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D3.2 IST-Africa Horizon 2020 Workshop, Maputo, 02 December 2013

Workshop Report prepared by INTIC, Mozambique and IIMC, Ireland

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1.   Workshop Context

Horizon 2020 will commence in January 2014 as the new Framework Programme to implement research and innovation with funds of €80 billion from 2014 - 2020.

Horizon 2020 will address all research and innovation funding that was previously provided through the Framework Programmes for Research and Technical Development (e.g. FP7), Competitiveness and Innovation Programme (CIP) and European Institute of Innovation and Technology.

Three main priorities:

> **Excellence Science** – Research Infrastructures, Marie Curie (Mobility Grants)

> **Leadership in Enabling and Industrial Technologies** (LEIT) – Components & Systems, Advanced Computing, Future Internet, Content Technologies and Information Management, Robotics, Micro and Nano-electronics and photonics

> **Societal Challenges** – Health, Food Security & Agriculture, Energy, Transport, Climate action and Environment, Innovation and reflective Societies and Secure Societies

INTIC as the IST-Africa partner in Mozambique organised a Horizon 2020 Workshop in Maputo on 02 December 2013. All relevant stakeholders were invited to participate to raise awareness of the opportunity for research cooperation at international level.

This workshop was well attended with 48 participants included representatives from INAQUA - Gestora dos Fundos da União Europeia; Uni.Estadual Michigan; Calipso Lda; Centro de Estudos Africanos; Centro de Integração Regional da SADC da Universidade Eduardo Mondlane - CEDIR; Centro de Investigação e Desenvolvimento Etnobotânica; CIDE-MCT; CISM; Ciyao Enginering & Consalting; Contador Verificador Superior; Coordenador da Extensão Universitária; Corporate Business School; USTM; University of Zambeze; UP-CEMEC; Escola Superior de Jornalismo; Escolinha de Futebol 7 de Abril; MUGEDE; Foco Technologies; Fundação Kyeema; Gkachs Service; IIAM; IIA-MCT; IINAM; Inst. Nac. Desesenvolvimento Aquacultura; INTIC; Empresa Gulele; GUTELC; ISAP; MUGEDE; Prospectus; MISAU-CEPAEP; Rep. De Niassa Cosultants; CA-Paz; UEM; UP-Escola Superior.

2.   Workshop Report

2.1   Introduction

Zauria Saifodine of INTIC thanked the participants for attending and introduced Dra. Ducle Chilundo, Director General (DG) of INTIC, who officially opened the workshop.

Dra. Ducle Chilundo outlined that the Government of Mozambique, aware of the Information revolution and how the use of Information and Communication Technologies (ICTs) greatly influences the relevance and competitiveness of nations world wide as well as the ratio of their development, adopted the ICT Policy in 2000 and its Implementation Strategy in 2002, thus

providing a framework with principles and objectives that allow ICTs to be used as a driver and and engine to promote development in different areas of activity.

Both the Policy and the Implementation Strategy pin point human resource development as one of the key areas and it was with this in mind that several programs of human capacity and skills development were developed, so that ICT could be used at different levels, to increase the level of knowledge and create conditions for professional and technical growth in this area.

To responding to the needs, widely identified by the Government of Mozambique, in relation to the area of Education and Human Resource Development, the National Institute of Information and Communication Technologies (INTIC) became a member of the IST-Africa Cnsortium in 2005. The IST-Africa Initiative, which is co-funded by the European Commission under FP7 has grown from four African countries in 2005 (Mozambique, South Africa, Botswana and Tanzania) to 18 African countries plus Ireland today. During this period, the consortium developed several activities including:

➢ Conducting training activities on ICT for health, Education, Tourism, Agriculture and supporting the development of small and medium enterprises;

➢ Provide training and awareness workshops on FP7 program, through which research activities were funded;

➢ Disseminating information about research capacity in Mozambique, including the nature and scope of research institutions in the country;

➢ Providing documents such as ICT Policy, ICT Policy Implementation Strategy and other documents produced in Mozambique in the area of ICTs, so that this could be shared among all other African countries .

Dra. Chilundo outlined that INTIC's participation in this consortium increased the visabilty of Mozambique and the number of research projects co-funded by the European Commission increased a lot. However, while this is positive, when compared with the increase in other IST-Africa partner countries, it can still be improved. This is why INTIC organised this IST-Africa Horizon 2020 Workshop, faciliated by our colleague from Ireland, who has a vaste knowledge about the mechanims and processes to access this research funding. Dra Chilundo encouraged all of the researchers present to take full advantage of knowledge shared during this event so that in the future Mozambique organisations can develop further research projects that respond to the challenges and constraints faced at national level in different areas of development.

