

Brussels, 24 March 2020

COST 044/20

DECISION

Subject: **Memorandum of Understanding for the implementation of the COST Action “Integrating Neandertal Legacy: From Past to Present” (iNEAL) CA19141**

The COST Member Countries and/or the COST Cooperating State will find attached the Memorandum of Understanding for the COST Action Integrating Neandertal Legacy: From Past to Present approved by the Committee of Senior Officials through written procedure on 24 March 2020.



MEMORANDUM OF UNDERSTANDING

For the implementation of a COST Action designated as

COST Action CA19141 INTEGRATING NEANDERTAL LEGACY: FROM PAST TO PRESENT (iNEAL)

The COST Member Countries and/or the COST Cooperating State, accepting the present Memorandum of Understanding (MoU) wish to undertake joint activities of mutual interest and declare their common intention to participate in the COST Action (the Action), referred to above and described in the Technical Annex of this MoU.

The Action will be carried out in accordance with the set of COST Implementation Rules approved by the Committee of Senior Officials (CSO), or any new document amending or replacing them:

- a. "Rules for Participation in and Implementation of COST Activities" (COST 132/14 REV2);
- b. "COST Action Proposal Submission, Evaluation, Selection and Approval" (COST 133/14 REV);
- c. "COST Action Management, Monitoring and Final Assessment" (COST 134/14 REV2);
- d. "COST International Cooperation and Specific Organisations Participation" (COST 135/14 REV).

The main aim and objective of the Action is to build a long term, interdisciplinary network of scientists from various European countries with mutual goals: re-evaluating Neandertal heritage (biological and cultural), assessing the „missing“ data, pinpointing relevant questions in the light of new developments (e.g. technical advances) and creating data sharing platform. This will be achieved through the specific objectives detailed in the Technical Annex.

The economic dimension of the activities carried out under the Action has been estimated, on the basis of information available during the planning of the Action, at EUR 48 million in 2019.

The MoU will enter into force once at least seven (7) COST Member Countries and/or COST Cooperating State have accepted it, and the corresponding Management Committee Members have been appointed, as described in the CSO Decision COST 134/14 REV2.

The COST Action will start from the date of the first Management Committee meeting and shall be implemented for a period of four (4) years, unless an extension is approved by the CSO following the procedure described in the CSO Decision COST 134/14 REV2.

OVERVIEW

Summary

Neandertals are the first human population that can be truly recognized as pan-European phenomenon. Traces of their cultural and/or skeletal remains can be found in most European countries and cover a period of more than 250 000 years. A lot of scientific work has been done on various aspects of their heritage and there is a vast collection of archaeological and anthropological data available. However, there is still a discrepancy in available and updated datasets from various countries. In addition, communication between scientists from various fields and from various countries is still based on personal connections between individual scientists, mostly related to specific projects. This Action is a long overdue attempt to bridge the geographic, language, disciplinary-and-data specific gap, as well as a gap created by traditions of different disciplines in different European countries. Through a combined, scientifically-based and geographically inclusive approach, creation of a growing inclusive database, and promoting dialogue among scientists and creating guidelines for research, a solid base for better understanding of Neandertals can be reached. Further, this will allow a base for inclusion of Neandertal legacy into the present, through scientifically based guidelines for public presentation and further actions for promoting their heritage via inclusion of non-scientific stakeholders, such as administrators, museum and cultural workers, touristic sector, small and medium enterprises and other interested parties.

<p>Areas of Expertise Relevant for the Action</p> <ul style="list-style-type: none"> ● History and Archeology: Prehistory and protohistory ● Other humanities: Cultural heritage, cultural memory 	<p>Keywords</p> <ul style="list-style-type: none"> ● Prehistory ● Palaeolithic ● Neandertals ● Europe ● Public Archaeology
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Specific Objectives

To achieve the main objective described in this MoU, the following specific objectives shall be accomplished:

Research Coordination

- Creating a Europe-wide scientific network and dialogue amongst scientists from different countries, concentrating on a common theme (Neandertal legacy), thus getting a better insight into the state of research in different parts of Europe which will help to create a dialogue between traditionally different disciplines.
- Creating smaller working groups of scientists that will concentrate on specific, localised and short-term goals. Results of such activities will be easier to evaluate and will provide a much better insight into specific issues of interest. Results of such studies are incorporated into iNEAL Action's long term goals.
- Engaging various stakeholders that have interest in Action's objectives, and bringing the results closer to the public. This will create a dialogue between scientists and non-scientists and help to embed the Neandertal heritage and research into a coherent, sustainable market (e.g. tourism, SME, heritage management and related).

Capacity Building

- Creating a pan-European network of scientists that deal with various issues related to Neandertal legacy (archaeologists, paleoanthropologists, geneticists, environmental scientists, zooarchaeologists etc.) that will share data and discuss issues of common interest, with a special attention to young researchers. This will help to create long-term international and multidisciplinary collaborations.
- Formation of smaller research groups that will concentrate on relevant scientific questions of limited scope, resulting in detailed understanding and new scientific research and projects that will upon

completion be included in datasets and data sharing platforms.

- The Action aims at bringing together all relevant stakeholders through the creation of an interactive platform in order to promote exchange and transfer of knowledge and expertise. Scientific research will thus become a basis for wider impact on various levels of society.

1 S&T EXCELLENCE

1.1 SOUNDNESS OF THE CHALLENGE

1.1.1 DESCRIPTION OF THE STATE-OF-THE-ART

Due to the state of research (fieldwork, specific studies, accidental finds etc.) over the last 150 years, there is a vast data on various aspects of Neandertal heritage from sites throughout Europe (as well as in parts of Asia). However, during this long period, scientific methods, technological and methodological aspects, theory and practices, developed, often at a different pace, and sometimes in different trajectories, in different countries. The result is that it is often difficult to evaluate and compare various datasets (whether biological, cultural or other) dealing with Neandertal legacy. Likewise, for numerous reasons there are problems related to access to data and information for various sites and finds. In addition, research questions asked by different groups and scholars from not only different disciplines, but sometimes from same disciplines but different traditions and different countries often are difficult to compare, even if their goal may be the same. Recent decades, connected to political changes, especially with the opening of “the Eastern Bloc” and former communist countries, saw a rapid rise in communication of scientists from former “Eastern” and those from the “Western Bloc”. However, this is still based on individual connections and related to specific analyses and work. Thus, in order to compare data on various aspects of Neandertal legacy from Europe, it is crucial to build a long-term network of scientists, that, in turn will help create a usable and inclusive, inter- and multidisciplinary database and data sharing platform for all interested in Neandertals. In addition, iNEAL Action will promote dialogue between scientists (with special attention given to early career investigators) and invite scientists from all relevant fields and disciplines (such as scientists interested in dating methods and chronology, paleoenvironmental analysis, palynology, trace analysis etc.). In such way, datasets will be created with specific purpose of inclusiveness, thus providing data from various disciplines that can be incorporated to create a more detailed picture of Neandertals in temporal and spatial dimensions. Another important aspect of the iNEAL Action is promoting awareness among various stakeholder groups of the importance of Neandertal heritage as an asset in education, tourism as well as other broader socio-economic spheres. At present, a lot of effort is being invested in research, presentation and interpretation of Neandertal heritage sites and other tangible remains like museum exhibits, however, there is a palpable lack of networking at higher-order levels, as well as across the stakeholder spectrum, which this Action aims to remedy. The intention is to build on the existing initiatives, including localized success stories in the heritage sector, like Fumane Cave or the Mettmann Neanderthal Museum, as regards musealised sites or interpretative centres and museums, to collaborative endeavours like the Ice Age Europe platform, which brings together a number of partners across Europe, even if its remit is somewhat broader in terms of temporal extent. Quality benchmarks like Hadrian’s Wall and The Frontiers of the Roman Empire Transnational World Heritage Site will be used to calibrate Action’s efforts as regards quality involvement of stakeholders across different sectors. What all these efforts are lacking is the inclusion of stakeholders other than academia, i.e. those that would create a more tangible link with real life: local communities, local and regional governments, private sector, SME’s, tourism sector etc., who have long been disenfranchised in matters of management of archaeological heritage in general, and Neandertals in particular. In education, primary and secondary-school curricula in many countries might greatly benefit from a more elaborate and school-children friendly didactic tools, which are at the core of the Action’s agenda.

