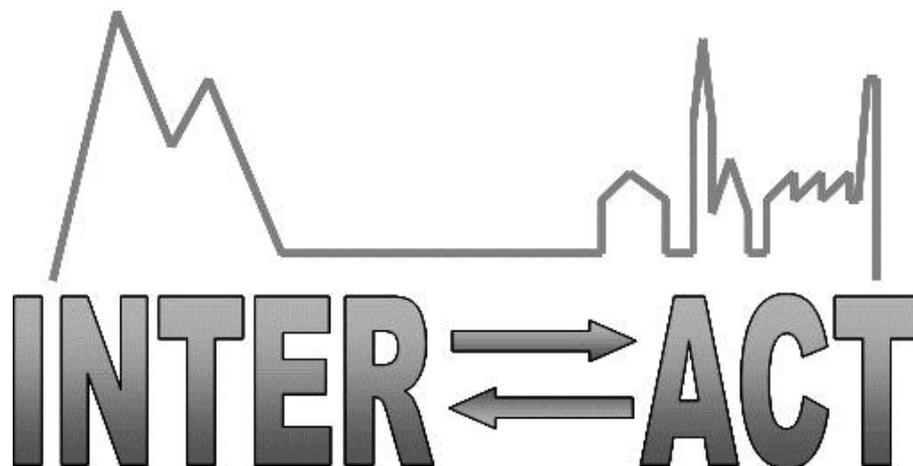


## Combination of CP & CSA



### D1.4 – Report to EU

Project No.262693– INTERACT

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<b>PU</b>	Public	X
<b>PP</b>	Restricted to other programme participants (including the Commission Services)	
<b>RE</b>	Restricted to a group specified by the Consortium (including the Commission Services)	
<b>CO</b>	Confidential, only for members of the Consortium (including the Commission Services)	

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## Publishable Executive Summary

Deliverable D1.4 presents an overview of INTERACT's many and diverse activities. We focus on the great success of the network, summarizing many important achievements, products – some with in-kind contributions - and highly significant legacy. Full details of the activities within INTERACT and their implications will be presented in a final report which will be submitted at the end of February according to contractual commitments.

The coordination structure of INTERACT has been simple but efficient, the rationale being that most funding should be directed to the operation of the infrastructure, the JRAs and Transnational Access. Furthermore, the Station Managers Forum and the Transnational Access WP involve a level of coordination under the overall coordination. The success of the coordination can be evaluated from the growth, integration, output and global visibility of INTERACT. In 2011, INTERACT consisted of 33 partner stations but by the end of 2015, the network had grown to 77 research stations! Consequently, INTERACT unites all the major terrestrial research stations in the North, while reaching out to stations in neighbouring forest and alpine regions. The coordination has therefore been extremely active in networking with an increasing number of research stations and developing MoUs with them. Furthermore, the coordination has networked with major Arctic and global organisations developing additional MoUs. Examples include the University of the Arctic, NEON, SIOS, GEO-GEOSS. The success of the coordination and the network as a whole has drawn attention around the world. INTERACT is sought after to give presentations at high level political meetings including tri-lateral EU-US-CAN meetings, the Arctic Circle with presidents and ministers, and INTERACT is also used as a model for activities such as EU consortia (even non-environmental consortia), the European Polar Board and other Arctic initiatives. For example, the station catalogue is being used as a basis for the co-production of a catalogue including all European polar research stations (Arctic and Antarctic), ships and planes. Technically, INTERACT's coordination has been made possible by continuous web site development and the inclusion of dedicated project management software and expertise.

The core of INTERACT is the research stations that form the overall infrastructure. These stations are extremely diverse in terms of their disciplinary bias, geographical location, stage of development of the infrastructure and operational procedures. Nevertheless, the INTERACT Station Managers' Forum has been highly successful in bringing the station managers together to collaborate on sharing best practices for running research stations, collating information about the infrastructures and the way they operate, and making accessible metadata on research and monitoring back to the year 2000. The annual meeting of the station managers has also been a platform for sharing many other types of information and this has helped to provide the excellent integration within INTERACT as a whole. For example, the JRAs were able to test methodology and technological developments at only a few stations. However, at the station managers meetings, the implications of the JRAs were spread throughout the

network leading to greater opportunities for take-up of new opportunities. Many of the results from the Station Managers Forum are intangibles even though they have great legacy. In addition, some results have resulted in highly tangible and important products. These are four reports: 2 Station Catalogues (two were required because of the rapid growth of INTERACT), a report on best practices of station management and a report presenting meta-data on research and monitoring back to the year 2000.