Dra. Chilundo urged the partiicpants to make use of this opportunity to share the activities carried out, the experiences and best practices used and also to discuss the constraints, difficulties that are being faced so that as a group it will be possible to find ways to overcome them.

The anxiety of Mozambicans today is to fight against poverty and became wealthy, so it is necessary to provide solutions through research activities to meet this expectations. To do so, it is important have a high sense of self - esteem and commitment to better serve our people. and to ensure that research outputs can have socio-economic impact. For the anxiety of the people to be satisfied in a short time, it is necessary to take advantage of the use of ICT, as they can shorten distances, allow for the exchange of knowledge and researchers can collaborate with one another in real time even if they are not physically in the same place.

Dra. Chilundo took this opportunity to address a word of appreciation to non-governmental organizations, to our cooperation and development partners which are and have worked hard with us, to identify joint solutions based on scientific knowledge, to address our communities need and provide to them sustainable solutions to solve development issues. The work done with the partners is allowing the country to grow on undertaking qualitative research.

In conclusion, Dra. Chilundo encouraged the participants to conduct research and to consolidate existing partnerships, diversifying the actions taken as well as the results acquired. She wishes each of the participants of this seminar to provide a bigger and better contribution to its success, as well as for the maintenance and exchange of experience, expertise and knowledge.

Miriam Cunningham, IIMC Ireland provided an overview of the IST-Africa Initiative which is supporting this workshop. The IST-Africa Initiative was founded in 2002 by IIMC, Ireland and has now grown to a partnership with Ministries and National Council responsible for Information Society, ICT and/or Innovation in18 African Member States[1]. The IST-Africa is supported by the European Commission and African Union Commission with co-funding under FP7.

IST-Africa facilitates and supports:

➢ International Innovation, Policy and Research Cooperation;

➢ Knowledge sharing and Skills Transfer between IST-Africa partners;

➢ Collaborative Innovation, Entrepreneurship and Adoption of Living Labs Methodologies;

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[1] IST-Africa partners: IIMC International Information Management Corporation Limited ("IIMC", Ireland); Ministerio da Ciencia e Tecnologia ("MINCT", Angola); Ministry of Transport and Communications ("MTC", Botswana); Ministere de l'Enseignement Superieur et de la Recherche Scientifique ("MESRS", Burundi); Agence Nationale des Technologies de l'Information et de la Communication ("ANTIC", Cameroon); Ministry of Communications and Information Technology ("MCIT", Egypt); Ministry of Communication and Information Technology ("MCIT", Ethiopia); Ministry of Education, Science and Technology ("MOEST", Kenya); Ministry of Communications, Science and Technology ("MCST-L", Lesotho); National Commission for Science and Technology ("NCST", Malawi); National Computer Board ("NCB", Mauritius); Instituto Nacional de Tecnologias de Informacao e Comunicacao ("INTIC", Mozambique); National Commission on Research, Science and Technology ("NCRST", Namibia); Ministère de l'Enseignement Supérieur et de la Recherche ("MESR", Senegal); Department of Science and Technology ("DST", South Africa); Ministry of Information Communication Technology ("MICT-S", Swaziland); Tanzania Commission for Science and Technology ("COSTECH", Tanzania); Ministere de l'Enseignement Superieur et de la Recherche Scientifique ("MHESR", Tunisia) and Uganda National Council for Science and Technology ("UNCST", Uganda).

➢ Information Society, ICT and Innovation Aspects of the Africa-EU Strategic Partnership;

➢ Awareness of African Research Capacity, cross-border cooperation and participation in Horizon 2020

➢ Establishment of National Contact Points in IST-Africa partner countries

INTIC leverages the IST-Africa Initiative to actively promote the national research community by

➢ Presentations at International events

➢ Chapter on Mozambique as part of the overall IST-Africa Study on ICT Initiatives and Research capacity

➢ Publishing articles on ongoing and emerging ICT and Innovation activities in Mozambique on the IST-Africa portal and in the Newsletter

➢ Raising awareness of upcoming Calls for Proposals and international funding opportunities

➢ Assists institutions in preparing for new opportunities such as Horizon 2020

➢ Raises awareness of activities being undertaken in other African countries

➢ Supporting the publishing of Organisational profiles on IST-Africa portal to raise awareness of activities in wider community

➢ Has access to IST-Africa Network including Ministries and National Councils in 17 African Countries to share knowledge, experiences and success stories

➢ Has first-hand experience of what is involved in being part of International funded activities under the European Framework Programme.

