

PROJECT FINAL REPORT

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1. SUMMARY REPORT

EXECUTIVE SUMMARY

The intention of the AeroAfrica-EU initiative is to create a platform for enhancing aeronautics and air transport research and development (R&D) cooperation between the European Union (EU) and South Africa (SA), and to explore the potential for and, where appropriate, to promote the participation of other African countries in such cooperation. In pursuance of its objectives, the AeroAfrica-EU team realised a number of achievements over the duration of the project (February 2009 - April 2011).

A comprehensive desktop analysis was undertaken to obtain information on the aeronautics and air transport R&D competencies, capabilities and activities within the South African government, research and private sectors. The data obtained were used to create a mapping database.

In support of the project activities, the project website www.aeroafrica-eu.org was developed. This website is the project's primary means of disseminating information on project activities, news in the field, upcoming events of interest to the community and other stakeholders, and provides links to important documents. AeroAfrica-EU also produced a number of other dissemination materials / instruments, including brochures, posters, banners, newsletters, CDs, catalogues and a partner search database.

AeroAfrica-EU hosted and / or participated in more than sixteen awareness development events in support of addressing the project objectives. Four thematic-focused workshops, with the aim of identifying areas of mutual priority and technological interest and to discussing mechanisms to best facilitate African-EU collaboration, were organised and held in Europe and Africa. These thematic workshops led to a number of collaborative EU-SA/African initiatives.

AeroAfrica-EU acted as a facilitator for African R&D actors to enter FP7 consortia. Information was disseminated on different aspects of FP7; including details on the technical work programmes, funding mechanisms, legal aspects and intellectual property rights. Two call analysis and training workshops and a number of one-on-one information sessions, were held. AeroAfrica-EU represented SA R&D organisation interests, at the EC's FP7 Transport Days and the brokerage events hosted by the ETNA network, in Brussels, Belgium. Other forums were also used to disseminate information. An interactive CD detailing participation in FP7 Transport (Aeronautics and Air Transport) theme was developed, as well as a FP7 page on the project website. The AeroAfrica-EU circulation list (> 600 subscribers) and the website were also used to announce FP7 developments.

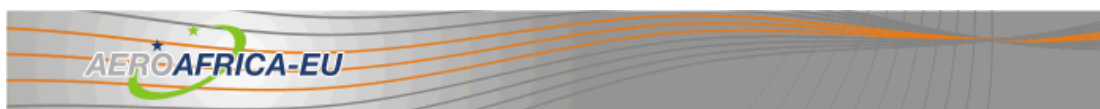
EU-SA collaboration was further strengthened through bilateral cooperation arrangements: four memorandums of understanding are in negotiation / were concluded between EU and SA institutions. These engagements constitute a foundation for further collaboration between EU and SA / African entities.

AeroAfrica-EU facilitated a seminar in SA presided over Dr Andras Siegler, Director of Transport, DG Research, EC. Dr Siegler and Prof Auf der Heyde, Deputy Director-General, International Cooperation and Resources signed a joint statement on behalf of the EC's Transport Directorate of DG RTD and the SA Department of Science and Technology, whereby the parties agreed to promote transport research between SA and the EU.

Following inputs from consultations with SA and EU aeronautics and air transport R&D representatives, a *Strategic Framework for Promoting SA - EU Research and Development Cooperation in Aeronautics and Air Transport* was produced. Several key recommendations were made and a joint EU-SA workshop proposed to further explore these options, and define and constitute mechanisms for achieving the proposed actions.

AeroAfrica-EU represents the first attempt to significantly capture the aeronautics and air transport capabilities and needs of the EU and SA in a complementary manner, useable as qualitative tools to enhance further co-operation.

SUMMARY



PROJECT CONTEXT AND OBJECTIVES

By the very nature of the skills and technologies involved, the world-wide aeronautics industry is a powerful driver of innovation across the industrial base. The air transport industry makes a significant contribution to the prosperity of Europe, both in terms of a globally competitive manufacturing sector providing goods and services, and also in terms of promoting the effective transfer of people and goods within Europe and globally.¹ Over recent years, the EU transport industry has changed under the impact of the internal market and of globalisation. Transport is a high-technology industry, making research and innovation crucial to its further development and conducive to European competitiveness, environmental and social agendas. European transport research has a role to maintain and increase the efficiency of the different transport modes, as well as their interaction and to foster progress. Technological progress, the organisation of transport and understanding the supply and demand factors are key elements in European transport research.²

The Advisory Council for Aeronautics Research in Europe Technology Platform (ACARE) defined a Strategic Research Agenda (SRA) that elaborates the long-term vision and strategic research agenda that constitute useful inputs to the approach and activities of the Transport theme, and complement the needs of policy makers and expectations of society. ACARE's SRA elaborated upon future expected or potential technology requirements in the air transport sector; the major priorities constituting the 'greening' of transport, strengthening competitiveness and efficiency, and responding to the increasing demand for mobility and higher safety standards.

These priorities are encompassed in the overall objective of the Seventh Framework Programme (FP7) Transport Theme, namely *"based on technological and operational advances and on the European transport policy, develop integrated, safer, "greener" and "smarter" pan-European transport systems for the benefit of all citizens and society and climate policy, respecting the environment and natural resources; and securing and further developing the competitiveness attained by the European industries in the global market."* FP7's Transport Theme, in agreement with the ACARE's SRA, addresses six activities in regards to aeronautics and air transport:

- The Greening of Air Transport;
- Increasing Time Efficiency;
- Ensuring Customer Satisfaction and Safety;
- Improving Cost Efficiency;
- Protection of Aircraft and passengers, and
- Pioneering the Air Transport of the Future.

It is acknowledged that for the EU to *become more competitive and play a leading role at world level*, it is necessary for it to strengthened international research cooperation so as to *reap the full benefits of internationalisation of research, technology and development, to contribute to the production of global public goods, and to further integrate the Community into the world-wide research*. International Cooperation activities are, thus, encouraged in the FP7 Transport Theme.

¹European Aeronautics: A Vision for 2020, European Commission 2001

²Framework 7 Work Programme 2008, Cooperation, Theme 7 - Transport (Including Aeronautics)

The role of S&T is also being recognised to a greater extent in Africa. At continental, regional and national levels, African countries have begun to prioritise science and technology as important factors in efforts to attain the Millennium Development Goals and to transform *Africa's Science and Technology Consolidated Plan of Action*. S&T is also gaining increasing focus as part of European - Africa cooperation programmes, with greater focus in S&T cooperation with Africa through collaborative R&D programmes and through development cooperation instruments.

