development of international activities.
Education: degree in Political Sciences; postgraduate European course (DEA) in the Free University of Brussels.

5. THE FREE UNIVERSITY OF AMSTERDAM - DEPARTMENT OF SPATIAL ECONOMICS

The Department of Spatial Economic carries out fundamental and applied research in the following fields:

- Urban and regional economics;
- Transport economics;
- Environmental economics;
- Geographical information systems (GIS).

Previous experience

The department is involved in a large number of externally funded contract research projects. The department is well facilitated for these activities. The availability of some 50 researchers guarantees a high standard of expertise. The department has the disposal of two specialized research centers: a GIS-laboratory and MASTER-point, the latter specialized in Meta-analytical research. Furthermore, the department operates in close cooperation with the Economic and Social Institute of the Vrije Universiteit.

Among the contractors are various governmental institutions (European Commission, Dutch Ministries, and regional and local authorities), financial institutes (World bank, ING-bank) and transport organizations (Dutch National Railway Company).

The department is well-established and recognized in the scientific community; the quality of the methodological approaches is proven by the numerous publications in high quality international scientific journals and presentation at well-established international congresses of members of the department.

Key persons

Professor **Peter Nijkamp** (1946) graduated from the Erasmus University in Rotterdam, with a specialisation in the field of econometrics (1970). He holds a Ph.D. (cum laude) on solution methods for non-linear mathematical programming models for industrial planning problems from the same University (1972). Since 1975 he is professor in regional and urban economics and in economic geography at the Free University, Amsterdam. His main research interests cover plan evaluation, multicriteria analysis, regional and urban planning, transport systems analysis, mathematical modelling of spatial systems, technological innovation, and environmental and resource management. In his long research career he has focused his research in particular on quantitative methods for policy analysis, as well as on behavioural analysis of economic agents. He has a broad expertise in the area of public policy, services planning, infrastructure management, and environmental protection. In all these fields he has published many books (monographs and edited volumes) and numerous articles, in both high ranking scientific journals and popular magazines. For several years, Peter Nijkamp has played a leading role as president of the European Regional Science Association (1979-1989) and as president of the Regional Science Association International (1990-1992). He is founding father of the Network on European Communications and Transport Activity Research, a scientific organization of whom he has been chairman for many years (1987-). He plays also an active role in several other scientific networks and professional associations. He is also past chairman of the board of the research school TRAIL, a collaborative research initiative of Delft University of Technology and Erasmus University Rotterdam.

He has been an advisor to several Dutch Ministries, regional and local policy councils, employers' organizations, private business firms, the Commission of the European Union (EU), the Organisation for Economic Cooperation and Development (OECD), the European Conference of Ministers in Transport (ECMT), the Asian Development Bank (ADB), the European Roundtable of Industrialists, ICOMOS, the World Bank, and many other private and public institutions.

He is a member of approx. 20 editorial boards of scientific journals in the field. He supervised more than 60 Ph.D students, several of them holding at present a professorship in various countries. He is also past chairman of the Dutch Social Science Council and member of the Board of the Royal Dutch Academy. At present, he is vice-president of this organization.

He has been a guest professor at several universities in Europe, Asia and America. He is doctor honoris causa at the Vrije Universiteit in Brussels and fellow of the Royal Dutch Academy of Science, the World Academy of Arts and Sciences and the Royal Belgian Academy of Science and Arts. Peter Nijkamp is the 1996 recipient of the most prestigious Spinoza Award in the Netherlands.

6. UNIVERSITY COLLEGE LONDON – CENTRE FOR ADVANCED SPATIAL ANALYSIS (CASA)

CASA is an interdisciplinary research centre in UCL that is dedicated to developing new computer technologies for spatial and environmental problems. It is concerned with theory and applications, with the development of simulation models using new techniques of mathematical modelling, and new techniques of computer visualisation such as virtual reality (VR) systems. It is building on developments in geographic information systems, computer-aided design, and agent-based modelling.

CASA draws from developments in several departments, in particular from the Departments of Geography, and Geomatic Engineering, from the Bartlett School of Architecture and Planning, from the Institute of Archaeology, and from the Centre for Transport Studies. CASA also runs in parallel to the new VR Centre for the Built Environment which also includes the Department of Computer Science. The VR Centre is concerned with the development of new software developments in virtual reality systems for problems of architecture, urban planning, construction and transport, and is supported by a wide range of industrial partners such as ESRI, Silicon Graphics, Divisions, and Ordnance Survey.

There are four research areas in CASA: the modelling and simulation area which involves the simulation of urban form and structure, using new techniques of complexity theory such as agent-based modelling and cellular automata; the GIS group which is concerned with fine scale urban geography and specialises in town centres and retailing; the Visualization group which is concerned with multimedia, internet and 3D GIS and ins concerned with developing online systems for various kinds of participation; and the Cyberspace Group which is concerned with measuring and mapping the web. Recent projects involve work for DTLR on defining town centres, the design of models for pedestrian movement, the interfacing of land use-transport models with GIIS, the design of an online participation system for regeneration in hackney, and the production of an online teaching resource for digital archaeology. CASA is involved in two EU projects under the City of Tomorrow Initiative: PRPOPOLIS and SCATTER.