Participants were encouraged to visit the IST-Africa portal[2] and download relevant papers and reports

2.2   African Participation in FP7

Miriam Cunningham, IIMC, Ireland provided an overview of how African participation in FP7 has grown steadily over the past seven years. As at September 2013 there were 1315 participations from 45 African countries in 565 projects with a total grant funding of 178 million euro from the European Commission going into African institutions.

The table below provides an overview of the number of projects[3] secured in each IST-Africa partner country as at November 2013:

Country	Thematic areas
Botswana	9 FP7 projects - ICT (4), INCO (1), Environment (1), Health (2) and Food, Agriculture and Biotechnology KBBE (1)
Burundi	3 FP7-ICT projects
Cameroon	23 FP7 projects - ICT (4), INCO (1), Environment (4), Health (6), Infrastructures (1), Food Agriculture and Biotechnology KBBE (1),

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[2] http://www.ist-africa.org/home/default.asp?page=reports

[3] Guide to ICT Initiatives and Research Capacity in IST-Africa Partner Countries, January 2014, ISBN: 978-1-905824-41-0. Download from http://www.ist-africa.org/home/default.asp?page=reports

	NMP (1), Science Society (1), Space (1), SSH (2)
Egypt	96 FP7 projects - ICT (9), INCO (19), Environment (12), Health (6), Space (3), Social Sciences (7), Energy (4), INFRA (4), NMP (1), People (7), Science in Society (2), Food Agriculture and Biotechnology (KBBE) (17), Regpot (2), SEC (1), Transport (2)
Ethiopia	23 FP7 projects - ICT- (2), Environment (8), Health (5), Food Agriculture and Biotechnology KBBE (3), Space (2), Social Sciences (3)
Ghana	43 FP7 projects - ICT (3), Environment (6), Health (17), IDEAS (1), INCO (2), Food Agriculture and Biotechnology KBBE (6), NMP (1), People (1), Space (2), SSH (4).
Kenya	68 FP7 projects - ICT (5), INCO (4), Environment (18), IDEAS - ERC (2), Health (14), Food, Agriculture and Biotechnology KBBE (13), INFRA (3), People (3), Science in Society (2), Space (2), Social Sciences (1), Transport (1).
Lesotho	4 FP7-ICT projects
Malawi	20 FP7 projects - ICT (2); INCO (1), Infrastructure (5), Environment (2), Health (8), Food, Agriculture and Biotechnology KBBE (1), Science in Society (1).
Mauritius	6 FP7 projects - ICT (3), Infrastructure (2), Health (1).
Mozambique	20 FP7 projects - ICT (5), Environment (3), Health (6), Food, Agriculture and Biotechnology KBBE (2), Space (4).
Namibia	11 FP7 projects - ICT (4), INCO (1); Health (1), Infrastructure (1), Food, Agriculture and Biotechnology KBBE (2), Science in Society (1).
Senegal	40 FP7 projects - ICT (6), INCO (3) Environment (9), Health (5), Food, Agriculture and Biotechnology KBBE (9), IDEAS (1), People (1), Space (1), Social Sciences (4), Infrastructure (1).
South Africa	189 FP7 projects - ICT (19), INCO (11), Energy (5), Environment (28), Health (30), Infrastructure (11), Food, Agriculture and Biotechnology KBBE (32), NMP (3), People (8), Security (2), Science in Society (5), SME (3), Space (9), Social Sciences (12), Fission (4), Transport (7).
Swaziland	3 FP7 projects – 2 ICT, 1 Space
Tanzania	39 FP7 projects - ICT (5), Environment (4), Health (19), Infrastructure (1), Food, Agriculture and Biotechnology KBBE (5), SME (1), Space (1), Social Sciences (2), Transport (1)
Tunisia	88 FP7 projects - ICT (5), INCO (17), Environment (13), Energy (2), Health (10), Infrastructure (1), Food, Agriculture and Biotechnology KBBE (19), NMP (3), People (2), REGPOT (6), Science in Society (2), SME (1), Space (1), Security (1), Social Sciences (3), Transport (2)
Uganda	41 FP7 projects - ICT (6), INCO (2), Environment (6), Health (16), Infrastructure (1), Food, Agriculture and Biotechnology KBBE (6), People (3), Social Sciences (1)

Mozambique has built up a good track record of participation in FP7 with successful participation in **20** projects with research funding in the region of **€3.36 million**: ICT (5 projects), Environment (3 projects), Health (6 projects), Food, Agriculture and Biotechnology KBBE (2 projects) and Space (4 projects). This is a direct result of the greater international visibility achieved by hosting the IST-Africa 2007 Conference in Maputo and the sensitisation undertaken during IST-Africa FP7 Workshops at a national level.

