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D3.1.1 IST-Africa Horizon 2020 Workshop, Lilongwe, Malawi, 12 November 2014

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Workshop Report prepared by IIMC and National Commission for Science and Technology (NCST), Malawi.

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## 1. Workshop Context

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

Horizon 2020 addresses 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

National Commission for Science and Technology as the partner in Malawi for the IST-Africa Initiative organised the IST-Africa Horizon 2020 Workshop in Lilongwe on 12 November 2014. All relevant stakeholders were invited to participate to raise awareness of the opportunity for research cooperation at international level.

This workshop is specifically focused on **ICT-39 International partnership building in low and middle-income countries** with a deadline of 14 April 2015. The aim is to launch a set of targeted collaborative research projects addressing the requirements of end-user communities in developing countries. Specific technological targets could include for example co-design, adaptation, demonstration and validation (e.g. pilots) of ICT related research and innovation in relevant thematic areas addressed by Horizon 2020 including Content Technologies and Societal Challenges.

Activities under this objective should be led by a clearly defined **user need/market opportunity** for the technology being adapted; they should in particular include requirements of developing countries, and where possible, have the potential for wider impact by involving a number of countries from the same region. Proposals should be submitted by a complementary partnership with a particular focus on the participation of relevant developing country innovation stakeholders and end-user community representatives (e.g. relevant public, private, education and research, and societal sector organisations, Innovation Spaces and Living Labs).

The workshop was well attended with 28 participants from Computer Science Department, Chancellor College; Physics Department, Chancellor College; Polytechnic of Malawi; University of Malawi; Mzuzu University; Kamuzu College of Nursing; Lilongwe University of Agriculture

and Natural Resources/Bunda; Bababo Health Trust; Malawi Institute of Management; Ministry of Finance; Malawi Communications Regulatory Authority (MACRA); eGovernment Department, Ministry of Information; National ICT Working Group; Department of Science and Technology; Research Department, Ministry of Health; National Library Service; Malawi Women in Technology; Supporting Life FP7 Project and National Commission for Science and Technology. Each organisation presented their current research capacity and areas of most interest for International Cooperation. This knowledge exchange at national level was very interesting for the participants as they were able to identify potential synergies in relation to future research.

Areas of thematic interest include Digital Repositories; eHealth, Health Informatics; eAgriculture; eGovernment; Security; White Spaces; Next generation networks; Wireless, mobile and cellular networks; Energy; Sensor Technology; Internet of Things; eSkills and eLearning / mLearning.

## 2. Workshop Report

### 2.1 Introduction



Ebony Msikawanthu, Master of Ceremonies, NCST welcomed Anthony Muyepa, Director General, National Commission for Science and Technology (NCST); Paul Cunningham & Miriam Cunningham, IIMC International Information Management Corporation Ltd, Ireland / IST-Africa Initiative; distinguished guests and participants to the IST-Africa Horizon 2020 Workshop.

Ebony invited Anthony Muyepa, Director

General to present the Welcome Address.

Anthony Muyepa commenced by outlining that NCST is very pleased to be hosting this workshop, which provided an opportunity to bring together the ICT community in Malawi. NCST recognised the partnership with IIMC and IST-Africa and excellent alignment between the IST-Africa activities and the Commission's mandate. The Commission's mandate is to be an advisor to the Government in relation to Science and Technology and to promote, support and



coordinate Science, Technology and Innovation to create wealth and quality of life. The workshop objectives include to: identify thematic areas most relevant to Malawi (eHealth, eAgriculture, eLearning, eEnvironment and eGovernment), end-user needs, key stakeholders that should be consulted and stakeholders who can undertake research activities under future projects. By the end of the workshop NCST expects that the community will have identified relevant research areas and technologies that can be developed through International Cooperation. The purpose is to raise awareness among the stakeholders - research, academia, public sector, private sector and societal sector of opportunities for cooperation under Horizon 2002 and specifically the ICT-39 Call.

