

# 2012 AFRICA-EU COOPERATION FORUM ON ICT

## EVENT REPORT, DEC. 2012

Teaming-up for a Strengthened and Coordinated Approach to Foster Euro-African Innovative Cooperation on ICT



### INTRODUCTION

The '2012 Africa-EU Cooperation Forum on ICT' was held on November 28-29, 2012 at the Centro Cultural de Belém (CCB) in Lisbon, Portugal. The event has been organised by the EuroAfrica-P8 EU/FP7 funded project in the framework of the EuroAfrica-ICT Initiative and with the support of the National Science Foundation (FCT) of Portugal. This major event was the fifth of a series of very successful conferences organised by the EuroAfrica-ICT Initiative under the aegis of the European and the African Union Commissions (EC & AUC):

- #1: March 25-26, 2009 – Brussels, Belgium
- #2: February 4, 2010 – Addis Ababa, Ethiopia
- #3: December 7-8, 2010 – Helsinki, Finland
- #4: November 14-15, 2011 – Cape Town, South Africa

Organised in the framework of the Africa-EU Strategic Partnership (JAES) and hosted by the Government of Portugal through the Ministry of Education and Science (MEC), this 5th Forum edition mainly aimed at strengthening and supporting the development of cooperation on ICT research and ICT4D between Africa and Europe.

While this report gives short summaries and impressions, more details, the full agenda, copies of the presentations and other related information can be found on the Forum [website](#).

The Forum was an event filled with discussions and debates, networking opportunities and knowledge sharing among key stakeholders in the field and policymakers coming from all over Europe and Africa.

### Objectives

This event presented a unique opportunity for all parties to:

- Reflect on progress made and lessons learnt on ICT research and development in Africa and its contribution through partnerships to economic growth, improved quality of life and efficient service delivery;



- Gain an insight on the status and perspectives of the "Africa-EU Strategic Partnership on Science, Information Society and Space" (the so-called Partnership 8) and support its action plans;
- Learn more about the status and perspectives of the EC and AUC research programmes;
- Enhance the development of Euro-Africa collaborative ICT research projects and identify potential partners;
- Highlight the range and excellence of ICT research in Africa and in Europe;
- Allow participative and interactive working sessions on ICT research and development through panel debates and interactive thematic sessions;
- Network with peers and key stakeholders in the field (private/public bodies);
- Hear about opportunities to enhance African participation in FP7;
- Get detailed information on successful EU-African FP7 cooperation projects and EU-African PPPs (Public-Private Partnerships);
- Exchange views, share information, and identify synergies in order to increase the impact of their activities.



The event was attended by 215 participants: 65 from Africa, 144 from Europe and 6 from elsewhere (namely Australia, Canada, India and the USA). This included 24 African countries and 17 European countries. Among them: Policy-makers | Senior representatives from Governments | Representatives from international development cooperation agencies | ICT project managers | Programme managers | Heads of research labs | Researchers | IT engineers | Deans, directors, lecturers and researchers from universities and the higher education sector | Managers of NGOs, professional associations, centres of excellence, trade unions, chambers of commerce, etc. | Industry stakeholders | etc.). Thematic discussions included a wide range of new developments on

ICT research, development and innovation in e-Learning, e-Health, e-Governance, e-Infrastructures, e-Libraries, e-Agriculture and e-Environment, Future Internet and Internet of Things, Trustworthy ICT, Mobile Technology applications and Living Labs. The comprehensive programme ensured that all participants developed international, cross-cutting contacts and enhanced their knowledge and expertise in collaborative ICT research and innovation.

The '2012 Africa-EU Cooperation Forum on ICT' featured various session types:

- Plenary sessions (featuring officials from the European Commission, the African Union Commission, Governments and internationally acknowledged ICT experts);
- Presentation sessions (organised around the main conference themes);
- Discussions and debates sessions (offering participants the opportunity to actively contribute to the Conference outputs); and
- Networking sessions (aiming at facilitating additional and informal networking opportunities).

The Forum featured the official launch of the AfricaConnect project and offered a platform for exhibitions where networking was ideal and different books, brochures, research and innovation magazines and practical demonstrations from the participating sponsors of the event were displayed.

## Sponsors

In addition to the project funding from the European Commission, the primary Sponsors of this event, providing mobility grants to African participants, were AfricaConnect, eLearning Africa, the South African Department of Science and Technology, SMART technologies, NOVABASIE and GFI.



## Parallel Events

The '2012 Africa-EU Cooperation Forum on ICT' facilitated the organisation of a number of parallel events (see table below), which enabled optimum use of time and travel cost for many participants that were involved in multiple events. Of these, only the BIC Workshop and the 'Africa-EU P8 Implementation Group for Information Society (IG8/ICT)' were open and brief summaries are given below.

### The '2012 Africa-EU Week on ICT' at a Glance

	MORNING	LUNCH	AFTERNOON
<b>MONDAY Nov. 26</b>	<b>EUROAFRICA-ICT/P8 CONSORTIUM MEETING</b> (restricted to members) Organisers: Sigma Orionis + FCT Venue: FCT, Lisbon		
	<b>REC STEERING COMMITTEE MEETING</b> (restricted to members) Organiser: AUC with the support of EuroAfrica-ICT/P8 Venue: FCT, Lisbon		
<b>TUESDAY Nov. 27</b>	<b>AXIS STEERING COMMITTEE MEETING</b> (restricted to members) Organiser: AUC with the support of EuroAfrica-ICT/P8 Venue: FCT, Lisbon		<b>EEG8 + REC MEETING</b> (restricted to members) Organiser: Sigma Orionis Venue: Tropical Research Institute, Lisbon
	<b>6<sup>TH</sup> EEG8 MEETING</b> (restricted to members & invited guests) Organiser: EEG8 Chair (Cristina Vaz Tomé) with the support of EuroAfrica-ICT/P8 Venue: Tropical Research Institute		
	<b>BIC STEERING COMMITTEE MEETING</b> (restricted to members) Organiser: BIC Project Venue: CCB, Lisbon		<b>BIC OPEN WORKSHOP</b> Organiser: BIC Project Venue: CCB, Lisbon
<b>WEDNESDAY Nov. 28</b>	<b>EUROAFRICA-ICT/P8 MAIN CONFERENCE (2012 AFRICA-EU COOPERATION FORUM ON ICT), DAY 1</b> Organiser: EuroAfrica-ICT/P8 Venue: CCB, Lisbon		
<b>THURSDAY Nov. 29</b>	<b>EUROAFRICA-ICT/P8 MAIN CONFERENCE (2012 AFRICA-EU COOPERATION FORUM ON ICT), DAY 2</b> Organiser: EuroAfrica-ICT/P8 Venue: CCB, Lisbon		
<b>FRIDAY Nov. 30</b>	<b>AFRICA-EU P8 IMPLEMENTATION GROUP FOR INFORMATION SOCIETY (IG8/ICT)</b> Organisers: EC + AUC with the support of EuroAfrica-ICT/P8 Venue: Knowledge Pavilion, Lisbon		

A stylized world map in white and light blue, centered on the Atlantic Ocean, set against a dark red background with a grid pattern. The map is partially obscured by a white horizontal bar at the top of the page.