Mozambique has been very successful in recent years in attracting international funding for ICT related projects. It is clear that having secured initial projects, it becomes much easier to become involved in more proposals.

The following projects are now completed:

- **ICT: IST-Africa Initiative** 2007-2009 (Unidade Tecnica de Implementacao da Politica de Informatica/INTIC) Support Action, **IST-Africa Initiative** 2009 - 2011 (Unidade Tecnica de Implementacao da Politica de Informatica/INTIC) Support Action, **IRMA** 2008 – 2009 (Instituto Nacional de Gestao de Calamidades) Collaborative project; and

- **Environment: EO2HEAVEN** 2010 – 2013 (Unidade Tecnica de Implementacao da Politica de Informatica / INTIC) Collaborative project; **DEWFORA** 2011 – 2013 (Universidade Eduardo Mondlane) Collaborative project;

- **Health: NANOTRYP** 2009 – 2013 (Universidade Eduardo Mondlane) Collaborative project;

- **Space: REDD-FLAME** 2011 – 2013 (Universidade Eduardo Mondlane) Collaborative project, **SAGA-EO** 2010 – 2012 (Instituto Nacional De Meteorologia) Coordination and support action, **WATPLAN** 2011 – 2013 (We Consult Limitada) Collaborative project; **MYWATER** 2011 – 2013 (Universidade Eduardo Mondlane) Collaborative project;

Ten projects are still running:

- **ICT: IST-Africa Initiative** 2011 – 2013 (INTIC) Support Action; **IST-Africa Initiative** 2014 – 2015 (INTIC) Support Action;

- **Environment: AGRICAB** 2011 – 2015 (Instituto Nacional De Meteorologia & Universidade Eduardo Mondlane) Collaborative project,

- **Health**: **CUT'HIVAC** 2010 – 2014 (Instituto Nacional de Saúde) Collaborative project, **DIFFER** 2011 – 2016 (Associacao Centro Internacional para Saude Reprodutiva) Collaborative project, **MOMI** 2011 – 2016 (Associacao Centro Internacional para Saude Reprodutiva & Universidade Eduardo Mondlane) Collaborative project, **REACHOUT** 2013 – 2018 (Universidade Eduardo Mondlane) SICA, **SURE** 2009 – 2014 (Ministerio de Saúde & Universidade Eduardo Mondlane) Collaborative project;

- **Food, Agriculture and Biotechnology KBBE: ICONZ** 2009 – 2014 (Universidade Eduardo Mondlane) Collaborative project, **EAU4FOOD** 2011 – 2015 (Universidade Eduardo Mondlane) Collaborative project

European coordinators included: IIMC International Information Management Corporation Limited, Ireland (4 projects); Universiteit Gent, Belgium (2 projects); with *one project each*: VIB, Belgium; Vlaamse Instelling Voor Technologisch Onderzoek N.V., Belgium; Thales Alenia Space France, France; Universite Pierre et Marie Curie - Paris 6, France; Fraunhofer-Gesellschaft zur Foerderung Der Angewandten Forschung e.V, Germany; Universite Du

Luxembourg, Luxembourg; Stichting Deltares, Netherlands; Stichting dienst Landbouwkundig Onderzoek, Netherlands; Waterwatch Bv, Netherlands; Nasjonalt Kunnskapssenter for Helsetjenesten, Norway; Gmvis Skysoft sa, Portugal; Liverpool School of Tropical Medicine, United Kingdom; Remote Sensing Applications Consultants Limited, United Kingdom and The University of Edinburgh, United Kingdom.

Ninety-five **(95)** European and Associated Country organisations partnered with Mozambique organisations in successful FP7 projects. This provides a significant network for future collaboration under Horizon 2020. The most prominent organisations that were involved in multiple projects included: IIMC International Information Management Corporation Limited, Ireland (4 projects); Joint Research Centre- European Commission, Belgium (2 projects); Universiteit Gent, Belgium (2 projects); Institut National de la sante et de la Recherche Medicale (INSERM), France (2 projects); Thales Alenia Space France (2 projects); Het Koninklijk Instituut Voor de Tropen, Netherlands (2 projects); Stichting dienst Landbouwkundig Onderzoek, Netherlands (2 projects); Universiteit Twente, Netherlands (2 projects); Universidade do Porto, Portugal (2 projects); Karolinska Institutet, Sweden (2 projects) and University College London, United Kingdom (2 projects). The full list of all European partner organisations is available in a complementary IST-Africa study entitled "Guide to Bilateral & Multilateral Cooperation Agreements Supporting ICT/STI-related Activities in IST-Africa Partner Countries, January 2014, ISBN: 978-1-905824-42-7.