Transnational Access has been an outstanding success and has set new boundaries for future EU transnational access schemes. Firstly, transnational access was pan-arctic involving physical access to 11 countries including all eight Arctic countries. During the five years in which access was offered, over 500 scientists received awards. The scheme attracted additional funding for access to Canadian stations from two Canadian sources as well as funding from the National Science Foundation for access to US Arctic research stations. The quality and productivity of the science was very high including over 250 publications of various types, a book of over 50 science stories, many media presentations and comments in the journal *Science* on one successful project that has become a model for future remote access projects. An important aspect of the transnational access was the establishment and operation of an evaluation board which set some strategies for widespread calls that for example targeted important gaps in science, both disciplinary (such as winter studies) and geographical. The work of this board and the whole transnational access scheme was made possible because of the excellent administration by experienced experts. This success story is a firm foundation for future development of a community of researchers collaborating across research stations to answer major questions about Arctic science that have global relevance.

INTERACT Joint Research Activities have improved monitoring technology as well as the capture and processing of data. The technological developments have focused on the establishment of ten energy measuring stations deployed at four sites to sample the ecosystem variability among and within sites. The technology has been designed to be intercomparable with ICOS technology and collaboration between INTERACT and ICOS was established at the beginning. The equipment is operational and data are being made available from a central hub. Furthermore, the network of measuring stations is being expanded. Capturing data has been improved at two stages. First of all, assessments of wireless networking of sensors in the field have been carried out to improve the automation of monitoring in remote environments. Secondly, the capture of meta-data from research projects at research stations has been improved through software development that combines data capture with station management. The pilot study was carried out at the Abisko Research Station, but now other stations are implementing the system too. The processing of data has been improved through the development of data manipulation software that is being applied in the Greenland Ecosystem Monitoring Programme.

Outreach and education are achieved at various levels. Each research station has its own activities usually aimed at local and national communities. INTERACT has applied different ways of involving local people in Arctic science. These include education programmes, citizen

science, Community-Based Monitoring and sharing traditional and local knowledge. A work package specifically dedicated to outreach provided appropriate resources and INTERACT partners gave outreach and contributed to education on numerous levels. Specific web-based outreach resources include a glossary of Arctic terms, photo gallery, videos, blogs from the field and a presentation of “INTERACTers”. In addition, the coordination made presentations to teachers’ conferences and schools (primary and secondary) and provided specific resources including a text book and a paper in a teaching journal that reached tens of thousands of students. The coordination in collaboration with the transnational access coordination produced a mass outreach video developed by in-kind contributions from Tomsk State University (Russia) and from the University of the Arctic. INTERACT has also given outreach in numerous presentations at all levels of society including advice to governments and the number of presentations per person per year has reached up to 20.

INTERACT is seeking legacy by exploring different models to continue its networking. At the same time, INTERACT is generating a huge legacy for a large diversity of scientific-related activities together with policy through its influence on high level activities. However, the true extent of the legacy from INTERACT in the worlds of science, education, outreach, and policy will become apparent only in the future. In addition to the legacy derived from a growing network of research stations and highly successful transnational access, INTERACT has also influenced national and international polar and environmental policy. It has visibility at high political levels and reaches out to Governments and Royalty. The member stations of INTERACT have supported research and monitoring and environmental assessments that have underpinned conclusions in the IPCC reports that eventually resulted in the Paris agreement by 195 countries to limit carbon emissions (remembering that the Arctic is the area of planet Earth changing most dramatically and giving the clearest evidence of climate change). INTERACT has also been instrumental in helping to create a protected area in Siberia. However, perhaps the greatest legacy will come from INTERACT’s influence on the next generation of researchers.