

Information and Communication Technologies in FP7

Perspectives for 2009-10

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Outline

- Why is R&D in ICT important?
- ICT Programme overview
- Examples of research challenges and objectives
- Focus on international cooperation
- Calls overview
- Sub-Saharan African participation so far

The WP for 2009-10 has been agreed by the ICT Committee.
The currently opened calls are covered by the 2009 budget only.



ICT what is it?

ICT services:
Telecom,
eHealth,
business,
education,
inclusion,
transport etc

Embedded ICT
in all sorts of
products and
applications

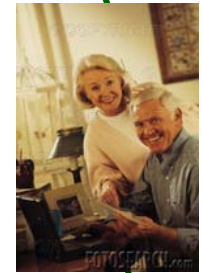
ICT equipments

Electronic Components

ICT devices



Embedded ICT
in all sorts of
products and
applications



ICT: Why is it important?

- ICT is an essential enabler of economic growth
 - ICT represents ~5% of EU GDP, but is responsible for half of productivity gains in our economies
 - ICT industry employs 6.5 Million people in the EU,
 - ~12 Million people work in ICT in the EU
- ICT helps us address key societal challenges
 - Health, environment, energy efficiency, ageing, inclusion,...
- ICT underpins innovation in all sectors
 - ICT underpins progress in major science fields
 - Higher value products and services, more efficient business and manufacturing processes



ICT in FP7: 7 Challenges + FET

systems addressing socio-economic goals

Examples

4. Digital libraries & content

~10%

5. ICT for health

~9%

6. ICT for mobility & sustainable growth

~8%

7. ICT for independent living, inclusion and governance

~4%

technology roadblocks

1. Network and service infrastructures

~30%

2. Cognitive systems, interaction, robotics

~10%

3. Components, systems, engineering

~20%

Future and Emerging Technologies (FET)

~9%

Budget share

European Commission
Information Society and Media



Challenge 4: Digital Libraries and Content

Challenges

- Data volumes growing faster than manageable
 - interpreting data (real-time, multi-dimensional, semantics)
 - automating preservation
 - complex objects
- Content and cultural experiences are not sufficiently immersive, adaptive
- Learning tools do not exploit creativity, collaboration and independent experimentation



Expected Impact

- Increased competitiveness in effective, intelligent information management systems
- Effective and reliable preservation and usability over time of digital objects
- New cultural experiences
- Personalised learning (through ICT) experiences



Target outcomes

4.1 Digital Libraries and digital preservation

- Call 6 -

Digital **content preservation** systems (IP)

- Assessment in large-scale testbeds

Advanced **preservation scenarios**

- Complex objects (STREP)

- Intelligent curation and preservation (IP)

Solutions for **assembling multimedia libraries** (IP)

Adaptive **cultural experiences** (STREP)

+

Research **Network** (NoE)

Uptake and roadmapping (CSA)

4.2 Technology-enhanced learning

- Call 5 -

Learning in the 21st century (IP)

- large scale **pilots**

Link between **individual and organisational learning** (IP, STREP)

-embedding learning experience in organisational processes and practices

Adaptive and **intuitive systems** (STREP)

-serious games and immersive environments

-simulation, story telling and collaborative learning

Learning **appliances** (STREP)

-including toys

-advanced cognitive tutors

+

Research **network** (NoE)

Awareness and **knowledge management** (CSA)

4.3 Intelligent information management

- Call 5 -

Capturing **tractable information** (IP, STREP, NoE)

-acquire, analyse and categorise
-extract, correlate and integrate

Delivering **pertinent information** (IP, STREP)

-improve efficiency of information lifecycle
-make information actionable

Collaboration and decision support (IP, STREP)

-complex business processes
-scientific communities
-web communities

Personal sphere (STREP)

-secure, manage and visualise personal information

+

Coordination and networking (CSA)



Future & Emerging Technologies – FET

An incubator and pathfinder for new ideas and themes for long-term research in the area of ICT

High risk research, offset by potential breakthrough with high technological and/or societal impact

FET Open

- bottom-up approach
- exploring new and alternative ideas at the frontiers

61 M€



FET Proactive

- top-down approach
- spearheading transformative research and supporting community building

110 M€

Objective ICT-2009.9.1

Horizontal actions for international cooperation

9.1a) Support to Information Society policy dialogues and strengthening of international cooperation [CSA]

- Events, analysis of ICT policy and research priorities in third countries
- Synergies with activities launched under other Programmes

4M€

Call 4

9.1b) Support the uptake of EU ICT research results in developing economies [STREP/SICA]

- Diffusion and local exploitation of ICT research results
- Testing of solutions adapted to local requirements
- ICT for public services (eg. e-government, e-health, ...)
- Business-related applications (eg. e-commerce, m-banking)
- Solutions supporting sustainable development objectives, notably for the environment
- Networking of relevant technology developers with users

5M€

Call 6

9.1c) Identifying strategic partners and developing international market objectives and priorities [CSA]