## **2012 AFRICA-EU COOPERATION FORUM ON ICT - DAY 1: Nov. 28, 2012**

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### **Opening Remarks & Conference Expected Outcomes**

The forum was officially opened on Wednesday, 28 November by Karine Valin (Managing Director of Sigma-Orionis and Coordinator of the EuroAfrica-ICT/P8 Project), who welcomed all speakers, delegates and session chairs to the conference and highlighted the three main aims of the event:

- To investigate and analyse the progress made so far on Euro-Africa cooperation on ICT;
- To identify the impediments and find the right instruments to overcome them; and
- To ensure that tangible benefits and win-win outcomes are delivered.

In her opening remarks Ms Valin expressed her gratitude to the European Commission, the African Union Commission, the Portuguese Ministries of Education, Science and Foreign Affairs and the sponsors for all the support for the forum to take place. She also extended her gratitude to the Guest of Honour, Keynote Speakers and all participants for accepting and taking their time to participate in the forum.

### **Welcome Addresses**

**Pedro Cabrita Carneiro** (Member of the Board, Fundação para a Ciência e a Tecnologia (FCT), Ministry of Education and Science, Portugal) started by highlighting the need to increase visibility of the cooperation and that the event was a networking forum between Africa and Europe. He pointed out that ICT is an enabling technology just like electricity was in the past and nanotechnology will be in future and that the Internet will change lives. He hinted that broadband access is a major priority for the use of ICT and he emphasised that the ultimate goal of ICT is the people. He also pointed out that partnership is highly important and that this project is working due to its openness and the bottom-up approach that it takes. He also indicated that the main challenge is the execution and delivery of the projects to benefit the development of human talent.

**Moctar Yedaly** (Head of the Information Society Division, African Union Commission, Addis Ababa, Ethiopia) highlighted that Europe and Africa are one community, one village and are so geographically close that the relationship between the two continents should not fail. He informed the participants that the partnership comes from 2009 when the forum started and he noted the presence of the key decision makers at the forum. He thanked the EU for its key support to the AUC programmes and he indicated that the AUC would like to play a key role in the partnership for it to grow with the aim of having something achievable by working and getting results through the structures. He hinted that ICT is not about telephones or computers but applications that transform the lives of the people. In particular he gave an example of how ICT can change the lives of those in the rural areas through e-Commerce. He then commended the EuroAfrica-ICT Initiative for the yearly forums which are enhancing the cooperation between the two regions.

**Zoran Stančić** (Deputy Director-General, DG CONNECT, European Union) challenged the participants to reflect on the progress of the partnership between Europe and Africa. He pointed out that ICTs are key enablers for economic growth and that there is still a focus on ICT and the Digital Agenda for Europe in the Horizon 2020 programme. He commended the new innovative solutions coming from



Africa, in particular mobile banking. He mentioned that the new programme has a four layer approach - the four pillars: cooperation of the joint partnership; open competitive market; ICT infrastructures for cooperation; and ICT capacity building for future leaders, ecosystems and living labs. In conclusion he referred to the budget for the next seven years which will also promote the cooperation between the two continents and he indicated that the EU is the largest donor in the world. Finally he pointed out that the key issue is that ICT is cross-cutting and there are common challenges and mutual benefits for both Africa and Europe.

**Prof Leonor Parreira** (Secretary of State of Science, Ministry of Education and Science, Portugal) started by commending the EuroAfrica-ICT Initiative for organising the forum. She reminded the participants that Portugal's links to Africa come a long way. She informed the participants that the Strategy is coming from the Lisbon Africa-EU Summit in 2007 which allowed for funding programmes in infrastructure and applications. There was an agreement for providing a unique platform which should be maintained. There are also new business models that increase economic growth. She pointed out that the partnership strongly focuses on capacity building. Portugal is ready to pursue these activities which have started with examples of e-infrastructures like the AfricaConnect project. She said the future is a crucial matter and that Portugal will be committed. She then welcomed all the participants to the EU-Africa Cooperation Week on ICT Research and the 5<sup>th</sup> EuroAfrica-ICT forum, and to Lisbon.

### **Official Launch of AfricaConnect**



The official launch of the AfricaConnect Project followed immediately after the opening session. This was the official launch of the UbuntuNet network in Europe after a similar community launch in November 2012 in Dar es Salaam, Tanzania. The project has been funded by the DANTE project with funding from the EU's DG CONNECT and the goal of the network is to reach all developing countries through the nRENs in Africa. The network will facilitate collaborative research in sub-Saharan Africa, which in turn will facilitate the achievement of the Millennium Development Goals in the region. A [video](#) showcasing the type of research activities that will be facilitated by the UbuntuNet network was shown. It featured health care at Queen Elizabeth

Central Hospital in Malawi and the collaboration with the Wellcome Trust Sanger Institute in search of drugs for the multi-drug resistant strain of non-typhoidal salmonella. The video highlighted three key areas: good networks for communication; Transformation of higher education networks for research; and collaboration through the partners of the UbuntuNet Alliance.



### **Keynote Address: eTransform Africa**

The keynote address on eTransform Africa, a World Bank Project on ICT as a transformational tool for Africa, was presented by Ilari Patrick Lindy (Senior Operations Officer with the World Bank). Lindy highlighted three pillars of the project: innovate, connect and transform. The project was launched in

May 2012. The objectives were to take stock, identify ICT applications, identify constraints, commission case studies and to develop a common framework for future ICT interventions, especially those with transformative power. In addition – looking for applications with potential for replication / scaling up, identification of the complementary roles of various stakeholders, and identification of policy gaps in creating an enabling environment.



Detailed studies were commissioned in the thematic areas of Agriculture, Climate Change and Adaptation, Education, Financial Services, Health, Local ICT Sector, Modernising Government and Trade & Regional Integration. The project encourages innovative ways to transform lives at grass-roots level and also aims at reducing the cost of broadband access. The full report is available [here](#) for download.