1.1.2 DESCRIPTION OF THE CHALLENGE (MAIN AIM)

Neandertals are the first European phenomenon (as they evolved locally) and have been present in almost all European countries (through their skeletal remains, remains of their material culture, or both) for over 250 000 years. Data left by earlier human groups (e.g. *Homo erectus*, *Homo heidelbergensis*, *Homo antecessor* etc.) is much scarcer. Likewise, anatomically modern human groups and populations that started arriving in Europe from the early Upper Palaeolithic period (e.g. roughly around 45 000 years ago) have their biological origin outside Europe (Hublin 2012, Trinkaus 2005). Cultures, or industries, of the Upper Palaeolithic are often geographically limited and specific in their geographical and temporal spread. In contrast, Neandertals are often seen as a relatively homogenous people, both in their biology, as well as in their behaviour. Material culture that is (at least in Europe) solely associated with Neandertals has a much longer duration and rather uniform characteristics (although there are numerous variations in both biology and behaviour of these interesting prehistoric humans). For all these reasons, Neandertals are a topic that is equally important to (almost) all European countries on various levels – from pure scientific inquiry into topics such as their biological evolution and continuity/discontinuity to later modern human groups, their cultural adaptations in various (geographic and temporal) environments, genetic (genomic) aspects (and contributions to modern humans that are becoming more and more apparent), as well as for their potential in contribution to contemporary society (through cultural tourism and related actions).

There has been a lot of scientific work done on various aspects of Neandertal heritage, both biological, as well as cultural (see e.g. Mellars, 1996, Klein 2009, Conard & Richter 2011, Condemi & Weniger 2011, Smith & Ahern 2013 and references therein). Ever since the first recognized discovery of these prehistoric people in 1856, scholars debated almost every aspect of their origin, cognitive and cultural capacities (including language and hunting skills, symbolic thought etc.) and demise. Datasets, resulting from discoveries of their skeletal remains, or their material culture and other evidence for their presence in a given area in Europe are numerous. However, although recent years saw a rise in communication of various scientists from various European countries, and there are some published volumes that try to concentrate on Neandertal legacy from Eastern Europe (e.g. Smith & Spencer 1984, Harvati & Roksandic 2016, Whallon 2017), there is still an overwhelming bias in favour of data from western parts of Europe (see Mellars 1995). This is especially true for evidence collected in excavations that took place in the first part of the 20th century (and almost to the late 1980s). Except for some fossils, and rarely for cultural data, publications are in the original languages of their respective countries and only overviews or summaries are available in English language. For better or worse, English became the language of science and in order to compare datasets it is of crucial importance to overcome this obstacle in communication.

One of the main aspects of the iNEAL Action is to create a web of scientists that can add to the overall understanding of issues related to Neandertal legacy through their respective fields of work, create and promote dialogue, pinpoint major issues and problems, and create comprehensive database and data sharing platform (as described in 1.2.2.1, 4.1.1. sections of this MoU) of Neandertal biological and cultural data. It is of great importance to gather and compare all available data on both Neandertal biology (skeletal, as well as aDNA data), and their cultural remains in geographical and temporal setting (i.e. throughout Europe and from a period of over 250 000 years) to get a much more detailed insight into various aspects of their behavioural and biological data. The main idea of the iNEAL Action is to use Neandertal (biological and cultural) data (sites, finds etc.) to organize a pan-European network of scientists that deal with issues related to this topic. In addition, over the course of the Action, inclusion of scientists, such as anthropologists, archaeologists, lithic specialists, bioarchaeologists, geneticists, specialists in paleodiet, zooarchaeologists, palaeontologists, biologists, paleoenvironmental scientists, geologists, palaeontologists, paleoclimatologists, geologists, zoologists and many others, is planned to get a more detailed picture of Neandertals in their ecological, environmental and related settings. It is also important to communicate various issues related to research practices (e.g. archaeological fieldwork practices) as well as theoretical and legislative issues in various EU countries related to various types of research related to iNEAL Action datasets. This will be achieved through a dialogue of scientists from various European countries.

Through this combined, scientifically based and geographically inclusive approach, a much better understanding of past events and of these ancient Europeans in general can be reached. Further, the Action will result in strong guidelines for future scientific work, but also for evaluation and implementation of Neandertal data and sites into cultural tourism (with various stakeholders that may have an interest in this topic, see Atalay 2012, Chhabra 2010, Ghattas et al. 2015, and Apaydin 2018). This will not be limited to the scientific community, but will also affect the private and public sector, as well as help the

legislatives for protection and presentation of heritage. In addition, and as a direct result, a much stronger communication network will be established, comprising both scientists working on various aspects of Neandertals (resulting in numerous projects and scientific collaborations), and other stakeholders (e.g. local communities, touristic workers, small and medium enterprises etc.), resulting in topical tours and collaboration between museums and other institutions and individuals in various countries).