2.3   Introduction to Horizon 2020

Horizon 2020[4] is the new European Framework Programme for Research and Innovation for 2014 – 2020.   Horizon 2020 will address all research and innovation funding previously provided by FP7 Framework Programme, Competitiveness and Innovation Programme (CIP) and European Institute of Innovation and Technology. There is a stronger focus on societal challenges and Innovation.

ICT will be incorporated across the three main pillars

➢ Excellent Science

➢ Industrial Leadership

➢ Societal Challenges

Horizon 2020 is open to International Cooperation. African research institutions can participate as part of International Consortia with partners from Europe to apply for funding as part of an international project addressing the challenges published in the Work Programme

Work Programmes for 2014 – 2015 is due for publication on 11 December 2013

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[4] Visit http://www.ist-africa.org/home/default.asp?page=horizon2020 and
http://ec.europa.eu/research/horizon2020/

Horizon 2020 Structure

➢ *Excellent Science (Total Budget of €24.4 billion, ICT Budget c €4 billion)*

Focus on World class Science as the foundation of tomorrow's technologies, jobs and wellbeing, need to develop, attract and retain research talent

1. The European Research Council (€13.1 billion)

2. Future and Emerging Technologies (€2.7 billion)

3. Marie Sklodowska-Curie actions on training and career development (€6.2 billion)

4. European Research Infrastructures (including eInfrastructures) (€2.5 billion)

➢ *II Industrial Leadership (Total Budget of €17 billion, ICT Budget c €8 billion)*

Focus on strategic investments in key technologies underpin innovation across existing and emerging sectors and support innovative SMEs to create growth and jobs

1. Leadership in enabling and industrial technologies (€13.6 billion)

2. Access to risk finance (€2.8 billion)

3. Innovation in SMEs (€6.2 billion)

➢ *III Societal Challenges (Total Budget of 29.7 billion, ICT Budget c €4 billion)*

Focused on Innovation addressing societal challenges, breakthrough solutions coming from multi-disciplinary collaborations including social sciences and humanities, promising solutions that can be tested, demonstrated and scaled up