### **The AU & EU Programmes and their Supporting Cooperation Frameworks - Priorities, Implementation Status and Remaining Challenges**

Harry de Backer presented on ***Recent developments and perspectives for EU-Africa cooperation on ICT.***

The presentation focused on the existing and emerging trends in ICT4D. The challenge being how much is allocated to ICT as compared to the overall budget in the EU funded projects, as some of the projects do not even have budget for the ICT component.

It was highlighted that the needs of Africa are mainly capacity building and levelling the playing field for different sectors. However, funds provided to some African organisations have not been used. He gave an example of China, which is now focusing on engineering to act as a wake-up call for Europe and Africa to re-align their programmes.

Moctar Yedaly presented on ***The AU reference framework for ICT policies harmonisation & implementation of the Programme for Infrastructure Development in Africa (PIDA) & The Africa-EU Partnership on Infrastructures (3rd Partnership).***

The presentation focused on the AU reference framework on policies, regulations in Africa, infrastructure and the PIDA project. The AU wants to build an integrated, inclusive African Information Society and establish a harmonized policy. He said the PIDA project is in line with the vision of the AU and that a master plan is available to guide its implementation. The World Bank has played a huge role in the PIDA project.

The reference framework was adopted in 2008 by the ICT Ministers. The EU-Africa Partnership on infrastructure has been launched and the outcomes of the PIDA project are targeting African integration by 2040. One key outcome is to interconnect all African cities by 2040.



Cristina Vaz Tomé and Rached Hamza presented on ***The Africa-EU Partnership on Science, Information Society & Space (8th Partnership)***

The presentation provided a summarised report on the progress of the JEG8 programme, highlighting the priority areas, the main achievements and the action plan.

The priority areas of the action plan II include Science and Technology; support for the information society; cooperation on applications and technology.

Oluf Nielsen presented on ***Recent developments and perspectives for EU-South Africa cooperation on ICT.***

International R&D Cooperation is valuable to support EU competitiveness and to address global issues of common interest and mutual benefit. All countries / organisations are encouraged to start participating by submitting proposals for the current FP7 ICT Call that is open till mid-January 2013. Horizon2020 will continue to provide opportunities for international R&D collaboration.

The presentation highlighted the bi-lateral cooperation between the EU and South Africa on ICT. He said South Africa is a leading player in ICT research and the leading African participant in the Framework Programme, and among the top 10 international participants. He highlighted the recent ICT developments (dialogues, ICT Roadmap) in South Africa with its involvement in international Research and Development cooperation.

Broadband expansion is a key aspect. We should not be doing research for research-sake – it needs to be directed by local needs and local markets to see whether it will make economic difference.

Alvise Forcellini presented on ***The second Call for Proposals of the ACP-EU Cooperation Programme in Science and Technology (ACP S&T II).***

The presentation highlighted the main objectives, both continental and intercontinental, of this second call for proposals. The programme is aimed at S&T development, innovation, a science culture, S&T goals and bolstering Science, Technology, Innovation capacities.


This second Call for proposals (€20.8m) is focusing on the areas of Energy Access and Efficiency, Agriculture and Food Security. Other themes are also welcome to apply with good motivation. The participants were encouraged to participate in this second call. Further documentation on eligibility principles and partnership guidelines is available [online](#) (ref. n° 133437).

### **Exploring funding mechanisms to support Public Private Partnerships (PPPs)**

The discussion focused on the essential areas for PPPs regarding developing effective partnerships, funding and policy issues. One challenge for the PPPs is the ownership of the projects, at government and community levels.

A number of key questions were raised:

- What kind of partnerships should be seen? With an example of the recent developments in ICT R&D from the South African perspective.

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- A stylized world map in white and light blue, centered on the Atlantic Ocean, set against a dark red background with a grid pattern. The map is partially obscured by a white curved line on the right side of the page.
- How best can government engage with other agents to deliver the intended outcomes? With an example of M-Pesa in Kenya.
  - How do we move into commercialization of the PPPs? How many prototypes rolled out of the market?
  - How to engage the communities and to get people with the right skills?

As a way forward it was agreed that different stakeholders should be involved including government agencies and multinational and national banks. It was also agreed that the business sector is driving the innovation because of profits while government supports and universities act as think-tanks for supporting the innovations.

In conclusion it was suggested that the future focus of PPPs should be to look at different models as PPPs do not have a single model; it depends on several factors for successful partnerships.

### **Lively Roundtable Discussion on Africa-EU Cooperation on Open Living Labs (local innovation & technology transfer): Taking Research Results to Local Innovation**

- Q1 - How do we embrace open-innovation on a global scale by operating as collaborative platforms?
- Q2 – How do we create a shared platform (virtual) for resource sharing and storytelling?
- Q3 – What kind of communication strategy can we utilise to ensure that we are abreast of developments in research and ICT globally?

The focus was on sharing experiences on Open Living Labs with different countries having different experiences. For example South Africa has advanced experience with more than 5 years while North Africa has just started. The discussions touched on the mechanisms of collaboration with other international research institutions and the funding organizations like the World Bank.

From the lessons learnt: The labs in South Africa are now self-sustaining, bringing together academia and students; There is no one model which can be used for all countries; Several models are being used, for example making the rural areas more attractive by turning tele-centers into living labs; Living labs are not projects, many projects can come out of the living labs; Solutions take time to come out; How to manage expectations from the community on what they will get; Stakeholder management; Lack of faith within research mechanisms; Separating research results and how to apply research.

### **The Role and Priorities of the African Regional Economic Communities (RECs) as Building Blocks for Regional Integration through ICT Networks**

The discussion focused on the role of the RECs in Africa with respect to infrastructure development and harmonization across countries.

**SADC** has the Digital Agenda for 2027, which is established on 4 pillars and the short term plan by 2017.

**Comesa** covers 19 countries and is focusing on infrastructure and moving towards the free trade area, hence ICT platforms will enable the development of other sectors. Focus areas include ICT in cross border business; infrastructure; internet exchange points; capacity building for regulators; content





regulations; and sharing of data. The challenges are harmonizing across countries, that capacities are different, financing, maintenance and others.

**EAC** is the smallest REC with 5 member states and is focusing on trade facilitation by establishing infrastructure across the region.

**EACO** is an association of ICT regulators dealing with regulatory challenges across borders, cyber security management, identified gaps e.g. policy, technical expertise e.g. computer response teams, internet exchange points, working with the AU, consumer related issues and harmonizing interconnections.