1.2 PROGRESS BEYOND THE STATE-OF-THE-ART

1.2.1 APPROACH TO THE CHALLENGE AND PROGRESS BEYOND THE STATE-OF-THE-ART

Scientists that work on different aspects of Neandertal heritage are faced with vast datasets that are increasing at a fast pace. This often results with detailed, but limited insights into specific aspects of evidence (e.g. behavioural, anatomical, genetic and so on). These studies, however important in their results, are often hard to evaluate by scientists from other respective disciplines and provide us with just a part of the story. Traditionally, scientific meetings of different fields are held separately, and scientists mostly discuss their results with colleagues from the same disciplines. Although topical meetings are organized, there is still lack of communication between scholars dealing with cultural aspects of Neandertals, those that study their anatomical and other evolutionary aspects, and those that came from the newly and fast emerging field of archaeogenetics (Green et al. 2010). Further, new techniques and developments in various fields of study allow a more detailed datasets and information to be collected (such as environmental, or sediment DNA and so on). While this is extremely important and exciting, it warrants for understanding of methods, promises and possibilities, but also limits of such datasets. Therefore, active dialogue of scientists and inclusion of scholars from such new and emerging fields is planned throughout the Action. Further complication is the limited communication between scientists from various European countries. As noted, Neandertals are a European phenomenon and their legacy (whether cultural, biological or both) is found throughout the continent. Acknowledging different approaches and problems that may result in various biases in certain aspects of datasets, through a discussion of scholars from different backgrounds, fields, as well as from different European countries (acknowledging all regional and national discipline specifics and traditions) is a crucial step in bridging the gap between sciences, and between scientists themselves.

Bringing together expertise of interdisciplinary scientists that study Neandertals from their respective fields of work, will result in comparable datasets, pinpoint issues of common interest, help to define missing data, missing analyses, and add to the better understanding of Neandertals in general. Further, iNEAL Action will help in dissemination of scientific data through appropriate public lectures and seminars, thus bridging the gap between scientists and non/scientists (private and public sector, local communities, interested public, small and medium enterprises and so on). Further, as a result of the iNEAL Action, a series of guidelines for future actions, both scientific as well as guidelines for public presentation and dissemination of data, will be created.

In summary, iNEAL will bring together a wide variety of researchers, both from different countries, as well as from different fields of research in order to:

1. Get a more detailed and much broader insight into various aspects of Neandertals (biology, including genomics, cultural aspects, geographic, environmental settings etc.) across space and over time;
2. Create a data sharing platform, making it easier to detect data of interest, as well as identifying major gaps, resulting in new research questions, collaborations and projects;
3. Stimulate international collaboration of scientists and create a wide network and platform for communication;
4. Build a new outreach platform between scientists and scientific research and other interested parties (general public, small and medium enterprises, local communities, tourist workers etc.) creating a positive environment and basis for integrating Neandertal legacy into present.
5. Address the career development of early career investigators. Through a participation in working groups, number of Short-Term Scientific Missions and Training Schools, they will get training in various disciplines and develop a firm understanding of specific current practices that will help them in their future research.

1.2.2 OBJECTIVES

1.2.2.1 Research Coordination Objectives

The main goal of this Action is to integrate Neandertal legacy and research related to the understanding of a wide range of cultural and biological aspects of these prehistoric humans in time and space (i.e. particularly in Europe, throughout the timeframe of their existence in this continent, ca. 300 000 to about 30 000 years ago), as well as to use this knowledge and scientific research as a platform for integrating Neandertal legacy into contemporary lives (i.e. tourism). More specifically, iNEAL will focus on the following research coordination objectives:

RCO1: Creating a Europe – wide scientific network and dialogue amongst scientists from different countries, concentrating on a common theme (Neandertal legacy). This will provide a better understanding of cultural and biological data and state of research in different countries and create a dialogue for better defining specific issues of importance for further study. In addition, bringing together scientists of traditionally different disciplines (e.g. physical anthropology, archaeology, genetics, biology, environmental studies, paleoclimate research etc.) to work on a single topic will create an interdisciplinary dialogue which will promote the various research goals. The success of this coordination objective will be assessed by yearly meeting outcomes and discussions, successful completion of Short-Term Scientific Missions (STSMs), in which a special attention will be given to early career investigators, as well as by participation in creation of final guidelines of the iNEAL Action.

RCO2: Creating smaller working groups of scientists that will concentrate on specific, localized and short-term goals, i.e. research (specific studies) and smaller-scale archaeological fieldwork based on issues of interest defined in RCO1. Such planned, albeit smaller, activities and goals that take into account various common themes defined during work meetings and workshops will result in outcomes that are easier to evaluate and be included into iNEAL Action's long-term goal, the integration of various aspects of Neandertal legacy. This, in turn, will provide a much more detailed understanding of not just specific details (e.g. anatomical or behavioural details, or genetic properties of specific samples or sites), but a more detailed understanding of Neandertals in general, including their culture, biology, evolutionary aspects and related issues. The outcomes will be measured by meeting attendances and discussions, as well as by new research projects, new grant applications and public presentations (both at scientific meetings, as well as public lectures).

RCO3: Include and engage various stakeholders that have interest in the Action's objectives. It is crucial to bring the results on Neandertal research closer to the public, as there are many benefits from creating a dialogue and better understanding between scientists and non-scientists. Neandertals are a pan-European phenomenon and as such there is a rich legacy they left throughout Europe. This legacy belongs to all of us, but there is no denying that we do not speak about it in a single and coherent voice. Rather, it is symptomatic that each stakeholder group approaches it from a particular perspective, which may often be in collision with those of other groups. This is why it is of crucial importance to establish an efficient collaborative platform that would promote a culture of dialogue appreciative of different attitudes and interests that characterize the usually diverse spectrum of stakeholders converging around any science/heritage interface. Through quality flow of information, dialogue, workshops, presentations, exhibits and publications, scientists can help other interested stakeholders (private sector, small and medium enterprises, tourism industry, local museums, municipal government, local communities and others) to embed this heritage (e.g. archaeological and fossil finds, archaeological sites etc.) into their touristic offer. In addition, actions directed to local communities and schools will help develop a deeper understanding of the significance of this heritage, and, in turn, make the sustainable heritage management a much easier goal. Success of RCO3 will be measured by participation in iNEAL Action's events (public lectures, exhibits, media coverage), presentations at scientific meetings, and by publication in guidelines of the iNEAL Action.

1.2.2.2 Capacity-building Objectives

CBO1: Creating a pan-European network of scientists that deal with various issues related to Neandertal legacy (archaeologists, paleoanthropologists, geneticists, environmental scientists, palaeontologists, zooarchaeologists etc.) that share relevant data and discuss issues of common interest. iNEAL Action is particularly concerned with engaging early career investigators from various countries, as well as in creating long-term international and multidisciplinary collaborations.

CBO2: Formation of smaller research groups (resulting from RCO1) that will concentrate on relevant scientific questions of limited scope, resulting in detailed understanding and new scientific research and projects that will upon completion be included in datasets and data sharing platforms as noted in 1.1.2., 1.2.2.1., and 4.1.1.

CBO3: The Action aims at bringing together all relevant stakeholders through the creation of an interactive platform seeking to create opportunities for exchange and transfer of knowledge and expertise. Scientific research thus becomes a basis for wider impact on various levels of society. The platform is fed through a combination of virtual and physical encounters, in which both permanent and lively internet-based exchange as well as events favouring immediate human contact meetings, seminars, capacity building workshops and demonstrations and the like are employed with a view to strengthen the capacities of all and any of those interested in pursuing activities pertaining to Neandertals as an asset in terms of scholarly research on one hand, and social or tourist development on the other.