Key person

Dr **Michael Batty** is Professor of Spatial Analysis and Planning, and Director of the Centre for Advanced Spatial Analysis (CASA) at University College London (UCL). He holds a joint appointment between the Bartlett School of Architecture and the Department of Geography. From 1990 to 1995, he was Director of the NSF National Center for Geographic Information and Analysis (NCGIA) in the State University of New York at Buffalo, and from 1979 until 1990, he was Professor of City and Regional Planning in the University of Wales at Cardiff where he acted as the Dean of the School of Environmental Design (1983-1986) and Head of the Department (1985-1989). He acted as a member of the Computer Board for British Universities and Research Councils (1988-1990), as Chairman (1980-1982) and Vice-Chairman (1982-1984) of the ESRC (Economic and Social Research Council) Environment and Planning Committee, and as a member of the SERC (Science and Engineering Research Council) Transport Committee (1982-1985).

In 1999, he was awarded the Back Award for ‘contributions to national policy and practice in planning and city design’ by the Royal Geographical Society, and in 2001 was made a Fellow of the British Academy (FBA). CASA, the UCL Centre which he directs, won the Association of Geographic Information’s (AGI) Award for Technological Progress in 1998. He is editor of the journal **Environment and Planning B: Planning and Design** and sits on eight editorial boards of journals concerned with urban studies and planning. His research interests involve the

development of computer models and computer graphics in land use and transport planning, the spatial analysis of urban form, geographic information systems (GIS) technology, the impact of information technology on cities, and formal methods of decision making in policy analysis. He has published **Urban Modelling: Algorithms, Calibrations, Predictions** (Cambridge University Press, 1976), **Microcomputer Graphics: Art, Design and Creative Modelling** (Chapman and Hall, 1987), and (with Paul Longley) **Fractal Cities: A Geometry of Form and Function** (Academic Press, 1994). He has co-edited six books on the use of computer models in urban studies and planning, and has published many articles.

7. THE SOPRINTENDENZA ARCHEOLOGICA OF SALERNO, AVELLINO AND BENEVENTO

The Soprintendenza Archeologica di Salerno constitutes an Unit of The Italian Ministry of Cultural Heritage and has administrative powers over the provinces of Salerno, Avellino and Benevento, for all conservation programmes involving these areas. These provinces are extremely rich in terms of archaeological remains that encompass the period from prehistory to High Middle Age. Within its boundaries, there are a number of palaeontological sites; among these the most noteworthy is Pietraroia (BN) where an extraordinary fossil of a small dinosaur was found.

Among the most important archaeological sites we recall the Greek colonies of Paestum and Velia, and in the italic centres of Caudium, Telesia, Compsa, Aeclanum, Abellinum, all well preserved. A particular mention is due to the National Archaeological museum of Paestum, recently enlarged.
The Soprintedenza Archeologica is a national body charged with the identification, conservation and enhancement of archaeological goods and sites.

Key persons

Dr **Giuliana Tocco** is Chief Archaeologist (Soprintendente) of the Soprintendenza Archeologica of Salerno, Avellino and Benevento, in Campania, Italy since 1985. During this period she has promoted archaeological excavations in all the territory which falls under her administration. She promoted conservation interventions of both moveable and immovable archaeological heritage. Among these, the restoration programmes of the archaeological site of Paestum and the Arch of Traiano in Benevento. She has been actively promoting conservation programmes aiming at the creation of archaeological parks and museums' services and support structures, developing new intervention methodologies for both the creation and management of museum and archaeological parks. She has been visiting professor in several universities. She is a member of the Istituto di Preistoria e Protostoria di Firenze, L'Istituto per la Storia dell'Archeologia della Magna Grecia and Il Centro Universitario Europeo of Ravello. She is the author of several scientific publications. Since 1997 she is Member of the National Committee of the Ministry of Cultural and Environmental Heritage.

Under her direction an extremely important conservation project of the archaeological park of Paestum has been carried out, partly funded by the European Union. The European Union is also supporting the following conservation programmes:
1. Museum of the Herarion, at the mouth of river Sele.
2. The Archaeological Museum of Ager Picentinus
3. The Archaeological Park of Velia
4. The Archaeological urban area of Volcei and Buccino.

8. GEODAN

The Geodan Organisation
Since its establishment in Amsterdam in 1985, Geodan has grown into a group of three independently operating companies which together deal with all different aspects of geo-information provision. The size of the individual companies makes it possible for the Geodan group to operate as a team, acting quickly, flexibly and decisively, in various market areas. The Geodan companies form a solid combination of knowledge and experience covering an extensive range of products and services.

What Geodan Does
Geodan's activities can be characterised by two keywords: integration and innovation. The integration of the spatial component within information systems is central to work of Geodan. It is only when all this information is brought together as a coherent whole that well thought out decisions can be made. This is true regardless whether the application is local, regional, or international.

Geodan also follows and encourages the latest developments in the field of geo-information management. Geodan concentrates not only on the methods and techniques of GIS, but also on new developments in information technology. A good example of this commitment is the use of Internet and Intranet applications for both our clients and ourselves.

Geodan IT
The cornerstones of Geodan IT are: the development of the companies own Geo-C++ library, the management of a geo-datawarehouse, the development of spatial analysis and presentation tools and finally the methods which facilitate the implementation. The international target group is comprised of governments, companies and semi-private organisations.

Geodan Mobile Solutions
Geodan Mobile Solutions focuses on wireless location services. It provides a wide portfolio of location-based applications, professional services and specialised consultancy for corporate customers and wireless operators for 2G, 2.5G and 3G technologies. Through integration of location data, e-commerce and ICT, Geodan Mobile Solutions is playing a leading role in the fast growing, international market of mobile communication.

Geodan SDT
Geodan SDT develops the core of the software that is set up by Geodan IT and Geodan Mobile Solutions, is in charge of the Geo-C++ library and supports all Geodan companies in matters of hardware and software. Geodan SDT provides the expertise on the latest technologies, such as Corba/Com, OpenGIS, metadata-standards and the Internet.