Anthony outlined that Horizon 2020 commenced in January 2014 as a new framework Programme with funds in the region of 80 billion euro up to 2020. It provides funding for both research and innovation. It offers public, private and research organisations the opportunity to compete for funding as part of an international consortia. NCST would like to leverage some of the experiences from Europe, adapted to the Malawi circumstances to assist in building capacity in research and innovation at national level. Anthony encouraged the participants to be active during the workshop. Anthony thanked the European Commission for funding the workshop and supporting activities in Malawi through the IST-Africa Initiative. Anthony thanked the IST-Africa coordinator and local organising committee for organising the workshop.

Ebony Msikwanthu then invited Paul Cunningham to present the IST-Africa Initiative.

### Overview of IST-Africa Initiative

Paul thanked NCST for hosting this knowledge exchange workshop and encouraged the participants to ask questions, share knowledge and showcase research capacity in Malawi during this interactive workshop.

Paul highlighted the importance to leverage the opportunity of ICT-39 as a dedicated Call focused on Africa to address relevant issues on the ground in Malawi. Areas of importance include

- Use of ICT for Agriculture - leveraging mobile technologies and ICT to provide better information about market opportunities, create knowledge communities to support capacity and ability to address value added processing.
- Health - MNCH or other health care delivery challenges
- Government - service delivery.

Paul provided a brief overview of the **IST-Africa Initiative** which was founded in 2002 by IIMC, Ireland and has now grown into a strategic partnership with Ministries and National Councils responsible for Information Society, ICT and/or Innovation in 18 African Member States<sup>1</sup>. IST-

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<sup>1</sup> IST-Africa partners: IIMC International Information Management Corporation Limited (“IIMC”, Ireland); Ministerio da Ciencia e Tecnologia (“MINCT”, Angola); Ministry of Transport and Communications

Africa is supported by the European Commission and African Union Commission with co-funding under FP7.

The IST-Africa Initiative 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;
- 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

NCST is gathering intelligence in cooperation with national stakeholders in relation to the state of research and innovation in Malawi. NCST leverages the IST-Africa Initiative to actively promote the national research community through

- Presentations at International events
- Compiling a chapter on Malawi 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 Kenya 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
- Having access to IST-Africa Network including Ministries and National Councils in 17 African Countries to share knowledge, experiences and success stories
- Having a first-hand experience of what is involved in being part of International funded activities under the European Framework Programme.

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("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).

Paul provided an overview of knowledge resources on the IST-Africa portal including access to up to date information on Horizon 2020<sup>2</sup> (Work Programmes, Guides to Calls for Proposals); Project Repository<sup>3</sup> to identify previously funded projects as contributions to the state of the art in specific domains; Organisational repository<sup>4</sup> to identify potential partners and previous projects that they have been involved; Country profile section to highlight ongoing activities at national level and Paper Repository<sup>5</sup> with access to papers published through the IST-Africa conference from 2006 which is one of the largest African focused paper repositories.

Participants were encouraged to visit the IST-Africa portal<sup>6</sup> and download relevant papers and reports. Paul also encouraged the participants to complete and return their organisational profile to NCST for publication on the IST-Africa portal.

Paul took the opportunity to encourage participants to leverage NCST hosting IST-Africa 2015<sup>7</sup> to raise awareness of research and innovation being undertaken at national level. There are three opportunities to make presentations during IST-Africa 2015 - a) publish research results from ongoing and completed projects; b) write a case study on ongoing activities within a specific domain and c) make an oral presentation if the project results are not sufficiently developed for paper publication at this stage. Participants were requested to raise awareness among their networks and institutions to take advantage of this opportunity.

Paul summarised the impact that has been achieved through IST-Africa as including an increase in African participation under FP7; increase in publications through IST-Africa proceedings; knowledge sharing between Europe and Africa; actively supporting policy dialogue between European Commission, African Union Commission and other key stakeholders; providing evidence to support African-focused Calls for Proposals under Horizon 2020 including ICT-39 Call; access to knowledge repositories and reports.

Malawi secured over €3 million in research funding through 20 projects under FP7 in the following thematic areas: ICT (2); INCO (1), Infrastructure (5), Environment (2), Health (8), Food, Agriculture and Biotechnology KBBE (1), Science in Society (1).