The relationship with the EU is one of South Africa's (SA) most strategic partnerships in international S&T relations. The first intergovernmental agreement concluded between the EU and SA, the *Agreement on Science and Technology Cooperation* was signed in 1996. Results of collaborative initiatives supported under the EU cooperation agreement have been recognised as not only significantly contributing to enhancement of the international knowledge base and human resource development, but also contributing markedly to improving the quality of lives of both SA and Europeans.

SA has relatively strong industrial capabilities; increased global competition, however, requires not only the strengthening of current capabilities, but also the development of new ones. There has been an accelerated effort amongst various SA government departments, in close consultation with industry and other stakeholders, to consider the potential opportunity offered by the aeronautics industry to reposition this industry as an emerging priority sector for Government. It is clear that the SA industry is becoming, and will continue to do so, more integrated into the European aeronautics community, through significant new developments which have been unlocked by various policies of the SA Government.

In order to enhance the competitiveness of the EU and SA airspace industry, it is essential that fields of shared interest be explored and elaborated into feasible research actions that are of mutual interest and mutual benefit to the participants.

The *Agreement on Science and Technology Cooperation* concluded between the EU and SA, amongst other benefits, afforded SA researchers the opportunity to participate fully in the EU's Framework Programmes for Research and Technology Development. SA is one of the most successful Third Country participants of the Framework Programmes.

In response to the "*Stimulating Research with International Cooperation Partner Countries (AAT.2008.7.6)*" call issued by the EC, the AeroAfrica-EU consortium sought to leverage and optimise its resources, partnerships and networks so as to promote active and purposeful cooperation between the EU, SA, and as appropriate other African, organisations, researchers and policy-makers, thereby strengthening the competitive position of the European, SA and other African aeronautics industries, and contributing to the solution of global problems of air transport.

AeroAfrica-EU overall objectives are:

- To explore the potential for enhancing cooperation through an analysis (mapping) of aeronautics and air transport R&D cooperation between the EU and SA, as well as other African countries
- To develop and enhance networks and partnerships between EU, SA and other African researchers and organisations in identified technical themes ideally suited for mutually beneficial aeronautics and air transport R&D cooperation
- To promote SA and African participation in the aeronautics and air transport activities of FP7 through focused information and advisory services, and
- To establish an aeronautics and air transport R&D policy dialogue between the EU and SA, as well as other African partners, so as to also support economic and development cooperation.

AeroAfrica-EU combines the resources of seven international partners:

- the Department of Science and Technology (DST, South Africa)
- the National Aerospace Centre (NAC) (formerly the National Aerospace Centre of Excellence (NACoE)) acting through the University of Witwatersrand, Johannesburg (Wits) and as third party, Wits Commercial Enterprise (Pty) Ltd (South Africa)
- Aerospace Valley (AV - France)
- Fraunhofer Institute for Chemical Technology (Fraunhofer, Germany)
- Royal Institute of Technology (KTH, Sweden) and
- Cranfield University (CU, United Kingdom).

Specific objectives for the project included:

- (i) undertaking a mapping of EU and SA/ African aeronautics and air transport EU research capabilities, analysis and correlation of the mapping data, and consultation with stakeholders in regards to the outputs
- (ii) developing a project information platform in the form of an informative and authoritative website and suitable dissemination material, and extending the search and database capabilities of this platform
- (iii) hosting / participating in events, both in South Africa (Africa) and in the EU so as to create and develop awareness of the AeroAfrica-EU initiatives and its objectives, sharing experiences and learning in aeronautics and air transport, and interrogating and proposing topics promoting European-African cooperation
- (iv) implementing a High Level Advisory Group with well-known aeronautics and air transport European and African experts from academia, research and industry whose members will assist in advancing the project's objectives and beneficial South African / African and European networks and partnerships
- (v) creating within the South African / African community a greater awareness of opportunities within the aeronautics and air transport activities of FP7 through focused FP7 information sessions and other interventions
- (vi) advancing SA / African – EU FP7 collaboration through promotion of African aeronautics R&D expertise to potential EU partners
- (vii) initiating policy dialogue so as to identify mutual aeronautics and air transport R&D needs and priorities and advance cooperation between the EU and SA and other African countries.

PROJECT RESULTS

In pursuance of its objectives, the AeroAfrica-EU team realised a number of achievements over the duration of the project (February 2009 – April 2011). An overview of the project's major achievements is given below.

Mapping the aeronautics and air transport landscape

Collation and analysis of the various interactions between EU and SA (African) partners is essential to supporting and maximising efforts to develop and enhance collaborative relationships between EU and SA / African researchers and institutions, so as to facilitate the exchange of ideas and knowledge, lead to the creation of programmes directed at solving challenges with global significance or that mutually impact on the participants, and nurture the development of scientific excellence.



A comprehensive desktop analysis was undertaken to obtain information on the aeronautics and air transport R&D competencies, capabilities and activities within the South African government, research and private sectors. The data obtained were used to create a mapping database. Relevant EU and FP7 initiatives / projects have been mapped against the South African contacts as part of the process. A consultation workshop was subsequently held with participants in the mapping exercise and inputs obtained from stakeholders. The database was subsequently revised and supplemented. Attendance of various events was used to inform and alert the community as to the database and to solicit further inputs for the database. Based on the information and data collected, two versions of the South African Aerospace Research and Development Catalogue were published (short and more detailed version). A CD of the short version catalogue was also produced.

Thematic areas and topics for SA - EU collaboration were identified from the inputs received for the database and as part of the activities of the workshops and meetings that the project consortium hosted / participated in during the course of the project. These themes / topics formed the basis for programme development for the thematic workshops and for proposals for potential SA-EU collaboration.

In support of the project activities, the project website www.aeroafrica-eu.org was successfully developed and launched in May 2009.



Snapshot of www.aeroafrica-eu.org

The AeroAfrica-EU website is the project's primary means of disseminating information on project activities, news in the field, up-coming events of interest to the community and other stakeholders, and provides links to important documents. The website was subsequently supplemented and enhanced, with new functionality added: an online mapping / catalogue and database with associated applications, a documents depository, a section on multi / bilateral cooperation and revisions and updating of the FP7 pages. Website hits grew 3-fold over the project duration; from an average 4800 hits at the start of the project to an average 15300 hits recorded on completion of the project. Visitors from 75 countries representing academia, industry, policy-makers and civil society, visited the AeroAfrica-EU website.



As part of establishing the AeroAfrica-EU "brand" a logo was designed for the project and AeroAfrica-EU posters and banners were created and used extensively for various events.