Key person

Professor dr. Henk Scholten
Professor dr. Henk Scholten is professor in Spatial Informatics at the Faculty of Regional Business Economics at the Free University in Amsterdam and Managing Director of the Research Institute for GIS in Amsterdam, Geodan. As Scientific Advisor for Geographical Information Systems at the National Institute of Public Health and Environmental Protection (RIVM), he is currently involved in the constitution of the Dutch environmental geographical information system and its application for environmental protection and public health.

Professor Scholten has written various articles about GIS for publication in international books and journals. The book 'Application of GIS in Urban and Regional Planning' was published in

1990. The book 'The Added Value of Geographical Information Systems in Public and Environmental Health' was published in 1995. The book 'Spatial AnalyticalPerspectives on GIS' was published in 1997.

Professor Scholten is secretary of the EGIS-foundation, responsible for the European GIS-conferences. He is member of the steering board of GISDATA of the European Science Foundation.

Professor Scholten is director of the Post Academic courses. UNIGIS is the international course which leads to a Master of Science degree in GIS coordinated by the Free University of Amsterdam, University of Manchester, University of Huddersfied and the University of Salzburg.

In his role as director of Geodan, professor Scholten has been supervisor on a large number of national and international GIS projects. Professor Scholten is advisor for several ministries in different countries. For the European Union professor Scholten is coordinating the European Spatial Meta Information Infrastructure (ESMI).

C8. Description of the Advisory Board

1. DEPARTMENT OF ECONOMICS, UNIVERSITY OF CALIFORNIA, SAN DIEGO

FACULTY. The department was founded in 1964 and has 23 permanent mebers. We are a relatively young group, all committed to a rigorous analytical approach to both teaching and research. As a consequence, we have a congenial and cooperative atmosphere in which department members take an unusually active interest in their colleagues' research. There are no social or administrative distinctions between junior and senior faculty, except on promotion decisions. Eight faculty members are Fellows of the Econometric Society, three are on the Econometric Society Council, and three are Fellows of the American Academy of Arts and Sciences. Five are NBER Research Associates, and twelve have NSF grants.

LOCALE AND CAMPUS. UCSD occupies a 1,300 acre wooded site on the La Jolla bluffs overlooking the Pacific Ocean. Mexico is 20 miles to the south, and Los Angeles is 120 miles to the north. There are hiking and camping opportunities in nearby mountains and deserts. The San Jacinto mountains, rising to 11,000 feet, are two hours drive to the northeast. The Laguna mountains, rising to more than 6,000 feet, are a one hour drive to the east. Beyond the Lagunas lie the Anza-Borrego Desert and the Salton Sea. The San Diego metropolitan area has about 2.5 million inhabitants and provides the urban amenities one would expect from a city of that size. The climate is perhaps the most benign in the United States, year-round. In July the mean high temperature is 77, while in January it is 65.

UCSD has about 16,150 undergraduate and 2,101 graduate students. It is a fairly new campus, having admitted its first undergraduates in 1964. However, in the approximately three decades since the founding of the general campus, UCSD has developed into a major research university. The campus typically ranks among the top four universities receiving federal research funds. The faculty of roughly 1,383 includes 64 members of the National Academy of Sciences, 74 Fellows of the American Academy of Arts and Sciences, and five Nobel Laureates.

LIBRARY AND COMPUTER CENTER. The research facilities available to department members are excellent. The department library subscribes to 60 periodicals, including the major journals, and has about 1,200 reference volumes. The University Libraries house over 2.6 million volumes, subscribe to over 26,000 serials in print and/or electronic format, and is an official depository of government documents. Books and journals not in UCSD's collections may be requested (electronically, if so desired) from any of the other University of California libraries or from other university libraries around the country. The University Libraries also provide on-campus and remote online access to numerous reference indexes and data collections.

The department maintains a computational laboratory for graduate students which includes 15 PCs that are updated yearly to ensure that the graduate students are supplied with enough computing power to perform complicated econometrics procedures such as Bootstrap and Monte Carlo. All of these machines have access to the latest versions of leading statistical packages including GAUSS, SAS, S-Plus, Stata, and E-views, as well as Microsoft Office for desktop publishing and Scientific Workplace for journal quality typesetting. In addition, laser printers, a color printer, Zip, Jaz, and CD-RW drives are available for student use in the lab. In cases where the PC environment is insufficient to fulfill the needs of a graduate student, the San Diego Supercomputer Center is only yards away with 5 of the fastest 500 supercomputers in the world including the 8th fastest machine. In the past students have used the SDSC to perform a variety of Monte Carlo techniques which would not be feasible on an ordinary computer. The

Economics Department also shares access to the Social Sciences Computer Center's leading edge HP-9000 K-class Unix server, which is via telnet from anywhere in the world. The SSCC maintains an extensive selection of statistical and econometric packages in addition to standard language and math routines. In addition, the SSCC hosts the social science database, which contains the major census, financial, and survey data sets. All computers are networked with the leading edge UCSD campus backbone that provides high-speed access to the Internet as well as ultra-high speed access to other leading edge university and research institutions via the Internet II.