National organisations included: University of Malawi (7 projects); The Ubuntunet Alliance for Research and Education Networking (5 projects); The Registered Trustees of the Research for equity and Community Health Trust (2 projects); National Commission for Science and Technology (3 projects); Mzuzu University (1 project); Malawi Ministry of Health (1 project); Citizens for Justice (1 project); The Registered Trustees of the Ungweru (1 project) and The Registered Trustees of the Parent and Child Health Initiative Trust (1 project).

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<sup>2</sup> <http://www.ist-africa.org/home/default.asp?page=horizon2020>

<sup>3</sup> <http://www.ist-africa.org/home/default.asp?page=project-search>

<sup>4</sup> <http://www.ist-africa.org/home/default.asp?page=org-search>

<sup>5</sup> <http://www.ist-africa.org/home/default.asp?page=paper-repository>

<sup>6</sup> <http://www.ist-africa.org/home/default.asp?page=reports>

<sup>7</sup> <http://www.ist-africa.org/Conference2015>

European coordinators included: IIMC International Information Management Corporation Limited, Ireland (2 projects); Liverpool School of Tropical Medicine, United Kingdom (2 projects); and with **one project each**: Universiteit Gent, Belgium; Sigma Orionis SA, France; Royal College of Surgeons in Ireland, Ireland; The Provost Fellows & Scholars of the College of the Holy and Undivided Trinity of Queen Elizabeth Near Dublin, Ireland; University College Cork, National University of Ireland, Cork, Ireland; Centro Euro-Mediterraneo sui Cambiamenti Climatici Scarl, Italy; Universitat Autònoma de Barcelona, Spain; Karolinska Institutet, Sweden; Association of Commonwealth Universities, United Kingdom; The University of Liverpool, United Kingdom; The University of Stirling, United Kingdom and The University of Warwick, United Kingdom.

More than seventy six **(76)** European and Associated Country organisations partnered with Malawi 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: Karolinska Institutet, Sweden (3 projects); Lunds Universitet, Sweden (3 projects); Centre de Cooperation International en Recherche Agronomique pour le Developpement, France (2 projects); IIMC International Information Management Corporation Limited, Ireland (2 projects) and Liverpool School of Tropical Medicine, United Kingdom (2 projects). The full list of all European partner organisations is available in the 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<sup>8</sup>

This provides an important baseline for cooperation under Horizon 2020.

## **2.2 Introduction to Horizon 2020**

Gift Kadzamira of NCST presented Horizon 2020<sup>9</sup>, which is the new European Framework Programme for Research and Innovation for 2014 – 2020, with funding of €80 billion. It is one of the largest research programmes and is open to participation from legal entities involved in research around the world.

Horizon 2020 addresses 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.

Gift highlighted that Horizon 2020 is focused on global challenges 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 (with partners from 3 European Countries) addressing the challenges published in the Work Programme. ICT-39 is

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<sup>8</sup> <http://www.ist-africa.org/home/default.asp?page=reports>

<sup>9</sup> Visit <http://www.ist-africa.org/home/default.asp?page=horizon2020> and <http://ec.europa.eu/research/horizon2020/>

a specific call focused on collaboration between Africa and Europe. There are a lot of resources available to support institutions to prepare proposals on the IST-Africa portal<sup>10</sup> - access to Work Programmes, Guides to proposals under 2014 and 2015 as well as the European Commission Participants Portal<sup>11</sup> and Horizon 2020<sup>12</sup>

### 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 Skłodowska-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)

Gift summarised differences between FP7 (which finished in 2013) and H2020 (which runs from 2014 - 2020):