Development and enhancement of networks and partnerships

Activities in support of the key objective were strongly linked to major international events in Europe, as well as Africa. The integration of the project activities with these events ensured the potential of highest participation and maximum attention of experts from academia, research, industry, and the policy and funding communities.



The project was launched at an event held in Brussels in June 2009.

AeroAfrica-EU Project Launch

(From left to right) Mr Pablo Perez-Illana, EU DG Research, Directorate H, Transport including Aeronautics (AeroAfrica-EU Project Officer); Mr Rudolph Louw, Director: National Aerospace Centre (AeroAfrica-EU representative) and Mr Daan du Toit, Minister Counsellor: Research and Development of the South African Department of Science and Technology at the South African Embassy in Brussels (AeroAfrica-EU representative)

AeroAfrica-EU hosted and / or participated in a number of awareness development events in support of addressing the project objectives; these included:

- presentation at the SAMPE Europe International Conference SEICO, Paris, France in March 2009
- project showcasing as part of the Fraunhofer booths at the:
 - Journal and Exhibition on Composites Show JEC, Paris, France in March 2009 and March 2011
 - Composites Europe in Stuttgart, Germany in October 2009 and in Essen, Germany in September 2010
 - K2010 - International Trade Fair No. 1 for Plastics and Rubber Worldwide in Düsseldorf, Germany in October 2010
- project showcasing as part of Fraunhofer and Aerospace Valley booths at the International Paris Air Show - Le Bourget, Paris, France in June 2009. Representatives from the NAC also attended the Show and held discussions with various relevant actors in the international aerospace community
- attendance of the Aerospace Testing, Design and Manufacturing, Munich, Germany in April 2009

- presentations and session-hosting at the International Aerospace Symposium of South Africa (IASSA). Three of the AeroAfrica-EU consortium members participated in the conference’s technical sessions. In addition, AeroAfrica-EU organised and hosted a special IASSA session. More than 60 attendees participated in the session entitled “Aerospace Technology – enhancing our partnerships”. A high level of discussion and participation took place both after each presentation, as well as during the panel discussion on “International partnerships and South African aerospace R&D - the way forward”. AeroAfrica-EU subsequently exhibited at the IASSA event held in Cape Town, South Africa in November 2010

**Presentation at IASSA
“Aerospace Technology –
enhancing our partnerships”
session**



- attendance of the ILA Berlin Air Show, Berlin, Germany in June 2010
- attendance of the Farnborough International Air Show, Farnborough, United Kingdom in July 2010 and project showcasing at the event as part of the Cranfield booth
- project showcasing as part of NAC exhibit at the Africa Aerospace and Defence (AAD), Cape Town, South Africa in September 2010
- exhibiting at Aeromart International Business Convention, Toulouse, France in November 2010
- presentation at the Aeronautics Days, Madrid, Spain in March 2011.



**Networking at the AeroAfrica-EU
exhibit at Aeromart International
Business Convention, Toulouse,
France in November 2010**

Exhibiting and / or participation in these events provided opportunities to showcase the AeroAfrica-EU initiative and topical EU-SA collaborative research projects

Thematic-focused workshops were organised and held in Europe and Africa, based on inputs from the mapping and consultation exercises. The aim of these workshops was to identify areas of mutual priority and technological interest and to discuss mechanisms to best facilitate African-EU collaboration.

The Cranfield AeroAfrica-EU Roundtable Meeting, which took place in July 2010 in the United Kingdom, focussed on advanced technologies and advanced manufacturing. Topics included unmanned vehicle and sensors and titanium tooling and machining of complex shapes. Discussions also took place on the potential for participation of South African entities in the 4th FP7 calls for proposals in the Transport (including Aeronautics) theme.

The Promoting European and South African Research Cooperation in Aeronautics and Air Transport Technical Workshop, hosted at the ONERA Toulouse Centre in France in December 2010, was aimed at identifying areas/topics in aeronautics and air transport for mutual collaboration – for the 4th and 5th FP7 calls, looking forward to Horizon 2020, and potential bilateral cooperation initiatives that could springboard into FP involvement. Two technical sessions were hosted: aircraft design and tools and aero-structures and production. A demonstration of Design Software tool CEASIOM software and a technical visit of the Airbus A380 final assembly line also formed part of the programme.



Attendees of the Technical Workshop, hosted at the ONERA Centre in Toulouse, France in December 2010

Both thematic workshops resulted in possible leads for collaborative EU-SA initiatives. Leading from the Cranfield discussions, a bilateral initiative is currently in negotiation, whilst the interactions held in Toulouse resulted in a successful FP7 research project, with advanced discussions underway on possible bilateral programmes.

Plans were progressed for a workshop on Air Traffic Management (ATM). Unfortunately due to events external to the project's influence, it was not possible to host this workshop. Renewed interest has, however, been indicated, and it is anticipated that this initiative will take place at a future date.

Topics / areas for EU-SA collaboration were also discussed as part of the *Perspectives for Strengthening Aeronautics and Air Transport Research Cooperation between South Africa and the European Union Seminar* held in Pretoria, South Africa in October 2010. The seminar provided excellent insight to EU priorities in aeronautics and air transport research and innovation. The seminar audience were enlightened as to the various initiatives in the EU and advised on mechanisms and means of participation in such initiatives. SA presenters representing the private sector, academia and science councils provided information on SA R&D capabilities, resources and activities in air transport and.

Similarly, potential EU-African areas of cooperation were highlighted at the workshop on *Promoting African and European Research Cooperation in Aeronautics and Air Transport* held in April 2011 in Johannesburg, South Africa. The workshop provided a framework for thematic discussions on aeronautics and air transport R&D being conducted in South Africa, Tunisia, Egypt, Kenya and Uganda. Perspectives were also provided for the EU. Technical presentations, as well as overviews of R&D activities for the specific countries, were made by the representative researchers.



Prof Farah Zeghal Mansour from the National Engineering School of Tunis, ENIT in Tunisia presents on Air Transport Optimisation at the Promoting African and European Research Cooperation in Aeronautics and Air Transport Workshop held in Johannesburg, South Africa in April 2011

The Pretoria seminar led to the inclusion of a South African organisation in a consortium that submitted a Level 2 proposal for the 4th FP7 Transport call, whilst the Johannesburg workshop provided the springboard for discussions on collaborative South-South, as well as North-South, R&D initiatives in air transport and aeronautics.

AeroAfrica-EU solicited inputs from several well-known and networked European and African experts from academia, research and industry. These experts assisted in advancing the project's objectives; in reviewing and advising on project activities; in advocacy on behalf of the project and its stakeholder communities; in assisting to identify and select suitable and sustainable themes for R&D cooperation, and as appropriate, acted as match-makers advancing SA / African and European partnering. Agreement in principle was also reached in respect of establishment of a "Long Term Advisory Group" for fostering European-African cooperation in the future.