**ECOWAS** was formed in 1975 and has a vision 2020 to improve human living conditions, harmonizing policy and infrastructure, the ECOWAS platform to connect offices of presidents, Foreign Affairs and agencies, the 2nd harmonizing policy and regulatory framework.

**NEPAD** is the technical body of AU overseeing implementation of regional and continental programmes, following AU values and principles. An ICT framework has been developed.

**ECCAS** is engaged in a project to have in the next 15 years a massive intervention for broadband. Their main role is to create the enabling environment and to look for international partners to support them.

**UNECA** is a framework on e-government indicators, and manage an innovation prize for Africa. There is a call for 2013. Challenges include limited resources and support.



It was noted from the audience that the focus of the RECs is on capacity building and infrastructure. The gender imbalance in REC representation is recognised and being addressed. The audience noted that there was no mention of the budgets in the RECs as regards ICT funding. This is because the budgets are more at national level and get external support from donors. The RECs meet twice a year to coordinate activities, building on experiences. They are bound by protocols from the Abuja Treaty. The EuroAfrica-ICT/P8 project will be given an opportunity to contribute to discussions.

### **Networking Cocktail offered by the AfricaConnect Partnership**

The day ended with an opportunity for the participants to network during a cocktail reception offered by the AfricaConnect Partnership. The networking was essential in facilitating exchange of contact details and relaxing after a full day of deliberations.



## 2012 AFRICA-EU COOPERATION FORUM ON ICT - DAY 2: NOV. 29, 2012

### Euro-Africa Joint ICT Research Priorities

The second day of the forum, November 29, opened with a plenary session dedicated to the Euro-African Joint ICT Research Priorities.

**Carlos Oliveira** (Policy Officer, DG CONECT, European Commission) focused on International Cooperation on ICT Research: the FP7 remaining calls for proposals and Horizon 2020 perspectives. He hinted on the budget of 80 billion Euros between 2014 and 2020. He said the project built on three pillars: International cooperation on ICT, developing a strategic plan, building on the report, also building on the inputs from the forums, moving from FP7 and focusing on international cooperation.



**Barend Taute and Hannes Toivanen** presented on the Euro-Africa Joint ICT research priorities. They explained the project methodology for identifying joint research and that the forum was to guide the context of the framework. Barend Taute pointed out that there is need to have a regional focus through the RECs. The question posed was: What is research and how to prioritise? He explored the need to provide an enabling ecosystem for successful inventions and innovation that leads to implementation. He pointed out that ICT research as such is broader than other domains. He mentioned the key levers for looking at ICT research priorities: common challenges between Europe and Africa; thematic ICT domains; and feedback from the training and awareness workshops.

During the session, announcements were made on the newly launched EU-funded projects addressing EU-Africa cooperation on e-infrastructures. The goal of the **iMentors project** is to enhance the effectiveness and coherence of national and EU research policies and international cooperation in the field of research in e-infrastructures in Sub-Saharan Africa. The objectives are to build a virtual data warehouse, develop a community of practice to support policy and sustain a stakeholder ecosystem.

The **ei4africa** EU/FP7 project aims to exploit infrastructure potential and is a 24 month project jointly between Europe and Africa based on two pillars: trade and space & science. The project is coordinated by Sigma Orionis.

**CHAIN-REDS** is the intercontinental project with duration of 30 months engaging different partners with different roles involved and aims at promoting the model of a science gateway, also focusing on clouds. The kick-off meeting will take place in Dubai.

**Ms Eunice Kariuki** (Deputy CEO and Marketing Director, Kenya ICT Board (KICTB) and EuroAfrica-ICT/P8 Project Partner, Kenya) was given the opportunity to present on the **M-Pesa** initiative which has been running for over five years. M-Pesa enables sending money to the rural areas hence bringing value to the citizens. She pointed out that the drive has been continuous innovation and customer awareness.



The audience raised a question on how we bring Africa into context. It was noted that South Africa is getting 50% of the African portion of the EU FP7 funding and it was noted that there are many common challenges between Europe and Africa, such as how to expand broadband connections. The participants observed that the intra-Africa research collaboration is weak as most projects are attached to Europe and the US. It was highlighted that Horizon 2020 is not repeating the FP7 but is engaging into more value-added interventions.

### **Keynote Addresses**

The first keynote address by **Catherinrose Barretto** (entrepreneur, KINU, Tanzania) focused on the innovation and capacity-building: a specific focus on young people and women. She presented on the KINU technical hub in Tanzania which is working on open source applications. The project brings students to work on real world problems. She gave an example of the Kids program which aims at teaching 12 year old kids on how to build robots.

The second keynote address by **José Luis Encarnaçãõ** (Prof. Dr.- Ing (Emer), TU Darmstadt, Informatik & Chairman, ICT working Group, Acatech, Germany) dwelt on the Mobile empowerment for the socio-economic development. He highlighted the difference between research and innovation. He pointed out that we are moving towards the digital world. He said that the vision for the future is the Internet of processes and currently we are moving towards the Internet of jobs which is bringing fears on job security. He continued that the new type of the Internet will be called mobile empowerment because users will be able to contribute towards the services. The key question posed from the audience was how to attract funding if you are just starting? A good example is the seed funding that the government of Kenya gives as grants to initiate starters but the challenge is what happens after one year? The participants also noted that mobile phones are a valuable tool in Africa.

### **Thematic Sessions**

The participants attended four parallel thematic sessions with each session having its specific focus based on the joint EU & Africa ICT research priority areas. There were 12 parallel sessions in total, which featured 72 invited speakers and panelists. The following gives some of the key points that were presented and discussed. Notes from the Rapporteurs can also be found on the project [website](#).

#### **1A - Technology Enhanced Learning (e-Learning & e-Skills)**

The presentations focused on the role of ICTs in enhancing teaching and learning and e-skills. Different projects were presented mainly focusing on transformative change towards inclusive, equitable, people-centred, sustainable growth and development; The ultimate objectives are: i) Human development and eradication of poverty; ii) Improving children's learning through a focus on the quality of classroom teaching in South Sudan; ii) A science-based solution for solving global illiteracy based on 20 years of research on dyslexia; and iv) Improving the quality of teaching, teachers and students learning in Mozambique since 2005.