<sup>10</sup> <http://www.ist-africa.org/>

<sup>11</sup> <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/index.html>

<sup>12</sup> Horizon 2020 website <http://ec.europa.eu/research/horizon2020>



- H2020 is more holistic in focus addressing all research and innovation funding with a stronger focus on Societal Challenges and Innovation
- Work Programme Structure - Under H2020 Work Programmes (WP) are published for a two year duration to allow stakeholders to plan proposal design sufficiently in advance. Each thematic areas has its own Work Programme but ICT is a horizontal component within Societal Challenges, LEIT and Excellent Science The WP 2014 - 2015 was published on 11 December 2013 and updated for 2015 in July 2014.
- Funding Levels - under H2020 organisations receive up to 100% reimbursement of costs for research activities (Research and Innovation Grants) and up to 70% reimbursement of costs for Grants for Innovation (large scale pilots to prepare for commercialisation).
- H2020 Funding Instruments: **Grants for Research and Innovation** (new knowledge, applied research, technology development and integration, testing and validation on a small scale prototype); **Grants for Innovation** (closer to market, prototyping, testing, demonstrating, piloting, large-scale product validation and market replication); **Grants for coordination and support action** (do not undertake research, support coordination of research and activities to the Programme)
- Indirect Costs (Overheads) - Under FP7 there were different levels of reimbursement of overheads depending on the instrument and organisational type. Under H2020, there is now a flat rate of 25% reimbursement of direct costs as a contribution towards overheads.
- **No Negotiation phase** in H2020: proposals are now judged as submitted (no timeframe for improvements, changes in partners or budget). As a result if there are inconsistencies, budgetary problems or insufficient justification of the approach, the proposal will receive a lower score and unlikely to be funded. It is critical that all partners are sure that they can undertake the project work and have the necessary internal support when submitting the proposal as part of a consortia.
- Proposal Structure & Page Length: Each funding instrument has a specific proposal template that needs to be followed. Part B is now divided into 2 sections for upload via the Participants portal - Section 1 - 3 (Excellence, Impact, Implementation) and Section 4 & 5 (Members of the Consortium, Ethics and Security). There is a **fixed number of pages** for each instrument - Research and Innovation (Part B Section 1 - 3) max of 70 pages, CSA - max of 50 pages. If the proposal is longer than the allowed pages, the extra pages are marked in red and are not considered in the evaluation process.

### **2.3 Snap Shot of Societal Challenges and LEIT in Horizon 2020**

Gift Kadzamira provided a brief snap shot of research areas for cooperation under Societal Challenges Work Programmes and Leadership in Enabling Technologies and Industrial Technologies (LEIT) Work Programme. Each area has a separate Work Programme that provides the details for each specific call, deadline, instruments open for submission.

Due to the high number of Work Programmes and the short timeframe for Calls in some thematic areas, IST-Africa has prepared a Guide to 2014 Calls for Proposals and Guide for 2015 Calls for Proposals in Horizon 2020. This guide lists each thematic area, deadlines and links to the Participants portal<sup>13</sup> for more detailed information. It can be downloaded from

[http://www.ist-africa.org/home/files/IST-Africa\\_Guide\\_2014Calls\\_Horizon2020.pdf](http://www.ist-africa.org/home/files/IST-Africa_Guide_2014Calls_Horizon2020.pdf)

[http://www.ist-africa.org/home/files/IST-Africa\\_Guide\\_2015Calls\\_Horizon2020.pdf](http://www.ist-africa.org/home/files/IST-Africa_Guide_2015Calls_Horizon2020.pdf)

IST-Africa has a specific section focused on Horizon 2020<sup>14</sup>, which provides links to all the Work Programme - Marie Curie, Infrastructures, Societal Challenges (Health, Food Security and Agriculture, Energy, Transport, Climate action and Environment, Inclusive and Reflective Societies; Secure Societies) and LEIT.

**Leadership in Enabling Technologies and Industrial Technologies (LEIT)** 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)

**Societal Challenges** fits under eight 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)

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<sup>13</sup> <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/index.html>

<sup>14</sup> <http://www.ist-africa.org/home/default.asp?page=horizon2020>

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)

ICT will be incorporated across the three main pillars

- Excellent Science
- Industrial Leadership
- Societal Challenges

## 2.4 ICT-39

Paul Cunningham, IIMC/IST-Africa presented the **ICT-39** Call, which closes on **14 April 2015**. The aim of ICT-39 is to launch a set of targeted collaborative research projects addressing the requirements of end-user communities in developing countries. Specific technological targets could include for example co-design, adaptation, demonstration and validation (e.g. pilots) of ICT related research and innovation in relevant thematic areas addressed by Horizon 2020 including Content Technologies and Societal Challenges.