Consolidation and mobilisation towards supporting European FP7

One of the main objectives of the AeroAfrica-EU was to raise awareness within the African R&D community of the 7th EU Framework Programme in general and in the thematic area "aeronautics and air transport" in particular. *Vice versa*, the project also sought to promote African, and in particular SA, aeronautics R&D expertise in Europe. In many instances, so as to optimise resources and maximise impact, activities in support of this objective were integrated with events associated with other project objectives.

AeroAfrica-EU offered services related to the dissemination of information on different aspects of FP7. This information included details on the technical work programmes, but also covered for example, funding mechanisms, legal aspects or intellectual property rights. In general, the AeroAfrica-EU initiative acted as a facilitator for African R&D actors to enter FP7 consortia.



Two call analysis and training workshops, to create awareness around the FP7 3rd Calls for proposals in the Transport (including Aeronautics) theme, were held in September 2009, in Pretoria and Stellenbosch, South Africa. Presentations covered an overview of AeroAfrica-EU, FP7 Call Analysis, FP7 project processes and DST supporting instruments. The workshops were well attended and interest generally was high.

Information gathered from the analysis and training workshops was used to populate the mapping database, as well as prepare for the FP7 Transport Day and Brokerage event hosted by the European Commission and the ETNA network respectively, in Brussels, Belgium in September 2009.

AeroAfrica-EU presented at the ETNA event and also provided partner profiles of South African organisations interested in joining consortia making submissions for the 3rd FP7 call. The project, its objectives and the aspiration for increased South African (African) collaboration with EU partners, especially within the context of FP7, were also highlighted at a cocktail reception organised at the South African Embassy in Brussels, Belgium in September 2009. As an outcome of hosting / participating in these events, several European organisations indicated interest in possible partnering with South Africa organisations.

The 4th call for proposals for the FP7 Transport (including Aeronautics) theme centred mainly on Level 2 research topics in aeronautics and air transport. Discussions and consortia addressing this call were initiated early in the process; entry of SA organisations into these consortia was consequently challenging. AeroAfrica-EU again participated in the “FP7 Transport Info Day” and also presented the project and potential partner profiles in the context of the “ETNA brokerage event” in July 2011, in Brussels, Belgium. There were a number of European organisations that indicated an interest in potentially collaborating with South Africa partners and a contacts list was compiled and circulated.

Opportunities for SA participation in FP7 consortia were also solicited at the:

- ETNA Network Technical Forum held on 8-9 March 2010 in London, United Kingdom
- Cranfield AeroAfrica-EU Roundtable Meeting, July 2010, United Kingdom
- Promoting European and South African Research Cooperation in Aeronautics and Air Transport Technical Workshop hosted at ONERA, December 2010, Toulouse France

The project also featured in the Parliament Magazine's Research Review, where a short communiqué was compiled on the project and its key activities and the FP aeronautics and air transport projects, in which South African organisations participate, were highlighted.

In response to the July 2010 call, the consortia chose not to host general FP7 and call information sessions in SA, but rather to target organisations with the potential to engage in the call topics and engage one-to-one.

The SA and African aeronautics and air transport R&D communities were, however, kept apprised of the opportunities for collaboration in the Framework programme through:



- Development and dissemination of an interactive CD detailing participation in FP7 Transport (Aeronautics and Air Transport) theme. The CD is intended to serve as a depository of relevant information on the Framework Programme.
- Use of the AeroAfrica-EU circulation list (> 600 subscribers) and website to announce / highlight FP7 developments. Revision and supplementation of the FP7 page on the website
- Information provided at the AAD exhibit in September 2010, Cape Town, South Africa
- Awareness raising as part of AeroAfrica-EU Seminar, October 2010, Pretoria South Africa
- Information provided at the IASSA exhibit, November 2010, Cape Town, South Africa.

As an outcome of these engagements and the efforts of project champions and partner representatives, South African organisations participated in three consortia making submissions in response to the FP7 July 2010 call, with two submissions being successful.

Opportunities from Marie Curie calls for international exchanges, especially the IRSES call, were also promoted to the community.

The AeroAfrica-EU Promoting African and European Research Cooperation in Aeronautics and Air Transport Workshop, held in April 2011 in Johannesburg, South Africa, provided a platform for African aeronautics and air transport researchers to share their research work. The African representatives, from Egypt, Kenya, Tunisia, Uganda, and South Africa, were also introduced to the Framework Programme and the potential for R&D collaboration between Africa and the EU in the areas of aeronautics and air transport. Opportunities for participation in the July 2011 FP7 Aeronautics and Air Transport call were emphasised.



Presenters and participants at the AeroAfrica-EU Promoting African and European Research Cooperation in Aeronautics and Air Transport Workshop, held in April 2011 in Johannesburg, South Africa

AeroAfrica-EU representatives and SA researchers attended the Aerodays, March 2011, Madrid Spain. The researchers not only represented their organisations in the selected technical areas, but also engaged on behalf of the greater R&D community. A presentation was made highlighting the AeroAfrica-EU initiative and the SA skills, capacities, resources and R&D areas of interest in aeronautics and air transport. It is hoped that the contacts made at this event will facilitate the development of SA EU collaborations.



In support of promotion of the project, its objectives and activities, building awareness of SA organisations and promoting R&D collaboration in aeronautics and air transport between SA and EU, AeroAfrica-EU produced a number of dissemination instruments. Two project brochures and annual project newsletters were also designed and published. The project information platform was enhanced, by extending the dedicated project website to include a searchable expertise database on the capacities of African R&D actors. As part of this activity, a profile page was created, facilitating the provision of organisational information and allowing for easy uploading to the AeroAfrica-EU database. An MS Access database was also created for easy maintenance of information and development of reports. The organisational catalogues were also made available on-line via the website. In addition, an interactive catalogue CD was developed for dissemination.

Regular contact and information sharing was maintained with the AeroAfrica-EU community (circulation list in excess of 600 subscribers) through e-mail communiqués.



Project brochures and newsletters

Identification and demonstration of mutual interest and benefit in S&T cooperation

AeroAfrica-EU's intent was on highlighting and improving existing S&T cooperation in the aeronautics domain between the EU and SA and other African countries and on identifying mutual needs and priorities, and instituting actions to address these, so as to derive mutual benefit. . Activities in support of these aims are also embedded in the actions of other project objectives.