The presentations included the following:

- Implications of the Post-2015 Agenda for the NEPAD e-Schools Initiative;
- The Connect.Teaching Project;
- ICT use for learning purposes: developing competences and establishing best practices between Universidade Nova de Lisboa & Universidade Eduardo Mondlane Mozambique;



- Technology enhanced literacy training with GraphoGame; and
- The 'Pensas Project' - Training teachers with ICT.

### **1B - e-Infrastructures & nRENs -AfricaConnect**

The session was in line with the official launch of the AfricaConnect project in an earlier session of the forum. The presentations discussed the progress made so far and the deliverables submitted, the finances involved and topology of the different EU funded e-infrastructure projects. The GÉANT project is the main EU funded project and aims at building a global Research & Education (R&E) network. Africa was the main focus through the continuous efforts being made by the UbuntuNet Alliance and its joint efforts with the other global RENs.

The presentations included the following;

- Joining the Global REN Players
- GÉANT at the Heart of R&E Networking
- Closing the Regional Network Gaps in Africa
- Exploiting e-Infrastructures: Current, Emerging and Potential Applications in Africa

### **1C - e-Government & e-Democracy**

This session on e-Government and e-Democracy approached issues such as accountability, transparency and sustainability, with a specific attention to citizens' participation through mobile phones and social media.

The presentations included the following:

- The ICT4 Democracy in East Africa Network
- Drivers, objectives and tools of Public Services reform in Portugal
- Capacity Development for Inclusive ICT Policy and Decision-Making in Africa
- The Africa4All Initiative take up in Uganda and Botswana

### **1D - ICT4D - ICT for Development**

Socio-economic development, driven by ICT, includes the need for improved network coverage, innovative services (for health, education, agriculture, financial services, government, etc.) and supporting the development of local ICT ecosystems. This includes a focus on the improvement of university infrastructures and educational programmes. Many successful projects and partnerships between African institutions and European / global organisations and institutions demonstrate the value and mutual benefit of international collaboration. Seed funding and incubators are valuable but a key challenge for these initiatives is sustainability and a strategy to scale up. Telco Regulators should cooperate and empower developers.

Fibre optic cable deployment facilitate ICT for energy saving. There are regional differences, but learning across regions and domains is valuable. Understanding of needs/requirements (consulting with communities) and impact analysis are crucial. The VOICES project is developing a Mobile Training Lab. Voice applications are very important in multi-lingual contexts. Open source software and platforms are also strongly supported.

The presentations included the following:



- How to scale up projects and sustain development
- The VOICES Project
- Sustainability powered by ICT
- ICT4DMZ: Strengthening universities' capacities for improved access, use and application of ICT for social development and economic growth in Mozambique
- Orange for development in Africa

## **2A - ICT for environmental sustainability & energy efficiency (e-Agriculture & e-Environment)**

The presentations focused on smart grid applications, key challenges in the management of agricultural knowledge using ICTs and effective use of ICTs to help small farmers to access markets and get better prices.

The presentations included the following:

- Knowledge management using ICT in agricultural and rural development in Africa
- Different Scenarios in Controlling Networked Smart Grid Energy Systems
- Countrywide Agro-ICT-infrastructure
- From raw data to high value added information on markets: an example of ICT use for small-scale farmers (an @CP-ICT funded-project)
- Innovative e-Agriculture for Productivity and Best Environmental Protection Practices in Ghana

## **2B - e-Infrastructures & nRENs – WACREN**

The participants were introduced to the West and Central African Research and Education Network (WACREN) which aims at the promotion and development of interconnection among nRENs in the region and fostering collaboration between Research & Education institutions in the region, as well as with their peers at continental and international levels. The focus was on the challenges and planned activities on the ground.

Presentations covered different efforts to improve the involvement of African institutions in research output, e.g. through capacity building in digital libraries, and the national-EU policies and international cooperation in e-infrastructures in Sub-Saharan Africa.

Presentations included the following:

- Introducing WACREN
- Supporting the development of NRENs in the WACREN region: French NRENs and their associated research organisations
- Support initiatives:
  - iRENALA, Madagascar opportunities to connect with worldwide RENs;
  - The iMentors project, e-infrastructures monitoring evaluation and tracking support system; and
  - Improving the visibility of African research output through capacity building in digital libraries.

## **2C - Connecting the EU & Africa for collaborative research**

The presentations highlighted the involvement of African institutions in the Africa-EU collaborative research framework programmes with a model example of South Africa. The session gave an overview of the EuroAfrica-ICT/P8 Initiative which aims at strengthening ICT research & policy links under the 8th



Strategic Partnership. This project works with the CAAST-Net Initiative which is promoting STI between Africa and Europe.

Participants were encouraged to submit proposals for the ERAfrica call - January 2013, which is based on 3 thematic pillars: collaborative research, innovation and capacity building projects.

The presentations included the following:

- The EuroAfrica-ICT/P8 Initiative: Strengthening ICT Research & Policy Links under the 8th Strategic Partnership (CSA)
- The CAAST-Net Initiative (INCO-Net)
- ERAfrica: Developing African-European Joint Collaboration for S&T (ERA-Net)
- The South African mechanisms and the ESASTAP Initiative
- The IST-Africa initiative (CSA)

## **2D - Mobile Applications (m-Apps incl. m-Health & m-Education) & Social Networking**

Jamo Macanze – SAIS, Mozambique – expressed the need to participate and share knowledge on innovation developments. Online experiences cannot replace the physical networks, new social networks will be more and more detailed and complex in the future; Cultural differences will always influence the way that online social networks evolve in Africa, and also how the mobile apps will be taken up in the continent.

Martti Ranin – Mobile Bond, Finland – explained the worldwide concept of Mobile Monday; 6.4 billions of mobile subscriptions in Q3 2013; global penetration is 91%; mobile data traffic doubled 2 times between Q3 2011 and Q3 2012; People don't buy things, they join things; Communities create markets; Social media changes every 6 months; The market for applications and for mobile uptake (including smartphones) is increasing.

Marlien Herselman – LLISA, South Africa – apps are useful for social cohesion and interaction; housewives sharing recipes, well-being in the community, adapt technology to people.

Dirk Elias – Fraunhofer Portugal – With respect to the download of apps: How can we focus on local demands in Africa? There is a need to focus clearly on people's needs. In Mozambique there was the case that Fraunhofer asked university students to develop apps based on their needs...and that is precisely what we need to do! What kind of apps would be developed by Africans? As just only a few apps make sense, there is no market for apps that don't provide anything useful. Apps on a smart phone will be the future world-wide.