1. Health, demographic change and wellbeing (€7.47 billion)

2. Food security, sustainable agriculture, marine research & the bio-economy (€3.85 billion)

3. Secure, clean and efficient energy (€5.93 billion)

4. Smart, green and integrated transport (€6.33 billion)

5. Climate action, resource efficiency and raw materials (€3.08 billion)

6. Inclusive and reflective societies (€1.3 billion)

7. Secure Societies (€1.69 billion)

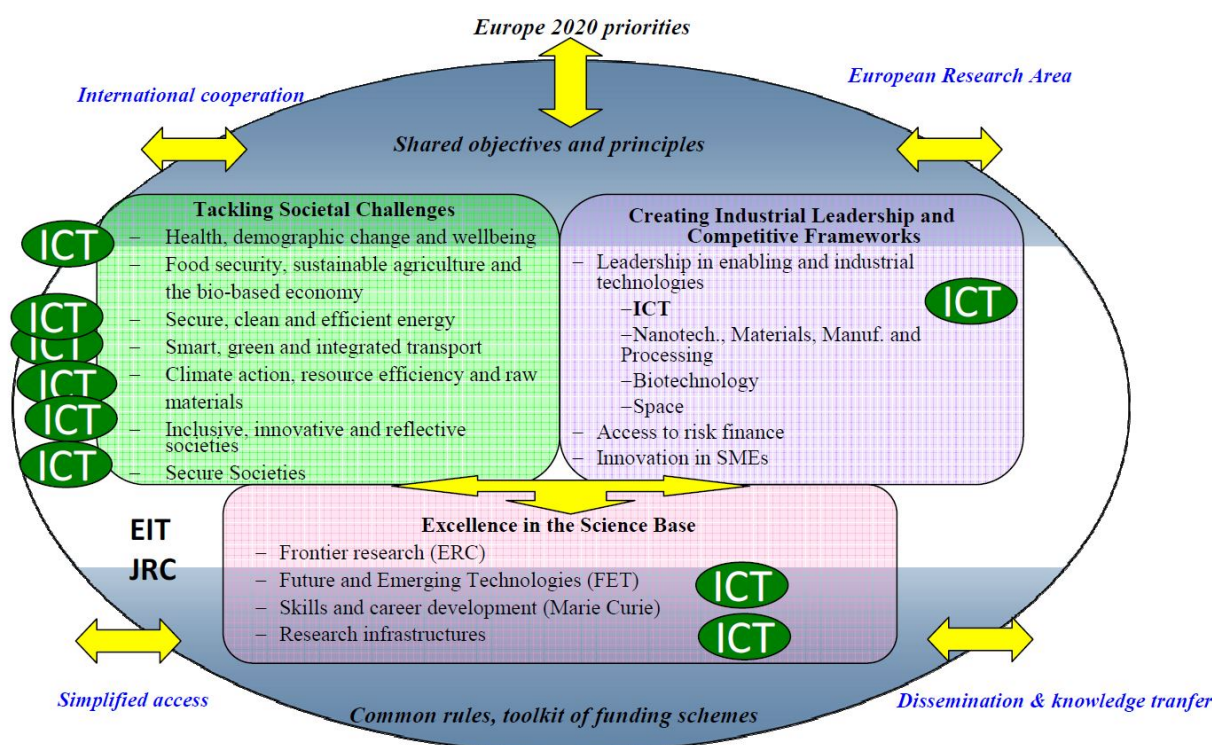ICT is involved in all three pillars as outlined in the diagram below:

Image provided by DG CONNECT, European Commission

Leadership in Enabling Technologies and Industrial Technologies incorporates six main areas:

1. Components and systems (Smart embedded components and systems, micro-nano-bio systems, organic electronics, large area integration, technologies for IoT, smart integrated systems, systems of systems and complex system engineering)

2. Advanced Computing (Processor and system architecture, interconnect and data localization technologies, parallel computing and simulation software)

3. Future Internet (Networks, software and services, cloud computing, cyber security, privacy and trust, wireless communication and all optical networks, immersive interactive multimedia and connected enterprise)

4. Content technologies and information management (Technologies for language, learning, interaction, digital preservation, content access and analytics; advanced data mining, machine learning, statistical analysis and visual computing, big data technologies)

5. Robotics (Service robotics, cognitive systems, advanced interfaces, smart spaces and sentient machines)

6. Key Enabling Technologies: Micro-nano-electronics and photonics (Design, advanced processes, pilot lines for fabrication, production technologies and demonstration actions to validate technology developments and innovative business models)

LEIT Call 2014 – Opens 11 December 2013, Closes 23 April 2014

➢ *Components and Systems*

  ➢ ICT1 – 2014 Smart Cyber Physical Systems (Research & Innovation Actions; Innovation Actions)

  ➢ ICT2 – 2014 Smart System Integration (Research & Innovation Actions; Innovation Actions, CSA)

  ➢ ICT3 – 2014 Advanced Thin, Organic and Large Area Electronics Technologies

➢ *Future Internet*

  ➢ ICT5 – 2014 Smart Networks and Novel Internet Architectures (Research & Innovation Actions)

  ➢ ICT6 – 2014 Smart Optical and Wireless Network Technologies (Research & Innovation Actions, SA)

  ➢ ICT7 – 2014 Advanced Cloud Infrastructures and Services (Research & Innovation Actions; Innovation Actions, CSA)

  ➢ ICT9 – 2014 Tools and Methods for Software Development (Research & Innovation Actions)

  ➢ ICT13 – 2014 Web Entrepreneurship (Innovation Actions, CSA)

  ➢ ICT14 – 2014 Advanced 5G Network Infrastructures for the Future Internet (Research & Innovation Actions; Innovation Actions, CSA)

➢ *Content Technologies and Information Management*

  ➢ ICT15 – 2014 Big data and Open Data Innovation and Take-up (Innovation Actions, CSA)

  ➢ ICT17 – 2014 Cracking the Language Barrier (Research & Innovation Actions; Innovation Actions, CSA)

  ➢ ICT18 – 2014 Support the Growth of ICT Innovative Creative Industries SMEs (Innovation Actions, CSA)

  ➢ ICT21 – 2014 Advanced Digital Gaming (Research & Innovation Actions; Innovation Actions)

  ➢ ICT22 – 2014 Multimodal and Natural Computer Interaction (Research & Innovation Actions; Innovation Actions)