Contributions were made to the outlined objectives through the creation of the mapping database and partner profiles and through development of a "contacts list" that facilitated matching and collaboration of SA and EU organisations. To facilitate and develop an awareness of bilateral cooperation instruments between SA and EU member states, a page was developed on the Aero-Africa-EU website, highlighting the various existing S&T agreements.

Opportunities to initiate and broaden current collaborative initiatives, as well as develop new collaboration frameworks were promoted through the hosting of and participation in the various workshops and meetings as discussed. Efforts towards identifying research areas of joint research needs and priorities and developing of research agenda to address requirements were undertaken through leveraging targeted initiatives and through engaging with groups of researchers.

AeroAfrica-EU was kept abreast of actions of the EU aeronautics and air transport technology platforms through the involvement of Consortium partners in these initiatives, as well as through the support, advice and championship provided to the project by its European academic, research and industry experts. The project also engaged in the ETNA brokerage events and with the CAAST-Net Eranet and ABEST II support action. These activities were important in maintaining the overall profile of the project, its objectives and activities, as well as informing the consortium on potential areas where there exists mutual need and interest.

EU-SA collaboration was further strengthened through bilateral cooperation arrangements. In this regard, four memorandums of understanding have been concluded / are in negotiation between EU and SA institutions. Collaborative initiatives are being pursued to develop advanced capabilities and world leading applied research. Access to resources, as well as student / staff exchanges is also being undertaken as part of these programmes. These engagements comprise a foundation for further collaboration between EU and SA / African entities.

Dr Andras Siegler, Director of Transport (including aeronautics research), Directorate-General Research, EC, and Dr Arnoldas Milukas, Head of Unit: Horizontal Aspects and Coordination Transport visited South Africa in October 2010. The AeroAfrica-EU Consortium facilitated a seminar on *Perspectives for Strengthening Aeronautics and Air Transport Research Cooperation between South Africa and the European Union*. On conclusion of the visit, Dr Siegler and Prof Auf der Heyde, Deputy Director-General, International Cooperation and Resources signed a joint statement on behalf of the Transport Directorate of DG RTD of the European Commission and the South African Department of Science and Technology (DST), whereby the parties agreed to promote transport research between South Africa and the European Union. The recommendations from this meeting will form part of the EU-SA Joint Science and Technology Coordination Committee (JSTCC) discussions going forward.

Following inputs derived from the various consultations with SA and EU aeronautics and air transport R&D representatives throughout the duration of the project, a draft framework was created and formed the basis for the discussion with representatives from government, academia, science councils and industry. A subsequent refined, interim *Strategic Framework for Promoting South Africa – EU Research and Development Cooperation in Aeronautics and Air Transport* was produced. The key recommendations arising from this process are:

- Maintenance of a focussed, well-coordinated initiative achieved through policy dialogues between South Africa and the EU
- Development and maintenance of strategic relationships with large EU OEMs
- Maintenance of these networks through frequent technical and policy level interaction and joint human capital development programmes
- Improvement in the levels of information sharing
- an interaction structure, with identified instruments and programmes, was suggested for enhancing EU-SA interactions on aeronautics R&D.

A joint EU-SA workshop is proposed to further explore these options and, define and constitute mechanisms for achieving the above-mentioned.

DISSEMINATION ACTIVITIES AND POTENTIAL IMPACT

The AeroAfrica-EU initiative represents the first attempt to significantly capture the aeronautics and air transport capabilities and needs of the EU and SA in a complementary manner, useable as qualitative tools to enhance further co-operation.

AeroAfrica-EU used diverse platforms and delivery formats to convey information. AeroAfrica-EU activities included support of its website, brochures, leaflets, posters; e-communiqués, training materials, etc. A crucial aspect of AeroAfrica-EU was the promotion of the project and the EU-SA/African cooperative initiatives. The outcome of events and the promotion of AeroAfrica-EU, its objectives and its activities were captured in both electronic and printed media. AeroAfrica-EU also utilised various briefings, forums, workshops, exhibitions and conferences to achieve its objectives, to convey the outcomes of its activities, and to promote the development of excellence. AeroAfrica-EU also contributed to JSTCC meetings and events for the aeronautics and air transport EU NCP network.

Public access to information and the development of knowledge-based societies are key policy objectives of both the EU and SA. AeroAfrica-EU activities included furthering policy sharing and debate between the EU and SA, and promoting joint identification of priorities for policy makers in the respective countries. The website, communiqués and various events were also used to share policy information to the end-user community, as well as the broader public. The various instruments employed by the project were intended to not only to disseminate information to the S&T community and government representatives, but to provide forums for participation of the non-governmental sector, the media, the private sector, and society as a whole. The dissemination instruments, therefore, were intended not only for sharing information with the end-user community, but also the broader public.

AeroAfrica-EU is inherently about the use and sharing of knowledge. This intent was intrinsic to its activities and formulated into most of its deliverables. Similarly, AeroAfrica-EU was in itself a disseminating instrument; all its objectives and activities were intricately linked with communication of information to the project team, to the EC, to the SA, African and EU research communities, to partners and networks, to the policy environment, to the general public, and to all other stakeholders.

The use and dissemination of the information and knowledge collected throughout the project after the official closure of the project is an important consideration of the project team. In this respect plans have been implemented to maintain the project website for a period of 12 months after official closure of the project, whereafter the webpage will constitute a link on the DST / ESASTAP websites. Similarly, catalogue information will be updated and supplemented via the website, and the community will continue to be informed through e-communiqués during this period. Access to the project document depository, presentations and the like will, thus, continue for an indefinite period.

The information and documents created and / or assembled by the AeroAfrica-EU consortium will be shared, as appropriate, with other projects / stakeholders. These actions are, therefore, designed to maintain and grow the impetus of the AeroAfrica-EU initiative and the original intent in establishing the project.

Relations with the EU are undoubtedly SA's most strategic partnership in international S&T relations. The SA government and the EC affirmed their commitment to closer cooperation on research issues during the Sixth annual meeting of the SA-EU JSTCC held in Brussels in 2007. The parties committed to "*pursue collaboration with renewed vigour, both within the context of Framework Programme participation, as well as through collaboration via other relevant instruments.*" AeroAfrica-EU in supporting the realisation of the JSTCC actions, contributes to the commitments made during the meeting, thereby beneficially impacting on the SA-EU relationship.

AeroAfrica-EU interventions have assisted national and institutional activities in the establishment of long-term S&T partnerships and networks between scientists and institutions of SA and the relevant EU member states. These relationships facilitate access to knowledge and expertise that would otherwise not be available to the participating parties. This in turn promotes the development of a strong and coherent scientific and technological base, allowing for greater innovation and promoting competitiveness in the global economy.