Starting from the acknowledgement that different stakeholders are not only motivated, but also governed by different principles and logic, the Action will aim to tailor its capacity-building activities and operations to a number of representative stakeholder groups beyond academia alone. For instance, for elementary and secondary schools a wide-reaching educational programme will be developed, which will focus not only on dissemination of knowledge but also offering active ways of interaction and involvement for all interested students. This programme will be presented and communicated at local, national and international levels, through seminars, webinars and workshops for elementary and secondary school teachers and educators. For local and regional administrations seminars on the socio-economic value of heritage sites will be organized. Museums and other heritage institutions will be counselled on the development of a database of didactic resources on Neandertals. The Action will seek to empower local communities through implementation of various methods used in public archaeology with a goal to encourage broader public participation and embracement of Neandertal legacy at the local, but also at higher levels. Heritage institutions, SMEs and tourism industry will be advised on the strategic and tactical, as well as operational aspects of sustainable heritage management (the tourism facet is further developed in the section on WG 4).

2 NETWORKING EXCELLENCE

2.1 ADDED VALUE OF NETWORKING IN S&T EXCELLENCE

2.1.1 ADDED VALUE IN RELATION TO EXISTING EFFORTS AT EUROPEAN AND/OR INTERNATIONAL LEVEL

Bearing in mind that the Action aims to create a comprehensive database and platform for sharing Neandertal biological and cultural data, the creation of a broad network of scientists dealing with various aspects of Neandertal legacy is both a necessary and logical precondition that would facilitate this key objective of the Action. In short, the challenge the Action has set before itself consists in, first, creating a Europe-wide network of stakeholders straddling such distant areas as e.g. research and science on the one hand, and social and economic valorisation of tangible remains pertaining to Neandertals on the other. Second, the Action endeavours to foster ways of broad utilization of such newly established, previously insufficiently or under-developed collaborative synapses between stakeholders for scientific, cultural, economic, social and other benefits.

The networking envisaged by the Action is applicable on several levels, bringing together partners from all over Europe. Although the main focus is arguably on research, the social and economic dimensions of heritage are underlined through inclusion of experts oriented towards bridging the gap between scholarly specializations and the general public, as well as other types of stakeholders. In other words, in addition to its scholarly significance, archaeological heritage is perceived as an asset for social and economic growth, and the network the Action aims to establish will create multiplying effects that would eventually generate direct, indirect and induced benefits for all involved parties.

The quality of the network established by the Action will ultimately determine the accomplishment of all its other objectives. It is therefore the intention of the Action to invest as much energy as possible to ensure that the representatives from different countries, traditions, disciplines and areas of expertise it

has brought together grow into a dynamic community capable of meeting the challenge. Although it would not be too difficult to demonstrate that Europe on the whole experiences a lively and intensive exchange of knowledge and information pertaining to Neandertal research, it would be equally easy to show that this exchange is often limited in scope. Most research is carried out within individual units or divisions, or in single groups, and then disseminated through usual channels like scientific publishing. Various workshops, symposia and conferences, organized on a regular, if infrequent basis, also play an important role as a means of this exchange. However, there are few, if any, pan-European endeavours connecting scholars, let alone other stakeholders, on any lasting basis. Furthermore, it also merits repeating that there is a palpable imbalance in the level of research and acquired data between different parts of Europe, seeing the east lagging heavily behind north-west and south-west of the continent resulting in less comprehensive understanding of the Neandertal ecology in the east, although certain positive exceptions are also present in the east like the Crimean Mousterian record. It is precisely in such an environment that the Action seeks to make a significant impact.

Heritage sector, on the other hand, certainly does provide instances of positive practice that may be considered as interesting benchmarks, e.g. the Ice Age Europe platform and the associated Neandertal Cluster project, aiming for a transnational serial nomination of European Neandertal sites for the UNESCO World Heritage List. It may also be added here that Neandertal legacy in Europe, as promoted by the Action, contains potential for the development of a cultural route on continental scale.

2.2 ADDED VALUE OF NETWORKING IN IMPACT

2.2.1 SECURING THE CRITICAL MASS AND EXPERTISE

The iNEAL Action is designed to be inclusive and expansive beyond the original group of proposers. The network will be expanded with participants from the COST Countries, including COST Inclusiveness Target Countries (ITCs), the Near Neighbour Countries and the International Partner Countries by extensive use of other European and international networks to ensure further engagement of other stakeholders. The Action will make efforts to advertise its goals, invite and engage researchers from relevant disciplines, such as anthropologists, archaeologists, lithic specialists, bioarchaeologists, geneticists, specialists in paleodiet, zooarchaeologists, palaeontologists, biologists, paleoenvironmental scientists, geologists, museum curators, museum and cultural management specialists, IT scientists, education specialists, and others. In addition, iNEAL Action will promote partnerships and create a platform for better understanding of scientific data related to Neandertal legacy by other relevant stakeholders and interested parties (public and private sector, including local government, small and medium enterprises, curators in local museums, nature management specialists and general public).

The Action will strive to a balanced number of experienced researchers and early career investigators (pre- and post- PhD) ensuring exchange of experience and continuation of main objectives of the Action.

Except for researchers from research institutes and universities, members come from museums which correspond to WG4 and objectives of the Action. As WG 4, in its outreach activities, addresses general public, touristic workers and experts, and SME's in the representational part, special focus will be put in inclusion of SME's during the Action. By linking different types of stakeholders, iNEAL Action will be able to open up to new forms of development of representation of archaeological heritage.

The four WGs will collaborate closely. The overall synergy between different disciplines and sectors will result in achieving the objectives of the Action.

As Neandertal legacy, in one form or another, is present throughout Europe, one of the Action goals is to further include scientists, as well as other participants (e.g. archaeology media experts and so on). The best practices for this and detailed timeline will be discussed and agreed upon after the first COST meeting and establishment of MC's.

2.2.2 INVOLVEMENT OF STAKEHOLDERS

It is one of the aims of the Action to bring together a truly representative sample of international scholars from more than a dozen European countries, covering all four pertinent areas of work (as outlined in 4.1.1.). It is envisaged that each member will play a pivotal role in their respective countries when it comes to generating interest and participation from other experts in their particular fields as well as from a broader inter- and transdisciplinary research area. This will be ensured through extensive promotion of the scheme both within and beyond the boundaries of individual discipline(s), seeking to engage

scholars, policy makers, public and private sector, tourism industry, SMEs, local communities and other stakeholders in an open and continuous dialogue resulting in effective and successful collaborations on Neandertal-related topics. For this, workshops, presentations, seminars, symposia, roundtables and other methods of direct engagement and knowledge transfer will be used. Members of the Management Committee (MC) will particularly be encouraged to liaise with already existing networks, organizations and associations in order to ensure the broadest possible participation of relevant stakeholders.