Mmamakanye Pitse-Boshomane – CSIR, South Africa – talked about Connectivity in a broader sense and outlined that cooperation between the existing living labs is needed. There should be a clear focus on extra support in strengthening innovation – that is the main constraint in mobile apps development.

Giacomo Ranibaldi – CTA, The Netherlands – focused on the impact analysis of the usage and uptake of apps. The highest adopters of apps are English-speaking women.

McLean Sibanda – Innovation Hub, South Africa – broadband penetration is a constant; access is still a problem; and all the discussion should include that reflection.

## **3A - Advanced technology to improve health (e-Health & HIS)**

ICT can provide user-friendly, expert systems to diagnose illnesses such as malaria in local languages, and to raise awareness about the disease. The Medishare project is looking at computerising patient medical records in a standardised way – the objective is a long-term, retrospective collection of pediatric and adult patients (including critical information on allergies). The AfricaBuild portal aims to



develop advanced centres of excellence in health care, education and research and is creating a platform for African health research related information. Eb@lé-Santé is introducing ICT to hospitals, universities and clinics in the Congo using Open Clinic software. Health workers are constrained by the availability of electricity and computers. The Lesotho Health Information System provides basic, secondary and expert levels of service (at one hospital) and connects levels one and two to the expert hospital. The ICT infrastructure revolution provides new opportunities. Awareness of an EC funded project on African databases in health was lacking.

The presentations included the following:

- Web based Malaria expert system with embedded Ethiopian local languages;
- ICT for health in Africa;
- A new platform to foster health collaboration in Africa: the AfricaBuild Project
- Eb@lé-Santé: an @CP-ICT project for e-Health in DR Congo university hospitals; and
- Overview of the Lesotho ICTs in health.

### **3B - Future Internet, Internet of Things & Low Cost Technologies**



The Future Internet is not well defined yet, but it will become the technology underpinning our networked society. We can assume that different sets of communication strategies, actors and purposes will be the reality. It is likely to be content centric and not just a copy of the current Internet - an opportunity for African Telecommunications Development. IPv6 uptake is increasing. Africa and Europe both have urban/rural areas at various stages of development and access to the Internet.

The Future Internet will be built on PPPs – increasing effectiveness of business processes and infrastructures and supporting applications in transport, health, etc.

The presentations included the following:

- IPv6;
- Future Internet: an opportunity for African Telecommunication developments;
- Probing EU-Africa Cooperation on Internet of Things: the PROBES-I(o)T Project; and
- FI-PPP (Future Internet - Public-Private Partnerships) use-case project Finest (Future Internet enabled optimization of transport and Logistics business networks).

### **3C - Building & Strengthening capacities in ICT Research**

This was a Panel discussion focusing on building and Strengthening Capacity in ICT. The discussion started by looking at the individuals who work on relevant ICT research capacities, which does not necessarily come from higher education or the IT field but from highly motivated people. The challenge being how to find the people who is interested and willing to flourish, even if they are not part of any programmes or even if they don't have any university degree?

The key points under discussion were:

- The need to educate teachers to integrate ICT in schools;
- The need to attract students to study for PhD programmes;



- The need to find enthusiastic people to work on specific applications and form them (not necessarily technical people); and
- The need to involve women.

### **3D - Cyber Security & Trustworthy ICT**

The session wanted to know what is unique in Trust and Security – in Africa and globally. What are the burning issues and how should they be addressed. This session combined presentations and short discussions.

The presentations included the following

- Declarative security and trust;
- BIC - Building International cooperation for Trustworthy ICT: A long term strategy based on multi-lateral cooperation;
- Information security innovation;
- The MASSIF Project experience "Management of security information in service infrastructures;" and
- The HIPSSA Project - Support for harmonization of the ICT Policies in Sub-Saharan Africa.

Topics identified for international research collaboration include Mobile security, the Mobile Cloud Computing Paradigm, International Data Exchange architecture, Identity/Privacy, Trust management models. The EU is working towards harmonization of cyber security and trustworthy ICT and together with the ITU on global harmonization. The Cloud and Mobility require new paradigms for security services with respect to trust models.

### **Conference Main Outputs**

This was an event for anyone interested in promoting Euro-Africa ICT collaboration, supplemented by the parallel events and Steering Committee meetings which were made possible by the conglomeration of representatives from Europe and Africa.

Reflecting on the Objectives of the Forum and the various presentations and panel discussions, the following Key Points were identified by Barend Taute and Hannes Toivanen:

- **ICT provides socio-economic benefits for both Europe and Africa:** This is broadly acknowledged by all role-players. While there are differences in levels of development, the two continents still face many common challenges and there is mutual benefit from collaboration. Both sides wish to strengthen the partnership.
- **The strong role and need for guidance from and interaction with the EC and AUC:** This interaction is facilitated by a variety of groups, commonly known as JEG8, EEG8, RECs, AXIS, IG8/ICT, NEPAD, UNECA and others. The presence of all the African RECs, for example, was a unique opportunity to understand their views and current initiatives in ICT as an input to focus areas for collaboration.
- **The importance of big players:** In addition to the official EU and African organisations, there is a wealth of impact from big organisations that are active in Africa – including large multi-national corporations, internet and mobile service providers, the World Bank, the African Development Bank, the International Telecommunications Union – to mention a few.