AeroAfrica-EU has, through the leveraging of resources with information and research platforms and the linking of NCP networks, promoted the exchanges of best practices, thereby enhancing systems and processes for the development of networks and partnerships between EU-SA-Third Countries, and also facilitating greater FP7 participation. AeroAfrica-EU activities in this regard are thus contributing to the internationalisation of the European Research Area (ERA).

AeroAfrica-EU leveraged the potential synergies arising from the identification of areas of bilateral cooperation in aeronautics for R&D cooperation, into enhanced FP7 cooperation. AeroAfrica-EU emphasised the opportunities and benefits associated with networking and partnership development. FP7 participation was introduced to all sectors of the SA aeronautics and air transport R&D communities, concomitantly addressed economic growth evolving from S&T innovations. Participation by SA in FP7 contributes to building research and development capacity, and enforces the requirement of greater government investment in S&T. The impact of involvement in FP7 and the enhancement of S&T capacity promote SA meeting its targets of investment in R&D. SA involvement in FP7 contributes to the EU's goals of becoming *the most competitive and dynamic knowledge-based economy in the world* and to strengthening international research cooperation so as to *reap the full benefits of internationalisation of research, technology and development, to contribute to the production of global public goods, and to further integrate the Community into the world-wide research.*

Contact details:

Project website: www.aeroafrica-eu.org

E-mail: info@aeroafrica-eu.org / transport.ncp@esastap.org.za

2. USE AND DISSEMINATION OF FOREGROUND

Section A: Dissemination measures

TEMPLATE A1: LIST OF SCIENTIFIC (PEER REVIEWED) PUBLICATIONS, STARTING WITH THE MOST IMPORTANT ONES										
NO.	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages	Permanent identifiers(if available)	Is/Will open access provided to this publication?
<i>None to report – this was a support action with no scientific (peer reviewed) publications produced</i>										

TEMPLATE A2: LIST OF DISSEMINATION ACTIVITIES						
No.	Type of activity	Lead Beneficiary	Title, Date and Place	Type of audience	Size of audience	Countries addressed
1	Exhibition	Fraunhofer	Journal end Exhibition on Composites Show (JEC), March 2009, Paris France	Scientific Community Industry Civil Society Policy makers	10000+	International
2	Conference	Fraunhofer	SAMPE Europe International Conference SEICO, March 2009, Paris France	Scientific Community Industry Civil Society	400	International

				Policy makers		
3	Exhibition	Fraunhofer	Aerospace Testing Design Manufacturing Expo, April 2009, Munich Germany	Scientific Community Industry Civil Society	10000+	International
4	Exhibition	Fraunhofer	International Paris Air Show - Paris Le Bourget, June 2009, Paris France	Scientific Community Industry Civil Society	10000+	International
5	Other	DST	AeroAfrica-EU launch meeting, June 2009, Brussels Belgium	Scientific Community Industry Policy makers	9	SA, EU
6	Workshop	Wits	FP7 training workshop, September 2009, Pretoria South Africa	Scientific Community Industry Policy makers	34	SA
7	Workshop	Wits	FP7 training workshop, September 2009, Cape Town South Africa	Scientific Community Industry Policy makers	21	SA
8	Workshop	Wits	AeroAfrica-EU Mapping Consultation Workshop, September 2009, Pretoria South Africa	Scientific Community Industry Policy makers	13	SA
9	Workshop	Aerospace Valley	FP7 Info day and ETNA brokerage, September 2009, Brussels Belgium	Scientific Community Industry	270	EU International

				Civil Society Policy makers		
10	Conference	Wits	International Aerospace Symposium of South Africa (IASSA 2009), November 2009, Centurion South Africa	Scientific Community Industry Civil Society Policy makers	140	SA International
11	Other	Aerospace Valley	ETNA Network Technical Forum, March 2010, London United Kingdom	Scientific Community Industry Policy makers	37	EU International
12	Exhibition	Fraunhofer	ILA Berlin Air Show, June 2010, Berlin Germany	Scientific Community Industry Civil Society	10000+	International
13	Presentation	Wits	ICAO meeting, June 2010, Cairo Egypt	Scientific Community Industry Policy makers	112	International
14	Workshop	Cranfield University	Cranfield AeroAfrica-EU Roundtable Meeting, July 2010, Cranfield United Kingdom	Scientific Community Industry Policy makers	16	UK, SA, Poland, Germany
15	Exhibition	Cranfield University	Farnborough International Air show, 20-25 July 2010, Farnborough, United Kingdom	Scientific Community Industry Civil Society	10000+	International

16	Other	Aerospace Valley	FP7 Info day and ETNA brokerage, July 2010, Brussels Belgium	Scientific Community Industry Civil Society Policy makers	250	EU International
17	Exhibition	Fraunhofer	Composites Europe, September 2010, Essen Germany	Scientific Community Industry Policy makers	10000+	International
18	Exhibition	Wits	AAD exhibit in September 2010, Cape Town South Africa	Scientific Community Industry Civil Society	10000+	Africa International
19	Workshop	DST	AeroAfrica-EU seminar, October 2010, Pretoria South Africa	Scientific Community Industry Civil Society Policy makers	37	SA EU
20	Exhibition	Fraunhofer	K2010 - International Trade Fair No. 1 for Plastics and Rubber Worldwide, October 2010, Düsseldorf Germany	Scientific Community Industry Civil Society	3100	International
21	Conference	DST	IASSA exhibit, November 2010, Cape Town South Africa	Scientific Community Industry Civil Society Policy makers	120	SA International

22	Workshop	Wits	CAAST-Net workshop, November 2010, Marseille France	Scientific Community Industry Policy makers	24	EU Africa
23	Exhibition	Wits	AEROMART Exhibit, 30 November - 2 December 2010, Toulouse France	Scientific Community Industry Civil Society	2200	International
24	Workshop	Aerospace Valley	Promoting European and South African Research Cooperation in Aeronautics and Air Transport Technical Workshop hosted at ONERA, 3 December 2010, Toulouse France	Scientific Community Industry Policy makers	25	EU SA Check event report
25	Workshop	Wits	ABEST II meeting, March 2011, Buenos Aires, Argentina	Scientific Community Industry Policy makers	30	Argentina Chile Bolivia France SA
26	Exhibition	Fraunhofer	Journal end Exhibition on Composites Show (JEC), March 2010, Paris France	Scientific Community Industry Civil Society Policy makers	10000+	International
27	Conference	Wits	Aerodays 2011, March 2011, Madrid, Spain	Scientific Community Industry Civil Society Policy makers	2000	EU International