As regards the use of new technologies, special attention will be given to opportunities opening themselves from embracing smart and innovative technologies as a means for reaching out to broader public. New concepts that have evolved in recent years, such as virtual museums, virtual archaeology or cyberarchaeology will be explored, as well as the ways in which they can be employed to attract stakeholders from cultural and creative industries sector. Building of digital culture infrastructure, aimed at e.g. sharing interpretative on-site experiences and online dissemination of results of archaeological enquiry, will be given particular attention.

In order to achieve all the short- and long-term impacts, steps will be taken towards the creation of a broad network, consisting of a number of stakeholders from different sectors. The common denominator for all the participants in the network will be the vision of Neandertal heritage as a growth asset, and the means to achieve this will be the creation of a cultural route.

To maximise impact, both short- and long-term ones, a promotion campaign will be carried out, aimed at raising the awareness among target stakeholders of the opportunities the Action presents. Having identified the main target groups, the Action will seek to align the goals of individual stakeholders and stakeholders' groups with those of the iNEAL Action. A very important element on the path to establish a viable and efficient network of stakeholders from different disciplines and areas, will be to build a corporate Action identity.

In addition to the strategic level of the Action itself, tactical campaigns will be conducted, tailored to individual stakeholder groups. For instance, museum or heritage sites managers will be presented with opportunities and benefits stemming from the potential inclusion of archaeological assemblages or sites in this Action, or inclusion of their museums and sites into the cultural route. To achieve this, meetings, seminars, workshops, public talks, small movable exhibits etc. will be organized. Before launching full-scale campaigns, each programme will first be piloted, in order to verify the planned activities, channels and approaches.

Considering that the Action aims to present and publicly promote an updated scholarly image of the Neandertal world, it will also be necessary to carry out an evaluation of the current trends in the way the Neandertals are portrayed in popular media, ranging from printed to video media and including also the gaming industry.

2.2.3 MUTUAL BENEFITS OF THE INVOLVEMENT OF SECONDARY PROPOSERS FROM NEAR NEIGHBOUR OR INTERNATIONAL PARTNER COUNTRIES OR INTERNATIONAL ORGANISATIONS

Through implementation of the Action and public outreach, measures will be taken to allow interested parties and individuals from Near Neighbour, International Partner Countries and International Organisations to take part in specific tasks and events. Mutual benefits include networking, scientific collaborations, interdisciplinarity, cross-sectorial collaborations and raising awareness of Neandertal heritage and its significance for world heritage.

3 IMPACT

3.1 IMPACT TO SCIENCE, SOCIETY AND COMPETITIVENESS, AND POTENTIAL FOR INNOVATION/BREAK-THROUGHS

3.1.1 SCIENTIFIC, TECHNOLOGICAL, AND/OR SOCIOECONOMIC IMPACTS (INCLUDING POTENTIAL INNOVATIONS AND/OR BREAKTHROUGHS)

One of the major goals of iNEAL Action is creating a Europe-wide inter- and multidisciplinary network of scientists from various disciplines (and throughout the course of the Action, involving scientists from other continents) dealing with specific aspects of Neandertal legacy. This will result in defining existing problems in various aspects of scientific work related to Neandertals, and steps to overcome these difficulties. In addition, inter- and multidisciplinary approach will encourage new research, and promote new research groups, with specific focus on early career investigators. Scientific dialogue among scientists will also result in potential development of new techniques and methods for scientific research.

Further, through communication of scientists and non-scientists, new ways, including technological and technical breakthroughs aimed at presentation of Neandertal legacy is expected. For example, the use of virtual reality in presentation of neandertal sites and related finds (e.g. physical remains of neandertals and their culture, stratigraphic sequences etc.) both *in situ* (at the find sites) and in local museum or tourist centres, provides a fast and direct way to familiarize tourists and public with various aspects of Neandertal heritage. Collaboration between scientists and public sector (including IT specialists, local government and various individuals and agencies) will result in best practice and sustainable models in which Neandertals will provide a basis, or an additional value through which tourists and interested public will become acquainted with different aspects of Neandertal heritage. The use of virtual models and presentations particularly allows various ways of presenting this heritage that is easily applied according to local needs and circumstances. Advantage of such models of presentation is their easy upgrade, which allows long-term sustainability. These can range from full 3D virtual reality presentation of sites and finds in different stages of excavation or analysis (in museum or similar enclosed settings) to simple QR codes at archaeological sites that can allow anyone interested to download virtual models to their smart phones and experience virtual trip to distant past in a matter of minutes.

In terms of potential for socioeconomic innovations, the Action perceives the totality of tangible aspects of Neandertal legacy as a major resource for social and economic growth, with a specific focus on local communities. Neandertals are an enduring universal attraction, whose valorisation through new and model approaches - in cultural and creative industries, for commercial uses, in edutainment and so on - is still an almost untapped asset for SMEs and other businesses and organizations on one hand, and, albeit a little less so, the cultural sector on the whole on the other. Sustainable management of tangible Neandertal heritage, for instance at archaeological sites, parks and museums, may ensure further development of cultural tourism in pertinent destinations, which may substantially benefit from Neandertal-related attractions on account of direct, indirect and induced economic impacts of domestic and foreign tourism. In addition, the Action will provide a solid basis for a long term and self-sustainable programs, such as creation of a European cultural route on Neandertal heritage that would be certificated by the Institute of Cultural Routes of the Council of Europe. Risk levels for this are, as noted, potential failure to motivate and engage non-scientific stakeholders (e.g. local government, small business representatives, tourist workers, IT specialists). However, through examples of good practice and steps already taken (e.g. virtual presentation of specific sites and heritage as examples for further development of sustainable models), intensive public outreach (round-tables and smaller, mobile presentations and short-term exhibits), the use of media and focused approach to target partners, actions to minimize risks will be taken.

In building the content database for a broader societal outreach, a potentially highly useful source of new ideas is expected to come from a partnership with creative industries. Such an inclusion of alternative perspectives that complement rather than challenge the established scientific ones will significantly contribute to expanding the attraction of Neandertals as a socioeconomic resource.

SHORT-TERM IMPACTS		
Scientific	Technological	Socioeconomic
Bringing together scientists from different EU countries and different fields and backgrounds thus creating a dialogue and defining issues of relevance to all. Early career investigators development.	Creation of a database sharing platform. Fast accumulation of data related to Neandertal legacy.	Raising awareness among different stakeholder groups of the opportunities related to valorisation of Neandertal heritage. Instances of specific positive actions by and effects for different interested parties due to the realization of the Action. Thematic workshops and public talks.
LONG-TERM IMPACTS		
Scientific	Technological	Socioeconomic
Creation of database and data sharing platform that is both inclusive and expansive. Creating a basis for new research with potentially greater impact in all fields and subfields (paleoanthropology, archaeology, genetics and related fields). Easier recruiting of future collaborators. Establishing a more balanced research environment throughout Europe.	Developing new technologies for sharing and representation of data, both on scientific and public level.	Positive steps towards the embracement by broader reaches of society of the idea that sustainable management of heritage will facilitate and eventually fully unleash its potential to be a growth asset. Substantial progress as regards more open, informed and successful partnership between archaeology and tourism, leading to direct, indirect and induced effects for all stakeholder groups. New ways to display and disseminate knowledge. New exhibition procedures and thus new ways for archaeological tourism including different stakeholders.