Activities under this objective should be led by a clearly defined user need/market opportunity for the technology being adapted; they should in particular include requirements of developing countries, and where possible, have the potential for wider impact by involving a number of countries from the same region. Proposals should be submitted by a complementary partnership with a particular focus on the participation of relevant developing country innovation stakeholders and end-user community representatives (e.g. relevant public, private, education and research, and societal sector organisations, Innovation Spaces and Living Labs)

The expected impacts include:

- Development of relevant technology responding to specific needs and conditions of the target country.
- Reinforced international dimension of the ICT and Innovation aspects of Horizon 2020 and a higher level of international cooperation with low and middle income countries in ICT R&D and Innovation, focusing on areas that are beneficial to the target countries/region

### Discussion re opportunities under ICT-39 for Malawi

Following an interactive discussion among the stakeholders it was considered to be important to have multi-disciplinary teams - while having a sector focus it was recommended that there should be a learning component, energy component and access in rural areas.

Priority areas for Malawi include eHealth, eAgriculture, eLearning/eEducation, Digital Inclusion, eGovernment Services and Environment/Energy.

In terms of Health there are a number of key research areas including Health Information Systems/Electronic records; Telemedicine/remote diagnosis; Maternal, Newborn and Child Health and Nutrition. There is high sensitivity in relation to data collection for health issues. The workshop participants discussed key stakeholders that should be consulted in the Health domain, how to address end-user engagement and build an implementation team for inclusion within a wider consortia for International cooperation.

In terms of eGovernment Services, it was agreed that there is a need to have central repository for data under eGovernment that other line Ministries could have access rights to have relevant segments of the data. Privacy is covered under legislation. There is a need for consolidated data collection - problems with distributed data.

The participants found this brainstorming and moderated group work to be very interesting in visualising how to start to prepare a proposal.

## ***2.5 Participation Rules and Instruments under Horizon 2020***

Ebony Msikawanthu, NCST presented the participation rules and instruments under Horizon 2020. Horizon 2020 has a single set of rules covering all funding programmes to simplify 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-28 Member States, Associated Candidate Countries, Associated States and International Cooperation Partner Countries. Legal entities from all African States 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.

H2020 is designed to be cross-border in focus 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.

## 2.6 Preparing a Proposal

Miriam Cunningham, IIMC / IST-Africa presented an overview of steps to consider when preparing a proposal.

Firstly it is necessary to download and read the **Work Programme**<sup>15</sup> carefully. As Gift has highlighted earlier, IST-Africa has also prepared a guide to 2014 and 2015 Calls listing each

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<sup>15</sup> Visit <http://www.ist-africa.org/home/default.asp?page=horizon2020> and <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/index.html>

thematic area, deadlines and links to the Participants portal<sup>16</sup> for more detailed information. It can be downloaded from

[http://www.ist-africa.org/home/files/IST-Africa\\_Guide\\_2014Calls\\_Horizon2020.pdf](http://www.ist-africa.org/home/files/IST-Africa_Guide_2014Calls_Horizon2020.pdf)

[http://www.ist-africa.org/home/files/IST-Africa\\_Guide\\_2015Calls\\_Horizon2020.pdf](http://www.ist-africa.org/home/files/IST-Africa_Guide_2015Calls_Horizon2020.pdf)

Having identified the relevant Call and deadline, it is then necessary to carefully identify the **funding instrument** that is open (Grant for Research and Innovation; Grant for Innovation or Support and Coordination Actions) and download the correct **proposal template** from the Participants portal. Ebony has outlined the specific activities that can be funded under each instrument.