28	Workshop	Wits	AeroAfrica-EU African Workshop, April 2011, Johannesburg South Africa	Scientific Community Industry Policy makers	32	Event report SA Uganda Kenya Egypt Tunisia Germany France UK
29	Publication	Wits	AeroAfrica-EU newsletter 1 st edition	Scientific Community Industry Civil Society Policy makers	500	International
30	Publication	Fraunhofer	AeroAfrica-EU newsletter 2 nd edition	Scientific Community Industry Civil Society Policy makers	500	International
31	Publication	Wits	AeroAfrica-EU e-communiqués	Scientific Community Industry Civil Society Policy makers	500	International
31	Publication	Wits	AeroAfrica-EU catalogue (hard copy, electronic and CD)	Scientific Community Industry Policy makers	500	EU SA International

32	Presentation, publication and web	Wits	AeroAfrica-EU FP7 training information (electronic and CD)	Scientific Community Industry	500	SA Africa International
33	Presentation, publication and web	Wits	AeroAfrica-EU marketing brochures	Scientific Community Industry Civil Society Policy makers	500	EU SA International
34	Publication	Wits	AeroAfrica-EU banners and posters	Scientific Community Industry Civil Society Policy makers	Participants at all events hosted by AeroAfrica-EU	EU SA International
35	Publication	DST	Feature in the Parliament Magazine's Research Review	Scientific Community Industry Civil Society Policy makers	6900	EU International
36	Web	Wits	AeroAfrica-EU website	Scientific Community Industry Civil Society Policy makers	>15000 / month	SA EU International

Section B: Exploitable foreground and plans for exploitation

TEMPLATE B1: LIST OF APPLICATIONS FOR PATENTS, TRADEMARKS, REGISTERED DESIGNS, ETC.					
Type of IP Rights	Confidential Click on YES/NO	Foreseen embargo date dd/mm/yyyy	Application reference(s) (e.g. EP123456)	Subject or title of application	Applicant (s) (as on the application)
<i>None to report – this was a support action with no foreground produced suitable for statutory protection</i>					

Type of Exploitable Foreground	Description of exploitable foreground	Confidential Click on YES/NO	Foreseen embargo date dd/mm/yyyy	Exploitable product(s) or measure(s)	Sector(s) of application	Timetable, commercial or any other use	Patents or other IPR exploitation (licences)	Owner & Other Beneficiary(s) involved
<i>None to report – this was a support action with no foreground produced suitable for statutory protection</i>								

3. REPORT ON SOCIETAL IMPLICATIONS

A General Information	
Grant Agreement Number:	ACS8-GA-2009-234092
Title of Project:	Promoting European - South African Research Cooperation in Aeronautics and Air Transport
Name and Title of Coordinator:	University of the Witwatersrand, Johannesburg, Wits Commercial Enterprise (Pty) Ltd Cristina Pinto, Research Support Manager
B Ethics	
1. Did your project undergo an Ethics Review (and/or Screening)?	NO
2. Please indicate whether your project involved any of the following issues	
RESEARCH ON HUMANS	
• Did the project involve children?	NO
• Did the project involve patients?	NO
• Did the project involve persons not able to give consent?	NO
• Did the project involve adult healthy volunteers?	NO
• Did the project involve Human genetic material?	NO
• Did the project involve Human biological samples?	NO
• Did the project involve Human data collection?	NO
RESEARCH ON HUMAN EMBRYO/FOETUS	
• Did the project involve Human Embryos?	NO
• Did the project involve Human Foetal Tissue / Cells?	NO
• Did the project involve Human Embryonic Stem Cells (hESCs)?	NO
• Did the project on human Embryonic Stem Cells involve cells in culture?	NO
• Did the project on human Embryonic Stem Cells involve the derivation of cells from Embryos?	NO
PRIVACY	
• Did the project involve processing of genetic information or personal data (e.g. health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)?	NO
• Did the project involve tracking the location or observation of people?	
RESEARCH ON ANIMALS	
• Did the project involve research on animals?	NO
• Were those animals transgenic small laboratory animals?	NO
• Were those animals transgenic farm animals?	NO
• Were those animals cloned farm animals?	NO
• Were those animals non-human primates?	NO
RESEARCH INVOLVING DEVELOPING COUNTRIES	
• Did the project involve the use of local resources (genetic, animal, plant etc.)?	NO
• Was the project of benefit to local community (capacity building, access to healthcare, education etc.)?	NO

DUAL USE		
• Research having direct military use		NO
• Research having the potential for terrorist abuse		NO
C Workforce Statistics		
3. Workforce statistics for the project: Please indicate in the table below the number of people who worked on the project (on a headcount basis).		
Type of Position	Number of Women	Number of Men
Coordinator		
Wits	1	4
Wits Enterprise	4	2
Work package leaders		
DST	5	3
KTH	1	2
Fraunhofer	0	3
Cranfield	1	5
Experienced researchers (i.e. PhD holders)	N/A	N/A
PhD Students	N/A	N/A
Other	N/A	N/A
4. How many additional researchers (in companies and universities) were recruited specifically for this project?		2
Of which, indicate the number of men:		1

D Gender Aspects																	
5.	Did you carry out specific Gender Equality Actions under the project?	<table border="1"> <tr> <td>X</td> <td>Yes</td> </tr> <tr> <td></td> <td>No</td> </tr> </table>	X	Yes		No											
X	Yes																
	No																
6.	Which of the following actions did you carry out and how effective were they? N/A																
		<table border="1"> <thead> <tr> <th></th> <th>Not at all effective</th> <th>Very effective</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> Design and implement an equal opportunity policy</td> <td><input type="radio"/> <input type="radio"/></td> <td><input type="radio"/> <input type="radio"/> <input type="radio"/></td> </tr> <tr> <td><input type="checkbox"/> Set targets to achieve a gender balance in the workforce</td> <td><input type="radio"/> <input type="radio"/></td> <td><input type="radio"/> <input type="radio"/> <input type="radio"/></td> </tr> <tr> <td><input type="checkbox"/> Organise conferences and workshops on gender</td> <td><input type="radio"/> <input type="radio"/></td> <td><input type="radio"/> <input type="radio"/> <input type="radio"/></td> </tr> <tr> <td><input type="checkbox"/> Actions to improve work-life balance</td> <td><input type="radio"/> <input type="radio"/></td> <td><input type="radio"/> <input type="radio"/> <input type="radio"/></td> </tr> </tbody> </table>		Not at all effective	Very effective	<input type="checkbox"/> Design and implement an equal opportunity policy	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="checkbox"/> Set targets to achieve a gender balance in the workforce	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="checkbox"/> Organise conferences and workshops on gender	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="checkbox"/> Actions to improve work-life balance	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/>
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X	Other:	Assessment of participation in project activities															
7.	Was there a gender dimension associated with the research content – i.e. wherever people were the focus of the research as, for example, consumers, users, patients or in trials, was the issue of gender considered and addressed?																
	<input type="radio"/> Yes- please specify	<input type="text"/>															
X	No																
E Synergies with Science Education																	
8.	Did your project involve working with students and/or school pupils (e.g. open days, participation in science festivals and events, prizes/competitions or joint projects)?																
	<input type="radio"/> Yes- please specify	<input type="text"/>															
X	No																
9.	Did the project generate any science education material (e.g. kits, websites, explanatory booklets, DVDs)?																
	<input type="radio"/> Yes- please specify	<input type="text"/>															
X	No																
F Interdisciplinary																	
10.	Which disciplines (see list below) are involved in your project?																
2.3	Main discipline ³ :																
<input type="radio"/>	Associated disci	<input type="radio"/> Associated discipline ³ :															