SPEAKER SERIES. There are four regularly scheduled seminars per week, with various additional speakers. Each week there is also an informal econometrics lunch, which is attended by faculty, visitors and some graduate students. Among the 2000-2001 seminar speakers were: Eric Ghysels (Duke), Jeremy Greenwood (Rochester), Austan Goolsbee (Chicago), Yves Balasko (Carnegie-Mellon), John Cochrane (Chicago), Caroline Hoxby (Harvard), Craig Burnside (World Bank), Narayana Kocherlakota (Federal Reserve Bank of Minneapolis), Peter Arcidiacano (Duke), James Poterba (MIT), David Laibson (Harvard), Severin Borenstein (Haas School), Norman Swanson (Texas A&M), William Dupour (Wharton), Karl Vind (Copenhagen), George Mailath (Pennsylvania), Eric Hanushek (Hoover Institute), Bent Sorensen (Federal Reserve Bank of Kansas), Jeremy Berkowitz (UCI), John McMillan (Stanford), David Cutler (Harvard).

Key person

RICHARD T. CARSON is Professor of Economics at the University of California, San Diego, Research Director for International Environmental Policy at the University of California Institute on Global Conflict and Cooperation, and senior fellow at the San Diego Supercomputer Center. Carson received a Ph.D. in resource economics and M.A. in statistics from the University of California, Berkeley in 1985 and an M.A. in international relations from George Washington University in 1979. Professor Carson has extensive experience in the assessment of the benefits and costs of environmental policies. His specialty is valuing non-market goods using a wide array of techniques, including contingent valuation, hedonic pricing, and the household production method. For U.S. EPA, he has estimated the benefits of the U.S. Clean Water Act, removing low-level carcinogens from drinking water, protecting groundwater aquifers, and health and visibility improvements due to air quality changes. He constructed models now used by the State of Alaska for estimating the economic gains and losses associated with changing recreational fishery management practices. For other government agencies, Professor Carson has examined the benefits of visibility improvements in the Grand Canyon, preventing residential water shortages in California cities, restoring Everglades National Park, and the addition of the Kakadu Conservation Zone to Kakadu National Park in Australia. He served as principal investigator on the economic damage assessments for the Exxon Valdez oil spill for the State of Alaska, the Southern Pacific Railroad Sacramento River spill for the State of California, and large scale DDT and PCB contamination off the coast of Los Angeles for the National Oceanic and Atmospheric Administration. Carson’s econometric research has focused on discrete choice and limited dependent variable models, experimental and sampling designs, imputing missing values, and robust statistical techniques. He has designed surveys to collected data in a number of applied economics fields.

Professor Carson has been a consultant to a number of non-profit organizations, major corporations, and government agencies, including the Alaska Department of Fish and Game, Battelle Memorial Institute, the California Attorney General's Office, the California Department of Fish and Game, the Electric Power Research Institute, Environment Canada, Interamerican Development Bank, the Los Angeles Department of Water and Power, Metropolitan Water District of Southern California, the National Oceanic and Atmospheric

Administration, Research Triangle Institute, the Resource Assessment Commission (Australia), the Salt River Project, South Florida Water Management District, U.S. EPA, the U.S. Forest Service, and the World Bank. Professor Carson has been a visiting professor at the University of Oslo and the University of Sydney, a Faculty Research Fellow at the National Bureau of Economic Research and a Continuing Consultant at Resources for the Future. He served as a member of the National Academy of Science's Committee on Oil Spill Research and Development and as a member of an Academy committee reviewing procedures for water resource project planning procedures. He has also served a member of the State of California's Technical Review Team for Socioeconomic Issues on the Mono Basin Environmental Impact Review and as a reviewer for the U.S. Army Corp of Engineer's California Drought Study. Carson's publications appear in the *American Economic Review, American Political Science Review, Ecological Economics, Environment and Development Economics, Journal of Behavioral Economics, Journal of Economic Perspectives, Journal of Environmental Economics and Management, Journal of Environmental Management, Journal of Risk and Uncertainty, Journal of Urban Economics, Land Economics, Natural Resources Journal, Quarterly Journal of Economics, Review of Economics and Statistics, Risk Analysis, Water Resources Research*, and a number of other professional journals and edited volumes. He is a co-author with Irving Hoch of *Energy Oriented Input-Output Models for 1972 and 2000* and co-author with Robert Mitchell of *Using Surveys to Value Public Goods: The Contingent Valuation Method*, which won the Association of Environmental and Resource Economists' Publication of Enduring Quality Award in 1999.

2. THE DEPARTMENT OF AGRICULTURAL & RESOURCE ECONOMICS

The Department of Agricultural & Resource Economics, in the College of Natural resources at the University of California, Berkeley has a faculty of 20 permanent members, together with four full-time extension specialists and several active emeriti faculty and extension specialists. The faculty are all economists and econometricians working in the fields of agricultural economics, trade, development economics, and environmental and resource economics. The faculty have research appointments through the Agricultural Experiment Station, and carry a reduced teaching load compared to faculty elsewhere at Berkeley. The Department has an undergraduate BA program and a Ph.D program, with approximately 60 Ph.D students in residence; about half of the Ph.D students come from outside the US. Our Ph.D students are to be found in the leading research universities around the world, as well as in the World Bank and other major international and national government agencies. The department has its own computer center and is the home of the Giannini Library of Agricultural & Resource Economics, the premier such library in the US. The department is rated the top department in the US in the field of agricultural resource economics. It was selected to be be the host for the World Congress of Environmental & Resource Economics that will be held in Monterey in June 2002.

Key person

W. Michael Hanemann graduated with a BA in 1965 from Oxford University and was awarded his MSc in 1967 from the London School of Economics. He graduated from Harvard University with a MA (Public Finance and Decision Theory) in 1973 and obtained a PhD in 1978, also from Harvard University.