3.2 MEASURES TO MAXIMISE IMPACT

3.2.1 KNOWLEDGE CREATION, TRANSFER OF KNOWLEDGE AND CAREER DEVELOPMENT

This Action gathers researchers and specialists from various disciplines (anthropologists, archaeologists, lithic specialists, bioarchaeologists, geneticists, specialists in paleodiet, zooarchaeologists, museum curators etc.) and its variety is crucial for the holistic understanding of Neandertals. Knowledge creation is a key objective of iNEAL Action: more detailed understanding of Neandertals in general, including their culture, biology, evolutionary aspects in space and time and representation of their legacy.

Even though working groups are thematically organized, this Action is designed to establish communication and collaboration of its working groups to open up interdisciplinary and cross-sectoral collaborations and synergy. Transfer of knowledge is envisioned on several levels: between working groups, to general public and to early career investigators.

The Training Schools and Short-Term Scientific Missions will be used specifically to address development of early career investigators, and through this involvement, their contribution to working groups, taking into account geographical distribution and gender balance. Priority for meeting reimbursement will also be given to early career investigators.

This Action will also take every care to ensure smooth and efficient knowledge transfer to the public. In doing so, it will be important to complement the body of knowledge to be transferred to the public with information about popular misconceptions, in order to prevent their perpetuation and potential misuse. An important first step on this path will consist of exploring and discussing such instances in popular dialogue.

3.2.2 PLAN FOR DISSEMINATION AND/OR EXPLOITATION AND DIALOGUE WITH THE GENERAL PUBLIC OR POLICY

In line with the basic goal of this Action, i.e. to establish a broad, Europe-wide network of stakeholders whose interests converge on the Neandertals, starting with academia and curators but involving also actors who are primarily interested in further affirmative valorisation of Neandertal heritage for social or economic benefit of broader reaches of society, an extensive dissemination plan is envisaged.

- Dissemination will take various forms: first and foremost, a website of the Action will be established, as the first and main point of reference for all activities undertaken by the Action. It will serve not only as a means of communication and information board, but also as a repository for all deliverables in digital form.
- written materials, which will ultimately be available at the Action Website, will include various types of publications (e.g. informative brochures and leaflets; conference proceedings; touristic guides; exhibition catalogues; educational volumes)
- oral communications (public lectures, presentations at conferences, media appearances, educational lectures etc.)
- interactive participation: one of the goals of the Action is to achieve a broad involvement of different target groups, going beyond passive reception of results. Rather, the Action is aiming at active participation in events organized by the Action itself, each of which would be tailored to match the interests and knowledge level of specific target groups. For instance, by creating extracurricular courses for elementary and secondary school children; by helping design tourist itineraries at local, regional or national level. Expected formats that will be used include workshops, courses, meetings, focus groups.
- Training Schools with specific topics (related to WG 1-3 goals)
- Short-Term Scientific Missions
- other types of public events (in addition to a major exhibition, planned for year 4, the Action will design a series of small-scale educational exhibition, suitable for touring around partner countries; excursions to archaeological sites and museums will be organized and actively promoted etc.)
- cultural route: steps will be taken towards the establishment of a cultural route, as a means to bring together the full spectrum of stakeholders for which Neandertal heritage is both a resource and a growth asset. The route will develop around focal points in each partner country, with eventual perspective of expanding to continental level.
- dissemination methods and objectives are designed relative to WG 1-4.

4 IMPLEMENTATION

4.1 COHERENCE AND EFFECTIVENESS OF THE WORK PLAN

4.1.1 DESCRIPTION OF WORKING GROUPS, TASKS AND ACTIVITIES

WG 1: The fossil data. This group will consist primarily (but not exclusively) of paleoanthropologists that will discuss fossil evidence from Europe relevant to iNEAL Action objectives (primarily Neandertals, but also other relevant evidence, such as Pleistocene fossils that predate and postdate Neandertal presence in Europe). Each member of the working group will gather all relevant data from their respective countries, thus contributing to the overall goal of creating relevant and up-to-date datasets. Such information will provide a basis for detecting issues of interest for iNEAL Action goals (detected in RCO1 and RCO2, namely specific scientific studies, make plans for future scientific work based on common interests), and, combined with WG 4, provide (in combination with WG 2 and WG 3 goals) a basis for implementation of goals described in RCO3. The dataset(s) will be updated for each WG meeting.

Task 1.1. Exchange knowledge and research experience on fossil data related to Neandertals from various sites and countries. Task 1.2. Creating a data sharing platform related to fossil data. Task 1.3. Sharing and uploading information on fossil data in their geographical and temporal settings including all relevant literature and references to a data base sharing platform. Task 1.4. Proposing input on Neandertal evolutionary aspects relevant for completion of tasks described in WG 4.

WG 2: Cultural data. This group will consist primarily (but not exclusively) of Palaeolithic archaeologists. As will the members of the WG1, members of this working group will gather all relevant data on archaeological sites, and finds from their respective countries, thus contributing to the overall goal of creating relevant and up-to-date datasets. Datasets will be regularly updated. As for datasets of WG 1, this will include all relevant information on location of the sites, relevant data on dates of layers and material from the sites, and information on relevant publications.

Task 2.1. Exchange knowledge and research experience on cultural data related to Neandertals from various sites and countries. Task 2.2. Creating a data sharing platform related to cultural data. Task 2.3. Sharing and uploading information on cultural data in their geographical and temporal settings including all relevant literature and references to a data base sharing platform. Task 2.4. Proposing input on Neandertal cultural and behavioural aspects relevant for completion of tasks described in WG 4.

WG 3: Molecular data. This group will bring together primarily (but not exclusively) scientists involved with aDNA studies to discuss the daily growing genetic and genomic ancient DNA datasets and studies allowing members of WG to detect relevant issues that are complementary with goals described in RCO1, RCO2 and pursued by WG 1 and WG 2. The field of archaeogenetics, and specifically archaeogenomics, is relatively a new one. Starting from 2010 and the publication of Neandertal genome from Vindija (Green et al. 2010), this field saw both a rapid rise in publications of successful aDNA studies, as well as in fruitful discussions related to the explanations of particular genomic sequences and data in their temporal and geographic settings. There is a growing database of Neandertal genomic sequences, and it is crucial to compare, contrast and discuss this type of evidence alongside what is known about Neandertal anatomy (e.g. fossil data) and culture (i.e. behavioural, or archaeological data *sensu stricto*).