> *Robotics*

>> ICT23 – 2014 Robotics (Research & Innovation Actions; Innovation Actions)

> *Cross cutting areas*

>> ICT31 – 2014 Human-centric Digital Age (Research & Innovation Actions, CSA)

>> ICT32 – 2014 Cybersecurity, Trustworthy ICT

Societal Challenges fits under seven areas:

1. Health, demographic change and wellbeing (e-health, self management of health, improved diagnostics, improved surveillance, health data collection, active ageing, assisted living;)

2. Food security, sustainable agriculture, marine research & the bio-economy

3. Secure, clean and efficient energy (Smart cities; Energy efficient buildings; smart electricity grids; smart metering)

4. Smart, green and integrated transport (Smart transport equipment, infrastructures and services; innovative transport management systems; safety aspects)

5. Climate action, Environment, resource efficiency and raw materials (ICT for increased resource efficiency; earth observation and monitoring)

7. Inclusive, innovative and reflective societies (Digital inclusion; social innovation platforms; e-government services; e-skills and e-learning; e-culture) and

8. Secure societies (Cyber security; ensuring privacy and protection of human rights on-line)

The Work Programme for Societal Challenges for 2014 – 2015 is still under development and should be published on 11 December.

Excellence Science

Miriam briefly presented Marie Curie actions on skills, training and career development. Marie Curie Programme facilities individuals to access mobility grants to facilitate career development and up-skilling for research staff. Individual Fellowships incorporates International Outgoing Fellowships and International Inward Fellowships. Fellowship must be applied for by the host European institution through a proposal submitted under an Open Call. Fellowships provide costs of time and a monthly allowance for living expenses for between 1 - 3 years depending on the project accepted.

The Research and Innovation Staff Exchange (RISE) is a new type of exchange of research staff to stimulate transfer of knowledge. This programme can support African researchers to work with the European host organisation for a period of time or for the European researcher to come to work with an African organisation to support setting up or extending research skills. All

levels of research staff can undertake short term secondments. A monthly stipend of 2,500 euro is provided within the project funding to cover living expenses while abroad. The person receiving the mobility grant remains part of the staff of their own institution. The proposal is submitted by a European research institution based on a common research project.

2.4 Participation Rules and Instruments under Horizon 2020

Miriam presented the participation rules and instruments under Horizon 2020. Horizon 2020 has a single set of rules covering all funding programmes to simply the procedure for applicants. Grant Agreements and Reimbursement of actual costs will remain the main funding mechanism.

Participants in Horizon 2020 can be legal entities from EU-27 Member States, Associated Candidate Countries, Associated States and International Cooperation Partner Countries. Legal entities from all African States except South Africa are funded on the same basis as their European colleagues – reimbursement of costs.

The types of organisations that are normally involved in research include Research Organisations, Universities, SMEs, Industry and public administration.

It is necessary for grant applications to be made by consortia that have a minimum of three independent legal entities from three different EU Member States or Associated countries. African participants can then be added to this consortium. It is necessary to justify the participation of each legal entity regardless of what country they are established in as part of proving operational capacity.

Instruments in Horizon 2020 include:

➢ Grants for Research and Innovation – 100% funding of all activities and participants

➢ Grants for Innovation – 70% funding of all activities and participants –except non-profit (100%)

➢ Support and Coordination Actions - 100% funding of all activities and participants

➢ Programme Co-funding Actions

➢ SME-Instrument – Instrument to support specific SME activities in three phases

➢ Pre-Commercial Procurement (PCP) – Steer development to public sector needs

➢ Public Procurement of Innovative Solutions (PPI) – First buyer for innovative solutions

➢ Prizes – Support for two key categories of prizes (recognition and inducement) – still under discussion

Research and Innovation Actions are primarily consisting of activities aiming to establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service or solution. May include basic and applied research, technology development and integration, testing and validation on a small-scale prototype in a laboratory or simulated

environment. Projects may contain closely connected but limited demonstration or pilot activities aiming to show technical feasibility in a near to operational environment.

Innovation Actions primarily consist of activities directly aiming at producing plans and arrangements or designs for new, altered or improved products, processes or services. For this purpose they may include prototyping, testing, demonstrating, piloting, large-scale product validation and market replication. A 'demonstration or pilot' aims to validate the technical and economic viability of a new or improved technology, product, process, service or solution in an operational (or near to operational) environment, whether industrial or otherwise, involving where appropriate a larger scale prototype or demonstrator. A 'market replication' aims to support the first application/deployment in the market of an innovation that has already been demonstrated but not yet applied/deployed in the market due to market failures/barriers to uptake. 'Market replication' does not cover multiple applications in the market of an innovation that has already been applied successfully once in the market.