As outlined in the Guide for Participants each instrument has two parts:

- Part **A** - Administrative Details related to partners (beneficiaries and proposed budget)
- Part **B** - Technical Annex

In the case of **ICT-39** the funding instrument is **Research and Innovation Actions**. Miriam outlined the five main sections for this instrument and the content required:

- Section 1: **Excellence** - Objectives, Relation to the Work Programme, Concept & Approach; Ambition
- Section 2: **Impact** - Expected Impacts, Measures to maximise impact - a. Dissemination & Exploitation of Results; b. Communication activities
- Section 3: **Implementation** - Work Plan (Work Packages, deliverables & milestones), Management structure and procedures, Consortium as a whole, Resources to be committed
- Section 4: **Members of the Consortium** - each partner to provide profile using template provided to facilitate judgement of operational capacity
- Section 5: **Ethics & Security**

As Gift has already highlighted Part B Section 1 - 3 must be a maximum of 70 pages in length and the Part B is now uploaded as two separate files by the Coordinator in the Participants portal - File 1 - Part B Sections 1 - 3 and File 2 - Part B Section 4 & 5.

Having identified the relevant Call and instrument, the Consortium partners will then split the grant proposal writing among the partners. It is advisable to agree the Work plan structure (Section 3) first. This will then facilitate each Work Package Leader to outline the proposed tasks, agree them with the partners and co-design a detailed description outlining the work to be undertaken with each task. With the work plan structure in place, it is then possible to starting writing the objectives, relevance to the work Programme, concept and approach (Section 1). Based on agreeing the work plan structure and objectives, partners can then start

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<sup>16</sup> <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/index.html>

writing the Impact section (Section 2). Each individual partner should prepare an organisational profile using the template provided for inclusion in Section 4.

Miriam then presented an overview of steps to consider when preparing the budget.

All funding under Horizon 2020 for research proposals are **grants**, which is based on reimbursement of actual costs based on the budget submitted and actual eligible costs incurred with no profit element.

#### Eligible Cost Categories

- **Personnel Costs** - reimbursement of costs based on salary from payroll - actual cost to the institution based on normal salary cost plus social security charges prior to the grant. Calculation of personnel costs are based on calculating person time required for each task in the Work Programme. It is necessary to keep timesheets for actual work undertaken that are signed by the Head of Department each month and put on file.
- **Subcontracting** (work undertaken by third parties outside project partners) - under a Grant agreement it is not allowed to subcontract project management or core project work. Eligible activities include printing of dissemination materials, room hire and catering for meetings and workshops, design of website if partners cannot do this themselves.
- **Other direct costs** include Travel costs and subsistence allowance (based on normal practises for the institution) - need to calculate the number of meetings / dissemination at conferences and work out the budget based on costs of flights and normal per diem rate for accommodation and subsistence. The European Commission has a maximum amount that can be reimbursed as per diem in each city - it is necessary to check this.
- Essential equipment is reimbursed based on depreciation of time when used for project requirements. Any equipment requests need to be carefully considered and well justified. It is also necessary to consider that the partner organisation will be paying for the equipment up front from the supplier and receiving back reimbursement on a yearly basis through the cost claim using the depreciation model based on actual time the equipment was used for project activities.

The partners in the consortia will agree the administrative coordinator (who interacts with the European Commission on behalf of the partners in relation to submitting the proposal, finalising the grant agreement, distributing the funding and general project management) and the technical coordinator (responsible for technical quality of the project deliverables) based on the skills, track record and expertise of the partners. It is advisable that the administrative coordinator has an existing track record managing Framework Programme projects.

Each partner must provide the administrative coordinator with their organisational Participants Identification Code (PIC), which is a unique number for each legal entity who has a profile on

the Participants portal. If your organisation does not have a PIC<sup>17</sup>, it is necessary to set this up in order to be a beneficiary of a grant. The PIC application process must be undertaken by the authorised representative in your organisation so this needs to be planned in advance in sufficient time.

It is good practise to provide the co-ordinator with a signed letter from a senior representative from your organisation confirming that your department has approval to participate in this submission and has the necessary resources to undertake the project work if selected for funding.

Miriam provided a brief overview of basic Intellectual Property Rights as this needs to be considered when preparing a proposal. It is necessary to outline an initial strategy for IPR, access right to pre-existing knowledge necessary for the project work and exploitation of results with the proposal.