Task 3.1. Exchange knowledge and research experience on molecular data related to Neandertals from various sites and countries. Task 3.2. Creating a data sharing platform related to molecular data. Task 3.3. Sharing and uploading information on molecular data with links to freely available raw data sets and other relevant research to a data base sharing platform. Task 3.4. Proposing input on genomic aspects relevant for completion of tasks described in WG 4.

Members of WG 1 and WG 2 and WG 3 will be encouraged to interact on joint meetings with a goal to combine and compare their datasets. The database will include data collected by WG 1, WG 2, and WG 3. In such way, a more complete picture of Neandertal biology and culture in space and time will be given. In turn, this will help in detecting specific issues and priorities of interest (e.g. morphological and other biological studies, as well as archaeological field work). Dialogue between WG's and scientists of various expertise, as well as creation of an interdisciplinary and inclusive dataset(s) and data sharing platform of fossil, cultural, and genomic data will allow to get a much better insight into Neandertals as once living people that inhabited Europe over a period of more than 250 000 years. This period saw many environmental and ecological changes and fluctuations, all affecting Neandertal groups and adding novel and variable pressures and challenges to their survival. Inter- and multidisciplinary approach, discussions of various types of data and different practices in various EU countries will ensure that data and work that stems from data collection and data analysis can be compared, and commonly shared.

All activities by individual WG's are complementary in their goals and outcome. Members of WG 1, WG 2 and WG 3 will detect the "missing data" relevant for discussing issues related to Neandertal legacy (both biological and cultural), such as environmental, geological, zooarchaeological and other data and organize specific meetings or seminars/symposia/workshops to which scientists of various profiles will be asked to participate in. After the first phase of collecting and evaluating of relevant datasets for all WG's (WG 1, WG 2, and WG 3) is done, all three WG's will have joint discussions to detect issues which will help in planning of goals for future scientific work. In addition, datasets and discussions of both individual meetings of WG's, as well as joint meetings/workshops/symposia of all three WG's will provide stronger guidelines that will help and provide a strong basis for successful actions of WG 4. WG 1, in combination with WG 2 and WG 3 will provide a concise overview and basis for actions that are a part of the RCO 3 (public dissemination, aimed for various stakeholders, e.g. tourism, small and medium enterprises, schools, general public, local communities etc.). Special attention will be given to early career investigators through Short-Term Scientific Missions organized by WG 1, WG 2 and WG 3.

WG 4: From past to present. Neandertals as stakeholders in cultural tourism. This WG will consist primarily (but not exclusively) of researchers experienced in public dissemination of scientific data, museum specialists and other relevant interested parties. Other stakeholders, such as representatives of local government, small and medium enterprises, IT specialists, tourist workers and museum workers,

will be strongly encouraged to join discussions of this WG, and participate in symposia and public lectures and other events as a part of the outcome of WG 4 and those in RCO3. Further, a special attention and invitation to all public dissemination events (e.g. public lectures, exhibits) will be aimed at the general public and school children. One of the objectives of WG 4 will be to originate a database on public didactic resources on Neandertals, most notably museums and musealized sites, i.e. those open to regular visiting. Among other things, this database would be used as the support for a digital and printed on-demand exhibition that could be widely disseminated across the continent.

Special attention will be given to potential positive impacts different aspects of Neandertal heritage, like museum displays or archaeological sites may have on the socio-economic development of a given community through mediation of tourism. This perspective underscores the public and touristic attractiveness of tangible and intangible aspects of the Neandertal story, while exhibits and heritage sites are considered as tourist resources. Consequently, their management and valorisation for purposes of tourism enter the domain of destination management, as a continuous process in which tourism industry, administration at various levels, and other stakeholders develop a destination with a view to fulfil a shared vision of its future. WG 4 will invest a lot of effort to inform the destination management planning processes with regard to valorisation of Neandertal heritage.

WG 4 will develop a package of informational, educational and didactic tools to be used for communicating topics relating to various facets of Neandertal legacy. The package will be designed to cater for different publics, from general public, schools, civil society and local communities, tourism sector, heritage institutions, small and medium enterprises, as well as other interested parties (as a part of WG 4 action and RCO3). The package will be used both by members of WG 4, as well as by supporters and associates, in order to fulfil the Action's agenda at the broadest possible level. The tools will include a variety of means and methods of communication, using both spoken and written word in combination with visual imagery, like public lectures, exhibits, workshops, courses, seminars and round tables on the one hand, and leaflets, textbooks, articles, manuals and guidelines on the other.

Task 4.1. Exchange knowledge, experience and best practices on representation of archaeological and anthropological heritage. Task 4.2. Pinpointing major problems and obstacles related to presentation and dissemination of sites and data (e.g. legislations, lack of relevant guidelines, procedures etc.). Task 4.3. Pinpointing challenges related to presentation of Neandertal legacy to specific target groups (age or interest specific). Task 4.4. Proposing measures to better exploit, incorporate and realise potential and existing data fund to maximise impact in society (smaller museum collections, sites etc.).

4.1.2 DESCRIPTION OF DELIVERABLES AND TIMEFRAME

After the kick-off meeting, the Management Committee (MC), as a decision-making body in charge of coordinating, managing and implementing the Actions' activities, will meet for setting the general guidelines of the Action and Working Groups.

Key roles will be elected: Chair, Vice-Chair, Grant Holder, WG1, 2, 3 and 4 leaders and their substitutes or co-leaders, STSM Manager and Communication Manager; to become a Core Group (CG). WG leaders will organize work in their groups according to the aim and work plan of the Action. The STSM Manager will coordinate Short-Term Scientific Mission applications and administer procedure according to CG approvals. Communication Manager will coordinate the Action's website to ensure good visibility of iNEAL. All dissemination intended for the website and for the MC and other participants will go through the Communication Manager. This includes Training Schools announcements for public lectures, STSM calls, news etc. the Communication Manager will also be in charge of press releases.

The MC will convene annually to revise results from the previous year and to plan the next. In the last year of the Action, the MC will convene twice, once at the beginning of the year and second time at the end of the year. MC meetings will be organized in combination with WG meetings, except the last MC meeting, which will be organized electronically. The CG will convene twice a year, once combined with MC and WG meetings and once via teleconference.

WG leaders will organize work in their groups according to the aim and work plan of the Action. Each WG will meet in an annual meeting, at the same event as other WGs, to enable scientific communication and joint work on fulfilling Action's objectives. One Training School per WG per year will be organized. WG leaders will coordinate organization of Training Schools that thematically fall under their WG topic.

Topics for WG1's Training Schools are related to Neandertal fossil record and evolution (e.g. geometric morphometric methods in palaeoanthropology, new techniques for analyses, new methods,

comparisons of “traditional” vs. computer based methods and other relevant topics); topics for WG2’s Training Schools are related to Neandertal cultural data (e.g. methods of lithic analyses, dating techniques, fieldworks methods and practice and other relevant topics); topics for WG3’s Training Schools are related to Neandertal molecular data (e.g. ancient DNA methodology methods of data collecting and analyses and problems and possibilities of this emerging field and other relevant topics) and topics for WG4’s Training Schools are Neandertal heritage and its use for public domain (aimed for museum workers, tourist workers, SME’s).