G Engaging with Civil society and policy makers			
11a	Did your project engage with societal actors beyond the research community? (if 'No', go to Question 14)	X	Yes No
11b	If yes, did you engage with citizens (citizens' panels / juries) or organised civil society (NGOs, patients' groups etc.)? <input type="radio"/> No <input type="radio"/> Yes- in determining what research should be performed <input type="radio"/> Yes - in implementing the research <input type="radio"/> Yes, in communicating /disseminating / using the results of the project		
11c	In doing so, did your project involve actors whose role is mainly to organise the dialogue with citizens and organised civil society (e.g. professional mediator; communication company, science museums)?	<input type="radio"/> <input type="radio"/>	Yes No
12.	Did you engage with government / public bodies or policy makers (including international organisations) <input type="radio"/> No <input checked="" type="radio"/> Yes- in framing the research agenda <input checked="" type="radio"/> Yes - in implementing the research agenda <input checked="" type="radio"/> Yes, in communicating /disseminating / using the results of the project		
13a	Will the project generate outputs (expertise or scientific advice) which could be used by policy makers? <input checked="" type="radio"/> Yes – as a primary objective (please indicate areas below- multiple answers possible) <input type="radio"/> Yes – as a secondary objective (please indicate areas below - multiple answer possible) <input type="radio"/> No		
13b	If Yes, in which fields?		
	Research and Innovation Transport		

13c If Yes, at which level?		
<input type="radio"/>	Local / regional levels	
<input type="radio"/>	National level	
<input type="radio"/>	European level	
<input checked="" type="radio"/>	International level	
H Use and dissemination		
14. How many Articles were published/accepted for publication in peer-reviewed journals?	None	
To how many of these is open access provided?	N/A	
How many of these are published in open access journals?	N/A	
How many of these are published in open repositories?	N/A	
To how many of these is open access not provided?	N/A	
Please check all applicable reasons for not providing open access:	N/A	
<input type="checkbox"/> publisher's licensing agreement would not permit publishing in a repository <input type="checkbox"/> no suitable repository available <input type="checkbox"/> no suitable open access journal available <input type="checkbox"/> no funds available to publish in an open access journal <input type="checkbox"/> lack of time and resources <input type="checkbox"/> lack of information on open access <input type="checkbox"/> other	N/A	
15. How many new patent applications ('priority filings') have been made? ("Technologically unique": multiple applications for the same invention in different jurisdictions should be counted as just one application of grant).	None	
16. Indicate how many of the following Intellectual Property Rights were applied for (give number in each box).	Trademark	N/A
	Registered design	N/A
	Other	N/A
17. How many spin-off companies were created / are planned as a direct result of the project?	None	
Indicate the approximate number of additional jobs in these companies:	N/A	
18. Please indicate whether your project has a potential impact on employment, in comparison with the situation before your project:		
<input type="checkbox"/> Increase in employment, or <input type="checkbox"/> Safeguard employment, or <input type="checkbox"/> Decrease in employment, <input type="checkbox"/> Difficult to estimate / not possible to quantify	<input type="checkbox"/> In small & medium-sized enterprises <input type="checkbox"/> In large companies <input checked="" type="checkbox"/> None of the above / not relevant to the project	

<p>19. For your project partnership please estimate the employment effect resulting directly from your participation in Full Time Equivalent (FTE = one person working fulltime for a year) jobs:</p> <p>Difficult to estimate / not possible to quantify</p>	<p><i>Indicate figure:</i></p> <p>X</p>		
<p>I Media and Communication to the general public</p>			
<p>20. As part of the project, were any of the beneficiaries professionals in communication or media relations?</p> <p style="text-align: center;"> <input type="radio"/> Yes <input checked="" type="radio"/> No </p>			
<p>21. As part of the project, have any beneficiaries received professional media / communication training / advice to improve communication with the general public?</p> <p style="text-align: center;"> <input type="radio"/> Yes <input checked="" type="radio"/> No </p>			
<p>22 Which of the following have been used to communicate information about your project to the general public, or have resulted from your project?</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Press Release <input type="checkbox"/> Media briefing <input type="checkbox"/> TV coverage / report <input type="checkbox"/> Radio coverage / report <input checked="" type="checkbox"/> Brochures /posters / flyers <input checked="" type="checkbox"/> DVD /Film /Multimedia </td> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Coverage in specialist press <input checked="" type="checkbox"/> Coverage in general (non-specialist) press <input type="checkbox"/> Coverage in national press <input type="checkbox"/> Coverage in international press <input checked="" type="checkbox"/> Website for the general public / internet <input checked="" type="checkbox"/> Event targeting general public (festival, conference, exhibition, science café) </td> </tr> </table>		<input checked="" type="checkbox"/> Press Release <input type="checkbox"/> Media briefing <input type="checkbox"/> TV coverage / report <input type="checkbox"/> Radio coverage / report <input checked="" type="checkbox"/> Brochures /posters / flyers <input checked="" type="checkbox"/> DVD /Film /Multimedia	<input checked="" type="checkbox"/> Coverage in specialist press <input checked="" type="checkbox"/> Coverage in general (non-specialist) press <input type="checkbox"/> Coverage in national press <input type="checkbox"/> Coverage in international press <input checked="" type="checkbox"/> Website for the general public / internet <input checked="" type="checkbox"/> Event targeting general public (festival, conference, exhibition, science café)
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<p>23 In which languages are the information products for the general public produced?</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Language of the coordinator <input type="checkbox"/> Other language(s) </td> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> English </td> </tr> </table>		<input type="checkbox"/> Language of the coordinator <input type="checkbox"/> Other language(s)	<input checked="" type="checkbox"/> English
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