Michael Hanemann is currently Chancellor's Professor, Department of Agricultural and Resource Economics and Goldman School of Public Policy, University of California, Berkeley.

3. THE WORLD MONUMENTS' FUND

World Monuments Fund is a **New York-based non-profit** organization dedicated to preserving and protecting endangered works of historic art and architecture around the world. The World Monuments Watch, a program of World Monuments Fund, issues the List of 100 Most Endangered Sites every other year.

WORLD MONUMENTS FUND (WMF) safeguards the heritage of mankind by encouraging the conservation and preservation of culturally and historically significant works of art and architecture worldwide. Founded in 1965, WMF works with public and private-sector partners and has orchestrated more than 280 projects in 70 countries. Past and present projects include: the Temple of Preah Khan in the Historic City of Angkor, Cambodia; Church of St. Trophime, Arles, France; Tower of Belem, Lisbon, Portugal; and many sites in Venice. WMF is a New York-based private, nonprofit organization with offices in Paris and Venice and independent affiliates in Britain, France, Portugal, and Spain.

WORLD MONUMENTS WATCH, a global program launched in 1995, calls attention to imperiled cultural heritage sites around the world and directs timely financial support to their preservation. A panel of leading international experts selects the List of 100 Most Endangered Sites from nominations submitted to WMF every two years by governments, organizations active in the field of cultural preservation, and individuals.

WMF's activities include documentation and surveys, field research, training, strategic planning, fundraising, and advocacy. WMF encourages private-sector participation in international conservation projects and promotes the use of monuments and sites as focal points for responsible development programs. "Monuments" denotes historic buildings, archaeological sites, city districts and townscapes, gardens and manmade landscapes, and public art. "Cultural heritage" encompasses the whole of the earth's cultural environment from the earliest human creations to works of twentieth-century architecture.

WMF's work would not be possible without the generous contributions of the many supporters who understand the importance of preserving our shared heritage.

Mission

Safeguard the heritage of our extraordinary past achievements by encouraging the restoration and preservation of monuments of exceptional artistic, historical, and cultural significance throughout the world.

Create an international constituency for preservation by developing its own membership and by conducting extensive education and advocacy activities.

Develop a broad base of financial support—from private contributions, government funding, and earned income—for preservation and related education and advocacy activities.

Foster the exchange of technical expertise in the areas of materials conservation, restoration methodologies, historical interpretation, financial procedures and education as they relate to heritage conservation.

Key person

John H. Stubbs

John Stubbs is Vice President for Programs for the World Monuments Fund based in New York and is in charge of planning and coordinating the organization's various architectural conservation projects and related activities in some 16 countries. In his role as overseer of WMF's World Monuments Watch program he is responsible for tracking of progress and stimulating positive developments at over 200 sites.

Prior to joining WMF in 1990 John Stubbs served for ten years as Assistant Director of Historic Preservation Projects at Beyer Blinder Belle, Architects and Planners in New York City. In 1978-79 he worked for two years as an Historical Architect for the Technical Preservation Services Division of the U.S. Department of the Interior in Washington, D.C. helping to administer federal tax incentives for architectural preservation. He is a graduate of Columbia University's Graduate Program in Historic Preservation, attended the International Centre for the Conservation of Cultural Property in Rome (ICCROM).

In addition to his work with WMF John Stubbs is also an Adjunct Associate Professor of Historic Preservation in Columbia University's Graduate School in Historic Preservation, where he teaches The Theory & Practice of Historic Preservation and The Language & Literature of Architectural
Classicism. He is a Trustee of the James Marston Fitch Charitable Foundation and the Archaeological Institute of America.

C9. Description of the resources

The project involves eight different institutions whose work in each part of the project is highly collaborative. Each of the different 9 work-packages is led by one participant but involves several contributions. The resources have been allocated according to the complexity of the tasks and the way we foresee they have to be implemented. Table 9.1 summarises the person-months for each task. Table 9.2 shows the costs for each task.

Table 9.1: person-months per task.

No.	Task Name	Duration	Partner	Leader	Partner MM	RA Cost	T Cost	N RAs	Duration
1.1	Review of existing programmes	5	P1a	1	5	4679	23396	1	5
1.1	Review of existing programmes	5	P1b	1	5	3766	18830	1	5
1.1	Review of existing programmes	5	P2	0	3.5	3500	12250	1	3.5
1.1	Review of existing programmes	5	P4	0	3	4000	12000	1	3
1.1	Review of existing programmes	5	P6	0	1	4688	4688	1	1
1.1	Review of existing programmes	5	P7	0	1	3800	3800	1	1
1.1	Review of existing programmes	5	P8	0	2	5000	10000	1	2
1.2	Electronic forum	2	P1a	1	2	4679	9359	1	2
1.2	Electronic forum	2	P1b	1	2	3766	7532	1	2
1.2	Electronic forum	2	P2	0	1	3500	3500	1	1
1.2	Electronic forum	2	P4	0	1	4000	4000	1	1
1.2	Electronic forum	2	P6	0	1	4688	4688	1	1
1.2	Electronic forum	2	P7	0	1	3800	3800	1	1
1.3	Analysis of current strategies	5	P1a	1	5	4679	23396	1	5
1.3	Analysis of current strategies	5	P1b	1	5	3766	18830	1	5
1.3	Analysis of current strategies	5	P3	0	2	4000	8000	1	2
1.3	Analysis of current strategies	5	P5	0	1	1000	1000	1	1
2.1	Analysis of indicators	4	P5	1	4	1000	4000	1	4
2.2	Defining carrying capacity	3	P1a	1	1	4679	4679	1	1
2.2	Defining carrying capacity	3	P1b	1	1	3766	3766	1	1
2.2	Defining carrying capacity	3	P3	0	1	4000	4000	1	1
2.2	Defining carrying capacity	3	P5	0	3	1000	3000	1	3
2.3	Definition of congestion	2	P1a	1	1.5	4679	7019	1	1.5
2.3	Definition of congestion	2	P1b	1	1.5	3766	5649	1	1.5
2.3	Definition of congestion	2	P3	0	1	4000	4000	1	1
2.3	Definition of congestion	2	P5	0	2	1000	2000	1	2
2.4	Develop comparative assessment	3	P1a	1	1.5	4679	7019	1	1.5
2.4	Develop comparative assessment	3	P1b	1	1.5	3766	5649	1	1.5
2.4	Develop comparative assessment	3	P5	0	3	1000	3000	1	3
3.1	Questionnaire design	6	P1a	1	6	4679	28076	1	6
3.1	Questionnaire design	6	P1b	1	6	3766	22596	1	6
3.1	Questionnaire design	6	P2	0	1	3500	3500	1	1
3.1	Questionnaire design	6	P3	0	1	4000	4000	1	1
3.1	Questionnaire design	6	P5	0	1	1000	1000	1	1
3.1	Questionnaire design	6	P6	0	2	4688	9376	1	2