Two or three Short-Term Scientific Missions will be implemented per year per WG, but no more than 9 Short-Term Scientific Missions for each WG for the total duration of the Action.

WG 1, 2 and 3 have similar tasks, milestones and deliverables, but related to the different type of data. Tasks of WGs 1, 2 and 3, as described in 4.1.1, is exchanging knowledge and research experience to create a data sharing platform. That is why each of the three WGs will have to test the trial version of data sharing platform at the end of the first year to be able to identify potential problems and propose solutions at the beginning of the second year. After the annual meeting of the second year, each of the three WGs will report to WG4 on proposing input on their respective data, relevant for completion of WG4 publications and public outreach activities. At the beginning of the third year of the Action, the completion of the second phase of the data sharing platform is planned. Finalization of the data sharing platform is planned for the second quarter of the fourth year of the Action.

WG1, 2 and 3 milestones and deliverables:

Milestone 1.1 / 2.1 / 3.1 WG1 / WG2 / WG3 fully operative (first year)

Deliverable 1.1 / 2.1 / 3.1 Report to MC describing progress on gathering of data and related activities (once a year after the annual meeting)

Deliverable 1.2 / 2.2 / 3.2 Organization of Training School (once a year, every year)

Deliverable 1.3 / 2.3 / 2.3 Reports on implemented STSMs (after the each STSM)

Milestone 1.2 / 2.2 / 3.2 Testing of the trial version of data-sharing platform (end of the first year)

Milestone 1.3. / 2.3 / 3.3 Identifying problems in database creation and solutions/way forward (beginning of the second year)

Milestone 1.4 / 2.4 / 3.4 Report to WG4 relevant to completion of WG4 tasks related to public outreach (second year after the annual meeting)

Milestone 1.5 / 2.5 / 3.5 Second phase of development of the data-sharing platform (beginning of the third year)

Deliverable 1.4. / 2.4 / 3.4 Completion of data sharing platform (fourth year)

Except the tasks and activities that are the same for all WGs and described above (annual meetings, Training Schools and STSMs), WG4 will work on development of guidelines, educational kits, handbooks and public outreach, respecting the outcomes and recommendations of the work of WGs 1, 2, and 3. In the first year of the Action, WG4 will make the plan of the public events (public lectures, workshops, exhibits and round tables) and implement it throughout the Action. In the end of the third and in the beginning of the fourth year of the Action, publications will be finalised.

WG4 milestones and deliverables:

Milestone 4.1 WG4 fully operative (first year)

Deliverable 4.1 Report to MC describing WG progress (once a year after the annual meeting)

Deliverable 4.2 Organization of Training School (once a year, every year)

Deliverable 4.3 Reports on implemented STSMs (after the each STSM)

Milestone 4.2 Completion of the plan of public events to be implemented throughout the Action (end of the first year)

Milestone 4.3 Completion of the plan and consensus on content of public-oriented package (beginning of the third year)

Deliverable 4.4 Educational kit for elementary and secondary schools (third year)

Deliverable 4.5 Guidelines for best practices in heritage presentation, management of Neandertal heritage and creation of cultural itineraries at local, regional and national levels (fourth year)

Deliverable 4.6 Handbook of good practices in valorisation of Neandertal heritage in tourism (fourth year)

Deliverable 4.7 Organization of public events (exhibits, round tables, workshops) (every year)

4.1.3 RISK ANALYSIS AND CONTINGENCY PLANS

The main risks include failure to create an international, multidisciplinary network of scientists as defined in WG 1, WG 2, and WG 3. However, all steps have been taken to contact a group that will serve as Core Group and Management Committee throughout the iNEAL Action. One of the goals of the Action is to engage new scientists and participants (including scientists from different but related fields, such as geologists, palaeontologists, environmental scientists, early career investigators, museum curators, heritage management personnel, IT specialists, legislators, local government representatives and local community, all in their respective roles as defined by RCO 1 – RCO 3). As steps to engage all relevant stakeholders will be taken as a part of RCO objectives, and throughout the duration of the Action, risks are minimal. Major risk for goals defined in (RCO 3) is in lack of interested parties. To mitigate that risk, the Action will initiate a broad campaign to promote its goals across the stakeholder spectrum, ensuring a quality flow of information as well as dialogue between scientists and non-scientists. Methods involved will include informative and educational materials, media appearances, use of social media, public lectures and presentations, workshops, exhibitions, excursions and museum tours etc. Steps against this risk are defined in more detail in RCO 3 and WG 4 objectives, and in the 3.2.2 section of this document.

There is also a potential risk pertaining to idiosyncratic policies and mechanisms in which scholarly activities unfold in different European countries, potentially preventing a smooth and timely participation and delivery by each and every member in Action activities as defined in the Action timeline. Contingency measures will primarily consist of backup by substitute members and intensive exchange within and across WGs, with strict observance of regular reporting as the norm.

4.1.4 GANTT DIAGRAM

	YEAR 1	YEAR 2	YEAR 3	YEAR 4
Web site	x			
Kick off meeting	◇			
MC meeting	○	○	○	○
Core Group meeting	○	○	○	○
Working Group 1				
WG1 meeting	○ D1.1 M1.1	○ D1.1	○ D1.1	○ D1.1
Training School	● D1.2	● D1.2	● D1.2	● D1.2
STSM		D1.3	D1.3	D1.3
Data sharing platform		M1.2	M1.3 M1.4	M1.5
Working Group 2				
WG2 meeting	○ D2.1 M2.1	○ D2.1	○ D2.1	○ D2.1
Training School	● D2.2	● D2.2	● D2.2	● D2.2
STSM		D2.3	D2.3	D2.3
Data sharing platform		M2.2	M2.3 M2.4	M2.5
Working Group 3				
WG3 meeting	○ D3.1 M3.1	○ D3.1	○ D3.1	○ D3.1
Training School	● D3.2	● D3.2	● D3.2	● D3.2
STSM		D3.3	D3.3	D3.3
Data sharing platform		M3.2	M3.3 M3.4	M3.5
Working Group 4				
WG4 meeting	○ D4.1 M4.1	○ D4.1	○ D4.1	○ D4.1
Training School	● D4.2	● D4.2	● D4.2	● D4.2
STSM		D4.3	D4.3	D4.3
Guidelines - heritage			M4.3	D4.5
Educational kit - schools			M4.3	D4.4
Handbook - valorisation			M4.3	D4.6
Public events (D4.7)		M4.2		
Public lectures		Ⓟ	Ⓟ	Ⓟ
Workshops			□	□
Exhibits			e	e
Round tables			○	○

- x Web site
- ◇ Kick off meeting
- MC meetings, Core Group meetings and WG meetings organized at the same event
- MC meeting and Core Group meetings organized electronically or via teleconference
- Training Schools
- Ⓟ Public lectures
- Workshops
- Round tables
- e Exhibits

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