- **There are many current, successful initiatives with growing impact:** Success stories include AfricaConnect, eTransform Africa (WB), ALICT (GESCI), Living Lab partnerships, iMentors, eI4Africa, KINU, CHAIN-REDS, CAAST-NET, BIC for Trustworthy ICT, ICT4D, VOICES, EO2HEAVEN, ERAfrica, PIDA and many others. There are enough of these to celebrate and give us hope for the future.
- **Reality about the challenges we face:** Successful research and innovation partnerships still have to overcome a shortage of funding, vast diversity across both continents, cultural peculiarities, language differences, long distances to travel, difficulty to keep ambitious timelines, policy and regulatory limitations, lack of infrastructure, shortage of human capacity and the need to learn from mistakes.
- **“Beautiful dreams”:** Various participants articulated “beautiful dreams” (as phrased by a respondent) – these were proposed, tested and enhanced. It is clear that this partnership is choosing to be positive about the future of Europe and Africa.
- **Technology:** One cannot neglect to acknowledge the role of ICT as an enabling, cross-cutting and pervasive technology for much of what is being discussed. The availability of computers and devices, internet, broadband speeds, mobile and other communication networks, and the host of social, entertainment, government and business applications that provided unprecedented value in ever increasing spheres of life.
- **Innovation and the transformational potential of ICT:** Projects should progress from challenges to R&D to implementation with impact. This requires the whole innovation ecosystem: academics, government, industry, funders and society. Projects should be based on local needs – “bottom up approaches” and “people centred solutions” – as well as involvement by policy makers. Then, in some cases, ICT has transformational impact – by changing the way we do things.
- **The Digital Advantage:** The uneven roll-out and availability of ICT has caused a massive “Digital Divide” between the “haves” and the “have not’s,” prompting the need for “ICT for Development.” The Department of Science and Technology in South Africa has chosen to turn this around and to aim for creating a Digital Advantage. The lingering emotion is that the potential Digital Advantage for both continents is so big and inspiring that we can only be positive about it.
- **Networking Works:** Judging from the buzz during the breaks between sessions, and the reluctance sometimes to interrupt the networking, it was clear that the Forum fulfilled a huge need to bring the communities together. Anecdotal feedback mentions people that met in previous forums and that are now collaborating on projects. New partnerships were formed and old ones strengthened. It was especially useful to have high level experts, key EC and AUC stakeholders, colleagues and friends in one place!
- **The Forum was a momentous event:** In addition to all the high quality technical presentations from experts, the end result was built on a huge effort to organise every detail, under guidance and leadership from the organising team and project coordinator, through perseverance to overcome difficulties, the availability of sponsorships and mobility grants, and through patience, adaptability and teamwork.

## **Closing Session & Concluding Remarks**



The closing session, co-chaired by Karine Valin (Managing Director of Sigma-Orionis and Coordinator of the EuroAfrica-ICT/P8 Project) and Laurens Cloete (Executive Director, CSIR Meraka Institute, South Africa) featured closing remarks from Klaus Pendl (Project Officer, Africa Desk Officer, DG CONNECT, European Commission), Moctar Yedaly (Head of the Information Society Division, African Union Commission, Addis Ababa, Ethiopia), Nienke Buisman (Policy Officer, Science and Technology relations with sub-Saharan African Countries, International Cooperation Unit, DG RTD, European Commission), Harry De Backer (Former Minister Councillor EU Delegation to the African Union, European Commission) and Ana Neves (Director of the Department of Information Society, Fundação para a Ciência e a Tecnologia (FCT), and EuroAfrica-ICT/P8 Project Partner, Portugal).

The closing session highlighted the following points:

- The EC can be proud about a number of success stories with international collaboration projects, including with Africa. There is already significant African participation in FP7.
- EC funding will continue to support international collaboration, but it will be increasingly strategic in nature, reinforcing cooperation with Member States and based on strategic roadmaps.
- The past week experienced intensive EU-Africa collaboration, with high level and interesting sessions and very fruitful discussions. The comprehensive scope of events enabled one to see the different pieces of the puzzle and how they connect. This was enabled by the wide scope of representatives from different sectors and fields.
- Exciting launches of new initiatives show progress but a lot more needs to be done.
- Special thanks to the event hosts (Portugal) and organisers (EuroAfrica-ICT/P8 project).
- “The curtain falls down but the show continues” – with new contacts, networks and partnerships. A lot of new ideas to implement.
- The RECs are challenged to come together to find a solution for a really big ICT4D programme in Africa.

## **Vote of Thanks**

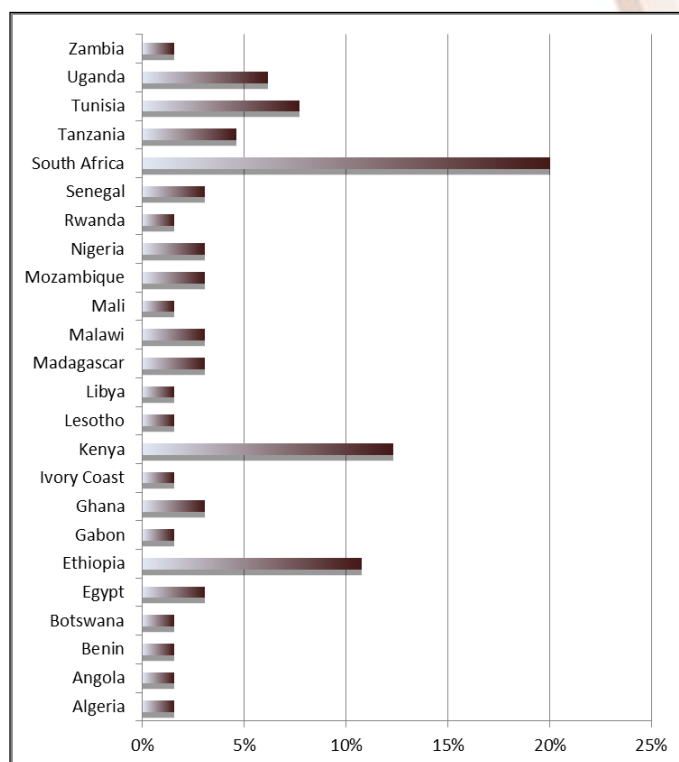
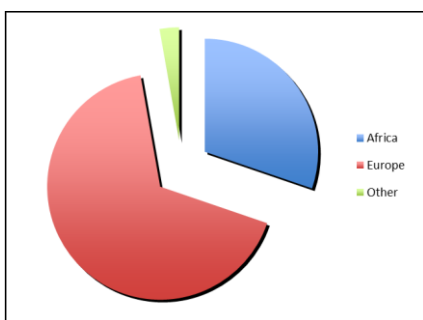
Ms Karine Valin thanked all the participants for attending and their active participation. A special word of thanks was directed at FCT Portugal for being the local organisers in Lisbon, the staff of the venue, CCB, her colleague Laura De Nale at Sigma Orionis for excellent support and the EuroAfrica-ICT/P8 consortium members for their contributions.

The next Africa-EU Cooperation Forum on ICT will be held in Africa during October/November 2013 and is planned to be held in Egypt or Uganda.



## FORUM ATTENDANCE AND FEEDBACK

The event was attended by 215 participants - 65 from Africa, 144 from Europe and 6 from other regions (Australia, Canada, India and the USA). This included 24 African countries and 17 European countries. These participants represented national and international companies, SME's, academia, government, NGO's, research institutions, the European Commission, the African Union Commission and various EU and African partnership groups. The graphs below give a summary of African participation as well as overall participation.