Support and Coordination Actions undertake studies, analysis, development of research and Innovation strategies, raising awareness of European Commission Programmes, setting up thematic working groups to address Challenges in specific thematic areas.

All instruments have an application template that must be used which can be downloaded from the Participants Portal.

The evaluation criteria for proposals include Excellence, Impact and Quality and Efficiency of the Implementation.

Eligible costs for reimbursement include:

➢ Personnel Costs (Salary and social security costs based on payroll costs, Reimbursement of costs based on timesheet outlining actual work undertaken)
➢ Subcontracting (e.g. printing of materials, non-core work)
➢ Other direct costs
  ➢ Travel and subsistence allowances
  ➢ Depreciation of equipment
  ➢ Other necessary goods and services

There was a general discussion in relation to intellectual property rights, consortium agreements, and how proposals are evaluated.

2.5   Summary of areas of research of participants

Each department and institution presented current research areas, which increased awareness at national level in relation to the types of research being undertaken. The table below summarises the main findings shared during the workshop:

Organisation	Research Areas
Eduardo Mondale University (UEM)	Indigenous knowledge, Networks, Health, Technology-enhanced Learning
UEM - CEDIR (Centre for Studies of Regional Integration)	Regional Integration Studies, Governance, Human Rights, Knowledge Management
	Have existing links with University of Bonn, Lund University, University of Ghent and Antwerp University
UEM (Chemistry)	Application of ICT in Chemistry
UEM (Philosophy)	Cultural areas, tribes in Southern Africa
CIUEM	Networks, Software and Services, Wireless Communications
Prospectus	Software tools
FSAP	Governance, Community participation, Gender
EST	Communication for Health, Gender, Environment
Niassa Cosultants	Community-based projects for development
University Saint Thomas	New Innovation Dept has been establisehd to support Individual research projects undertaken by staff and students
IIA (Water Research Institute)	Water Research, Disaster Management (floods and drought), Water & Sanitation, Ground Water, Tech Transfer related to water treatment and harvesting
	Cooperating with UEM in relation to research
GUTELC	Future Internet (Networks), Cyber Security
CIDE	Research on native plants, Indigenous Knowledge related to plants, Tech Transfer
Calipsolde	Recycling
CIYAO	Sustainable Agriculture, Energy, Environment, Climate Change
WIEMO2	Engineering Areas
UP	Study of medicinal plants, Research on plants to address TB, HIV, Malaria
	Have cooperated with 2 Portuguese University, Rhodes University and Johannesburg University
	Technology-enhanced Learning
IIAM	Sustainable Agriculture - Soil, forestry, plants, Agronomy and natural resources
University of Zambeze	Water Quality, Environment Quality, Socio-

	economic impact of gold Mining (Environmental Risks)
	Have cooperated with institutions from Netherlands
AICIMO	Water resource management and analysis, Databases in different application areas (GIS, scientific research, maps)

2.6 Conclusion

The workshop was very interactive in style with participants asking questions and seeking clarification as required. Areas of particular discussion focused on how to build consortia and how to co-design proposals.

In terms of consortia it is necessary to initially focus on identifying one European partner with relevant skills, a good network of collaborators across Europe and an interest in co-designing a proposal for submission under H2020. This partner will then in turn identify other European partners with complimentary skills.

In relation to co-designing proposals, it is best to work with partners who have a lot of experience writing grant applications. The consortium partners will contribute to different sections and work packages. It is necessary to clearly identify the specific roles of most interest and relevance to your organisation and ensure that the work to be undertaken if relevant and feasible.

There was a discussion in relation to how to better leverage the European Embassies that exist in Maputo in terms of providing introductions to relevant institutions in their country to build partnerships if specific institutions do not already have relationships with peer organisations in Europe. For those institutions with existing relationships it is necessary to proactively identify relevant Calls in H2020 and then engage with collaborators in relation to participating in proposal submissions. Mozambique has an existing track record from FP7 that needs to be leveraged.

Zauria thanked the participants for attending the workshop and thanked Miriam for providing the training on H2020. Zauria emphasised the requirement to download the Work Programmes form the IST-Africa portal once they are published in mid December and quickly identify relevant Calls and deadlines. Institutions were encouraged to prepare an organisational profile for publication and to identify key European partners based on existing relationships and bilateral projects.

Participants

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