3.2	Survey implementation	3	P1a	1	3	4679	14038	1	3
3.2	Survey implementation	3	P1b	1	3	3766	11298	1	3
3.2	Survey implementation	3	P2	0	1	3500	3500	1	1
3.3	Data analysis	4	P1a	1	4	4679	18717	1	4
3.3	Data analysis	4	P1b	1	4	3766	15064	1	4
3.3	Data analysis	4	P2	0	1	3500	3500	1	1
3.3	Data analysis	4	P3	0	2	4000	8000	1	2
4.1	Questionnaire design	6	P1a	1	2	4679	9359	1	2
4.1	Questionnaire design	6	P1b	1	2	3766	7532	1	2
4.1	Questionnaire design	6	P2	0	1	3500	3500	1	1
4.1	Questionnaire design	6	P3	0	1	4000	4000	1	1
4.1	Questionnaire design	6	P4	0	1	4000	4000	1	1
4.1	Questionnaire design	6	P5	0	6	1000	6000	1	6
4.1	Questionnaire design	6	P6	0	2	4688	9376	1	2
4.1	Questionnaire design	6	P8	0	1	5000	5000	1	1
4.2	Survey implementation	3	P5	1	3	1000	3000	1	3
4.3	Data analysis	3	P1a	0	3	4679	14038	1	3
4.3	Data analysis	3	P1b	0	3	3766	11298	1	3
4.3	Data analysis	3	P3	0	2	4000	8000	1	2
4.3	Data analysis	3	P5	1	3	1000	3000	1	3
5.1	Questionnaire design	6	P1a	1	2	4679	9359	1	2
5.1	Questionnaire design	6	P1b	1	2	3766	7532	1	2
5.1	Questionnaire design	6	P3	0	6	4000	24000	1	6
5.1	Questionnaire design	6	P4	0	1	4000	4000	1	1
5.1	Questionnaire design	6	P6	0	2	4688	9376	1	2
5.2	Survey implementation	3	P3	1	3	4000	12000	1	3
5.2	Survey implementation	3	P4	0	1	4000	4000	1	1
5.3	Data analysis	3	P1a	0	3	4679	14038	1	3
5.3	Data analysis	3	P1b	0	3	3766	11298	1	3
5.3	Data analysis	3	P3	1	3	4000	12000	1	3
5.3	Data analysis	3	P4	0	1	4000	4000	1	1
6.1	Development of heritage GIS	3	P1a	0	1	4679	4679	1	1
6.1	Development of heritage GIS	3	P1b	0	1	3766	3766	1	1
6.1	Development of heritage GIS	3	P5	0	1	1000	1000	1	1
6.1	Development of heritage GIS	3	P6	1	3	4688	14064	1	3
6.1	Development of heritage GIS	3	P8	0	1	5000	5000	1	1
6.2	Development of Internet GIS	3	P1a	0	1	4679	4679	1	1
6.2	Development of Internet GIS	3	P1b	0	1	3766	3766	1	1
6.2	Development of Internet GIS	3	P5	0	1	1000	1000	1	1
6.2	Development of Internet GIS	3	P6	1	3	4688	14064	1	3
6.2	Development of Internet GIS	3	P8	0	1	5000	5000	1	1
6.3	Online tools for preference data	3	P1a	0	1	4679	4679	1	1
6.3	Online tools for preference data	3	P1b	0	1	3766	3766	1	1
6.3	Online tools for preference data	3	P5	0	1	1000	1000	1	1
6.3	Online tools for preference data	3	P6	1	3	4688	14064	1	3
6.4	Incorporate pedestrian flow data	2	P1a	0	1	4679	4679	1	1
6.4	Incorporate pedestrian flow data	2	P1b	0	1	3766	3766	1	1
6.4	Incorporate pedestrian flow data	2	P6	1	2	4688	9376	1	2
6.5	Roll-out IT framework	2	P1a	0	2	4679	9359	1	2