## **2.7 Evaluation of Proposals**

Miriam provided an overview of the evaluation process.

When preparing for the evaluation of a Call, the European Commission puts together a panel of independent thematic experts to evaluate the proposals submitted.

Each proposal is provided to a number of experts who individually evaluate the proposals based on the agreed criteria and submit their individual report via an online Evaluation system.

The evaluation criteria for proposals are closely aligned with the proposal structure:

### **1. Excellence** (Threshold 3/5)

- Clarify and pertinence of the objectives
- Credibility of the proposed approach
- Soundness of the concept
- Extent that the proposed work is ambitious, has innovation potential and is beyond the state-of-the-art (e.g. ground breaking objectives, novel concepts and approaches)

### **2. Impact** (Threshold 3/5)

- Aligned with expected impact listed in the Work Programme
- Enhancing Innovation Capacity and Integration of new knowledge
- Strengthening competitiveness and growth of companies by developing innovations meeting needs of global markets
- Effectiveness of the proposed measures to exploit and disseminate the project results (Including management of IPR), to communicate the project and manage research data where relevant

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<sup>17</sup> <http://ec.europa.eu/research/participants/portal/desktop/en/organisations/register.html>



### 3. Quality and Efficiency of the Implementation (Threshold 3/5)

- Coherence and effectiveness of the work plan including appropriateness of the allocation of tasks and resources
- Complementarity of the consortium partners
- Appropriateness of the management structure and procedures (communication flows, assignment of responsibilities, quality controls, conflict resolution strategy etc) including risk and innovation management

After submission of the individual Evaluation Reports, there is then a discussion among the experts who evaluated the proposal and a combined Evaluation Summary report is prepared. This Evaluation Summary Report is sent to the administrative coordinator following the evaluation process outlining the feedback provided on each criterion and the associated score.

## 2.8 Next Steps

The participants found the workshop to be very useful in terms of learning more about what research each institution is undertaking, learning about H2020 and specifically ICT-39 and going through the brainstorming and group work associated with preparing concepts for proposals.

Each participant was requested to share the materials provided during the workshops with their colleagues and hold a departmental meeting to agree next steps in relation to preparing concepts for proposals.

Having identified thematic areas of most relevance, each department should then engage with European partners that they have links with (either as a result of external PhD supervisors, meetings during conferences or personal contacts) and discuss how they can cooperate to co-design a proposal for submission under ICT-2015.

The participants were requested to keep NCST up to date in relation to their progress and any additional support that they require from IST-Africa.

Gift thanked the participants for coming to the workshop. NCST looks forward to supporting the community in the coming weeks and months in relation to proposal preparation.

## 2.9 Participants



NAME	INSTITUTION
James Chipofya	Baobab Health Trust
Alex Gondwe	Baobab Health Trust
L Maluwa	Chancellor College
Chomora Mikeka	Chancellor College
Chipo Kanjo	Chancellor College
Chrissie Mtonga	Department of e-Government
Mac Pherson Matewere	Department of Science and Technology
Miriam Cunningham	IIMC / IST-Africa
Paul Cunningham	IIMC / IST-Africa
Thomas Bello	Kamuzu College of Nursing
Elliot Mpala	Lilongwe University of Agriculture and Natural Resources
Henry Silika	MACRA
L Momba	MACRA
Bessie Nyirenda	Malawi Institute of Management
Elizabeth Kalitsiro Mwale	Malawi Women in Technology
Kondwani Nampana	Ministry of Finance
Rage Majamanda	Ministry of Health
Seyani Nayeja	Mzuzu University
Gray Nyali	National Library Service
Anthony Muyepa	National Commission for Science and Technology
Gift A Kadzamira	National Commission for Science and Technology
Ebony Msikawanthu	National Commission for Science and Technology
Ellen Funsani	National Commission for Science and Technology
Gift Khangamwa	Polytechnic
P. A. Chikumba	Polytechnic
T Kaonga	Supporting Life
Demster Ngaume	University of Malawi
Lloyd Kambwiri	University of Malawi