### Feedback from Participants:

The following is a selection of comments that were obtained in person or via email:

#### **Value of the Forum**

*"...In fact, it was for me a great opportunity to get in touch with peoples from different kind of institutions (Academia, R&D, NGO, etc.). Also, it allowed me to have an idea about many interesting ICT projects that are being conducted in African countries. We had also the occasion to witness some partnerships that have been established during the conference days; which I found an excellent outcome..."*

*"...I enjoyed taking part in the forum EuroAfrica-ICT, it was important to have a better understanding of the type of partnership between Africa and Europe in the area of ICT and to understand better the different projects that are being developed on both continents. This type of meeting is also interesting because it allows us to create a network of contacts that is important for the development of my PhD research project..."*

*"...A great networking opportunity and interesting dissemination forum for existing projects. I know you were very busy taking care of all the details during the 3 days but I hope you had a little time to notice that everyone was enjoying themselves and truly savouring the conference!"*



*"...The co-locating of the Forum with pre-events worked out very well. The participation of representatives from the Regional Economic Communities in the Forum was also invaluable especially as they are the ones that connect with policy makers and other regional stakeholders. The communication leading up to the event was good. I think the knowledge sharing objectives of the Forum are well addressed."*

*"...This event has allowed me to understand more clearly, what the priority areas are for Africa in terms of ICT and gave a very good overview of the current state of ICT R&D solutions for African challenges. I have made good contacts with researchers in my domain, and strengthened already existing relationships..."*

### **Suggestions for Improvement**

*"...My only suggestion is that the plenary session should be more interactive, during these sessions only the presenters talk and there was no space for the participants to ask questions..."*

*"...The representation of North-African countries was noticeably inferior than other communities like COMESA (eastern and southern Africa), EAC (eastern Africa), ...etc..."*

*"...Most of the panel sessions of the first day were "one-side" animations, and the attendees didn't have the occasion - because of the tight schedule - to give their opinions or asks some questions. Personally, I found the panel list rich in terms of representation (AU, EU, RECs, ...etc), and I would have preferred to know their answers to some practical issues rather than hearing presentations..."*

*"...In order to maximize the partnership opportunities between EU and Africa, I wish that the next edition will target more calls for project proposal that may interest potential attendees. In Addition, it would be very nice to have in the forum agenda a small practical workshop on how to apply and write an FP7 proposal for example..."*

*"... AfricaConnect and WACREN to be discussed together. What are we doing about increasing the ICT Research presentations from Africa? - This should be a plenary session. More should be done about identifying research challenges and proposing solutions. Thought-provoking keynote addresses are needed on ICT4D. Thematic tracks should commission an introductory presentation that gives guidance. The seating was a bit closely packed. Time management of some speakers was a problem if they don't keep to 10 minutes..."*

### **SHORT SUMMARIES OF OPEN PARALLEL EVENTS**

#### **Tuesday, Nov. 27: BIC Open Workshop on Trustworthy ICT**

The purpose of BIC (Building International Co-operation on Trustworthy ICT) [project](#) is to build cooperation between the EU and the international programme agencies and researchers in India, Brazil and South Africa within the focus areas of Trustworthy ICT, including trust, privacy and security, in order to: (a) Understand the activities and planning of the target countries; and (b) Carry out a mapping of the European Commission's planning to them, such that a common technical and policy alignment is viable. The workshop was attended by 20 African, European and other international delegates.

The workshop followed on the June 2012 Workshop and included updates and discussions on the various Work Groups (Human oriented/citizen trust and security; Network Information Security / cyber security; and Programme funding, focus and community), as well as presentations on:

- Information Security Innovation – especially related to the "cloud" and mobility needs.



- Privacy and Security of Mobile Cloud Computing – an ecosystem for a “lightweight” secure framework is needed between cloud and mobile devices.
- South African and Indian perspectives, initiatives and challenges.
- Perspectives from the EC DG Connect on Funding, Horizon2020 and the continued importance for research and development in this domain, also uniquely with international challenges to be addressed through collaboration.
- Other presentations focused on Trust in cultural settings in South Africa, Trust in the Indian context, Trustworthy issues in service composition, Designing for trustworthiness, and International Cooperation for Trust (building a multi-cultural Trust Model).

### **Friday, Nov. 30: Africa-EU Implementation Group 8 for Information Society (IG8/ICT)**

This event was organised by the EC and AUC with the support of the EuroAfrica-ICT/P8 project. The main objective was to discuss the different roles that the different stakeholders have to play in the EU-Africa Strategic Partnership. The meeting was attended by 40 participants representing the academia, industry (R&D), RECs and Governments from Africa and Europe.



While the full report will be published separately, the following are some key points (challenges/suggestions/recommendations):

- **Academic Research perspective:** Make the activities of IG8/ICT known. Promote mobility of academic staff and students. Enhance working conditions to be attractive for African researchers to stay in Africa. Broadband and infrastructure is crucial. Time and resources to apply for funding is needed. Revisit focal points – Call information needs to be distributed widely. Good ideas must be promoted even if no call is open.
- **EU and AU Member States perspective:** Collaboration and dialogue on Internet Governance needed. EU/Africa and Africa/Africa bilateral country agreements could be expanded to other countries. Member state representatives need to be empowered. Raise awareness among African and EU member states – benefits, success stories, enhanced communication, governments should take a leading role, and AUC to strategize around integration of ICT in key development programmes.



- **Research & Development perspective:** African countries need to make R&D attractive (eg tax benefits) for local companies as well as multi-nationals. Policies should promote collaboration among industry and universities. Focus should be on problem solving and applied/directed research with links to industry.
- **Industry perspective:** Industry should be made aware of the Euro-Africa initiatives, benefits to be clarified, and invited to put their research agendas on the table. IT research careers to be linked to industry. ERASMUS-type programme for mobility of African researchers to be considered. Mixed development teams to support entrepreneurs and researchers to move results to incubators, trials, scaling up and market introduction.
- **Regional Economic Community perspective:** AUC and member states to align and harmonize policies that involve RECs. Share information on how RECs are handling and promoting ICT programmes for the benefit of member states. Appropriate member state representation and communication is needed. Active RECs to bring more member states on board in the Euro-Africa partnership.

## CONCLUSIONS

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The overall consensus among the attendees of the event was that the '2012 Africa- EU Cooperation Forum on ICT' had provided them with an excellent platform for an overview of the latest developments into the on-going and planned EU-AU programmes for ICTs. The participants had the opportunity to meet the key players from Europe and Africa and exchanged experiences with international experts. They also found the interactions and lessons learnt to be of great value, in particular for joint Euro-Africa ICT collaborative research and innovation.

Event proceedings, attendee lists and a photo gallery are available [here](#).