6.5	Roll-out IT framework	2	P1b	0	2	3766	7532	1	2
6.5	Roll-out IT framework	2	P6	1	1	4688	4688	1	1
7.1	Survey of economic incentives	4	P1a	0	2	4679	9359	1	2
7.1	Survey of economic incentives	4	P1b	0	2	3766	7532	1	2
7.1	Survey of economic incentives	4	P3	1	4	4000	16000	1	4
7.1	Survey of economic incentives	4	P5	0	1	1000	1000	1	1
7.2	Analysis of impediments	4	P1a	0	2	4679	9359	1	2
7.2	Analysis of impediments	4	P1b	0	2	3766	7532	1	2
7.2	Analysis of impediments	4	P3	1	4	4000	16000	1	4
7.2	Analysis of impediments	4	P5	0	1	1000	1000	1	1
7.3	Blueprint for economic policies	4	P1a	0	2	4679	9359	1	2
7.3	Blueprint for economic policies	4	P1b	0	2	3766	7532	1	2
7.3	Blueprint for economic policies	4	P3	1	4	4000	16000	1	4
7.3	Blueprint for economic policies	4	P5	0	1	1000	1000	1	1
8.1	International workshop	1	P1a	0	1	4679	4679	1	1
8.1	International workshop	1	P1b	0	1	3766	3766	1	1
8.1	International workshop	1	P3	1	2	4000	8000	2	1
8.2	Paper dissemination	1	P1a	0	1	4679	4679	1	1
8.2	Paper dissemination	1	P1b	0	1	3766	3766	1	1
8.2	Paper dissemination	1	P2	0	0.5	3500	1750	1	0.5
8.2	Paper dissemination	1	P3	0	1	4000	4000	1	1
8.2	Paper dissemination	1	P4	0	0.5	4000	2000	1	0.5
8.2	Paper dissemination	1	P5	1	2	1000	2000	2	1
8.2	Paper dissemination	1	P6	0	1	4688	4688	1	1
8.2	Paper dissemination	1	P7	0	0.5	3800	1900	1	0.5
8.3	Book editing	6	P1a	1	6	4679	28076	1	6
8.3	Book editing	6	P1b	1	6	3766	22596	1	6
8.3	Book editing	6	P2	0	0.5	3500	1750	1	0.5
8.3	Book editing	6	P3	0	1	4000	4000	1	1
8.3	Book editing	6	P4	0	0.5	4000	2000	1	0.5
8.3	Book editing	6	P5	0	1	1000	1000	1	1
8.3	Book editing	6	P6	0	1	4688	4688	1	1
8.3	Book editing	6	P7	0	0.5	3800	1900	1	0.5
8.4	IT prototype testing	4	P1a	0	2	4679	9359	1	2
8.4	IT prototype testing	4	P1b	0	2	3766	7532	1	2
8.4	IT prototype testing	4	P2	0	0.5	3500	1750	1	0.5
8.4	IT prototype testing	4	P3	0	1	4000	4000	1	1
8.4	IT prototype testing	4	P4	0	0.5	4000	2000	1	0.5
8.4	IT prototype testing	4	P5	0	1	1000	1000	1	1
8.4	IT prototype testing	4	P6	1	4	4688	18752	1	4
8.4	IT prototype testing	4	P7	0	0.5	3800	1900	1	0.5
8.5	International conference	2	P1a	0	1	4679	4679	1	1
8.5	International conference	2	P1b	0	1	3766	3766	1	1
8.5	International conference	2	P2	0	0.5	3500	1750	1	0.5
8.5	International conference	2	P3	1	3	4000	12000	3	1
8.5	International conference	2	P4	0	0.5	4000	2000	1	0.5
8.5	International conference	2	P5	0	1	1000	1000	1	1
8.5	International conference	2	P6	0	1	4688	4688	1	1
8.5	International conference	2	P7	0	0.5	3800	1900	1	0.5

8.5	International conference	2	P8	0	3	5000	15000	3	1
9.1	General coordination	8	COORD	0	2	9000	18000	1	2
9.1	General coordination	8	P1a	1	8	4679	37434	1	8
9.1	General coordination	8	P1b	1	8	3766	30128	1	8
9.1	General coordination	8	P2	0	0.5	3500	1750	1	0.5
9.1	General coordination	8	P3	0	1	4000	4000	1	1
9.1	General coordination	8	P4	0	0.5	4000	2000	1	0.5
9.1	General coordination	8	P5	0	1	1000	1000	1	1
9.1	General coordination	8	P6	0	1	4688	4688	1	1
9.1	General coordination	8	P7	0	0.5	3800	1900	1	0.5
9.1	General coordination	8	P8	0	0.5	5000	2500	1	0.5
9.2	Organisation of Advisory Board	2	COORD	0	2	9000	18000	1	2
9.2	Organisation of Advisory Board	2	P1a	1	1	4679	4679	1	1
9.2	Organisation of Advisory Board	2	P1b	1	1	3766	3766	1	1
9.3	Reporting to EC	6	COORD	0	2	9000	18000	1	2
9.3	Reporting to EC	6	P1a	1	6	4679	28076	1	6
9.3	Reporting to EC	6	P1b	1	6	3766	22596	1	6
9.4	Internet based coordination	4	COORD	0	2	9000	18000	1	2
9.4	Internet based coordination	4	P1a	1	4	4679	18717	1	4
9.4	Internet based coordination	4	P1b	1	4	3766	15064	1	4

Table 9.2: personnel costs per task.

Task	**COORD**	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**Totals**
Task 1.1: Review of existing programmes		23396	12250		12000	1000	4688	3800	10000	67134
Task 1.2: Electronic forum		9359	3500		4000		4688	3800		25347
Task 1.3: Analysis of current strategies		23396		8000		1000				32396
WP1 total		56151	15750	8000	16000	2000	9376	7600	10000	124877
Task 2.1: Analysis of indicators						4000				4000
Task 2.2: Defining carrying capacity		4679		4000		3000				11679
Task 2.3: Definition of congestion		7019		4000		2000				13019
Task 2.4: Develop comparative assessment		7019				3000				10019
WP2 total		18717		8000		12000				38717
Task 3.1: Questionnaire design		28076	3500	4000		1000	9376			45952
Task 3.2: Survey implementation		14038	3500							17538
Task 3.3: Data analysis		18717	3500	8000						30217
WP3 total		60830	10500	12000		1000	9376			93706
Task 4.1: Questionnaire design		9359	3500	4000	4000	6000	9376			36235

Task 4.2: Survey implementation						3000				3000
Task 4.3: Data analysis		14038		8000		3000				25038
WP4 total		23396	3500	12000	4000	12000	9376		0	64272
Task 5.1: Questionnaire design		9359		24000	4000		9376			46735
Task 5.2: Survey implementation				12000	4000					16000
Task 5.3: Data analysis		14038		12000	4000					30038
WP5 total		23396		48000	12000		9376			92772
Task 6.1: Development of heritage GIS		4679				2000	14064		5000	25743
Task 6.2: Development of Internet GIS		4679				1000	14064		5000	24743
Task 6.3: Online tools for preference data		4679				1000				5679
Task 6.2: Online tools for preference data							14064			14064
Task 6.4: Incorporate pedestrian flow data		4679					9376			14055
Task 6.5: Roll-out IT framework		9359					4688			14047
WP6 total		28076				4000	56256		10000	98332
Task 7.1: Survey of economic incentives		9359		16000		1000				26359
Task 7.2: Analysis of impediments		9359		16000		1000				26359
Task 7.3: Blueprint for economic policies		9359		16000		1000				26359
WP7 total		28076		48000		3000				79076
Task 8.1: International workshop		4679		8000						12679
Task 8.2: Paper dissemination		4679	1750	4000	2000	2000	4688	1900		21017
Task 8.3: Book editing		28076	1750	8000	2000	1000	4688	1900		47414
Task 8.4: IT prototype testing		9359	1750	4000		1000	18752		15000	49861
Task 8.5: International conference		4679	1750	20000	2000	1000	4688	1900		36017
WP8 total		51472	7000	44000	6000	5000	32816	5700	15000	166988
Task 9.1: General coordination	27000	9359	1750	4000	2000	1000	4688	1900		51697
Task 9.2: Organisation of Advisory Board	18000	4679								22679
Task 9.3: Reporting to EC	18000	28076								46076
Task 9.4: Internet based coordination	18000	4679								22679
WP9 total	81000	46793	1750	4000	2000	1000	4688	1900	0	143131
Project totals	81000	336906	38500	184000	40000	40000	131264	15200	35000	901870

C10. Economic development and scientific and technological prospects

The most important products of this project are

1. An **analytical tools to model** chain behaviour of tourists and visitors to cities of art, accounting for interference between tourists' and residents' behaviour.
2. **List of indicators of congestion** in cities of art and historic centres, defining the **carrying capacity** of historic sites.
3. The **operational** framework for the analysis of congestion and sustainable exploitation of cultural heritage empirically tested in **three European cities of art.**
4. **Six datasets** obtained by means of **SP surveys**, eliciting public and other stakeholders' preferences for cultural attributes, current policy instruments and **alternative management models**.
5. A **methodology** to compare results from the three cities of art, in terms of preferences, attitudes, and patterns of exploitation, impact on local economies, policy implementation and instruments.
6. **IT tools**, embedded in a **Geographical Information System (GIS)**, containing a case-base of methodologies for managing Cultural Heritage.
7. A framework for controlling **urban economic policies** focusing on lessons and **methodologies** that can be transferred to **other European context.**

There is an **industrial company** associated with the project and its exploitation. The company believes that the development of the IT tools represents a good market opportunity. They will help managing the product of this project and divulge it to the interested end-users (municipalities, local governmental agencies). It will be the intention of the partners of the project to license the decision support tool to this company.

We are producing a **prototype tool** that incorporate GIS state of the art and information of tourist behaviour in a limited range of places. This will produce a model system capable of further refinement, for which further research will be needed.

The methodology developed in this project will advance the state of the art, by taking the latest methodological developments in the field of non-market valuation, and extending and adapting them to the problem of the valuation of cultural and historic goods. The true value of this methodology is not in its mere existence, but in its use. The consortium's philosophy is that the methodology assisted by a clear information model, should be made widely available, and that it should be made as transparent and easy-to-use as possible, increasing the group of potential users. By making the methodology available and accessible using computer software, more practitioners will be able benefit from our study.

The dissemination and utilization plan for each of the above products is designed to maximise its subsequent value and use. In particular, we will publish in Journal such as the Journal of International Union of local authorities and others targeted to the civil servants audience. Articles will be written targeted for outlets that will reach individuals responsible for conservation, and presentations will be made at professional meetings in each country.

This analysis is of most use to policy and decision makers involved in the application of valuation techniques. Results will be disseminated through articles in refereed economics journals and at professional conferences such as the annual meeting of the European Association

of Environmental and Resource Economists (EAERE) and those organised by AESOP and Euroepan Heritage Agencies.

New approaches to the statistical analysis of stated preference data will be developed, and their utility will be demonstrated using data from the case study surveys. The dissemination plan for these results will primarily involve articles in economics and statistics journals and presentations at professional conferences. This work will further the state of the art in statistical analysis, improving the quality of subsequent valuation studies.

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