- Extend the constituency of established European technology and innovation roadmaps to key partners in third countries, particularly in the fields of Future Internet and ICT components and systems
- Identification of centres of competence
- Exchange of best practice
- Comparative studies

3M€

Call 4



Call 5: Open 31 Jul 2009, Close **3 Nov 2009**; 722 M€ (TBC)

Challenge	Objectives
Challenge 1: Pervasive and Trusted Network and Service Infrastructures	ICT 2009.1.1 The Network of the Future (call 5) ICT 2009.1.2 Internet of Services, Software & virtualisation ICT 2009.1.3 Internet of Things and enterprise environments ICT 2009.1.4 Trustworthy ICT ICT 2009.1.6 Future Internet Experimental Facility and Experimentally-driven Research
Challenge 3: Components, systems, engineering	ICT 2009.3.1 Nanoelectronics Technology ICT 2009.3.5 Engineering of Networked Monitoring and Control Systems ICT 2009.3.7 Photonics ICT 2009.3.9 Microsystems and Smart Miniaturised Systems
Challenge 4: Digital Libraries and Content	ICT 2009.4.2 Technology-Enhanced Learning ICT 2009.4.3 Intelligent information management
Future and emerging technologies	ICT 2009.8.4,5,6,9,10 FET-Proactive
Horizontal support actions	ICT 2009.9.2 Supplements to support International Cooperation, ongoing projects



Call 6: Open 24 Nov 2009, Close **13 April 2010**; 286 M€

Challenge	Objectives
Challenge 2: Cognitive systems, interaction, robotics	ICT 2009.2.1 Cognitive Systems and Robotics
Challenge 4: Digital Libraries and Content	ICT 2009.4.1 Digital Libraries and Digital Preservation
Challenge 5: Towards sustainable and personalised healthcare	ICT 2009.5.3 Virtual Physiological Human
Challenge 6: ICT for mobility, environmental sustainability and energy efficiency	ICT 2009.6.2 ICT for Mobility of the Future
Future and emerging technologies	ICT 2009.8.7,8,9,10 FET-Proactive
Horizontal support actions	ICT 2009.9.1 International Cooperation ICT 2009.9.2 Supplements to support International Cooperation between ongoing projects



Sub-Saharan African participation in FP6 and FP7 so far



FP6

Who?

CSIR - COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH
ECOLE SUPERIEURE POLYTECHNIQUE
ICT POLICY IMPLEMENTATION TECHNICAL UNIT
MINISTRY OF COMMUNICATIONS, SCIENCE AND TECHNOLOGY
Panos Institute West Africa
TANZANIA COMMISSION FOR SCIENCE AND TECHNOLOGY
UNIVERSITY OF ADDIS ABEBA
UNIVERSITY OF CAPE TOWN
UNIVERSITY OF DAR ES SALAAM
UNIVERSITY OF MALAWI
UNIVERSITY OF MAPUTO
UNIVERSITY OF THE WESTERN CAPE

South Africa
Senegal
Mozambique
Botswana
Senegal
Tanzania
Ethiopia
South Africa
Tanzania
Malawi
Mozambique
South Africa

What?

- ✓ ICT for health
- ✓ ICT for cultural heritage
- ✓ Open Source Software
- ✓ Human-machine interfaces

- ✓ Regional Impact of IST in Africa
- ✓ Support to S&T cooperation between the EU & sub-Saharan Africa in the ICT sector



FP7 Call 1

Who?

Creative Commons Nigeria start up
Ghana India Kofi Annan Centre of Excellence in ICT
GS1 South Africa
ICT Policy Commission
Kigali Institute of Science and Technology
Makerere University
Meraka Institute of the CSIR
Meraka Institute of the CSIR
Ministry of Communications, Science and Technology
Ministry of Education - Namibia
ONEVILLAGE FOUNDATION GHANA
Panos Institute West Africa
Stellenbosch University
Tanzania Commission for Science and Technology
Uganda National Council for Science and Technology
University of the Western Cape
Wits Enterprise (Pty) Ltd

Nigeria
Ghana
South Africa
Mozambique
Rwanda
Uganda
South Africa
South Africa
Botswana
Namibia
Ghana
Senegal
South Africa
Tanzania
Uganda
South Africa
South Africa

What?

- ✓ Inclusive and accessible ICT
- ✓ Open source software
- ✓ RFID standardisation
- ✓ Nanoelectronics

- ✓ Support to S&T cooperation between the EU & sub-Saharan Africa in the ICT sector
- ✓ Support to EU-African authorities dialog



FP7 Call 2

Who?

CENTRE DE SUIVI ECOLOGIQUE

COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH

CSIR

FEDERAL UNIVERSITY OF TECHNOLOGY MINNA

INSTITUT D'ECONOMIE RURALE

UNIVERSITÉ DE YAOUNDÉ

UNIDADE TÉCNICA DE IMPLEMENTAÇÃO DA POLÍTICA DE INFORMÁTICA

SENEGAL

SOUTH AFRICA

SOUTH AFRICA

NIGERIA

MALI

CAMEROON

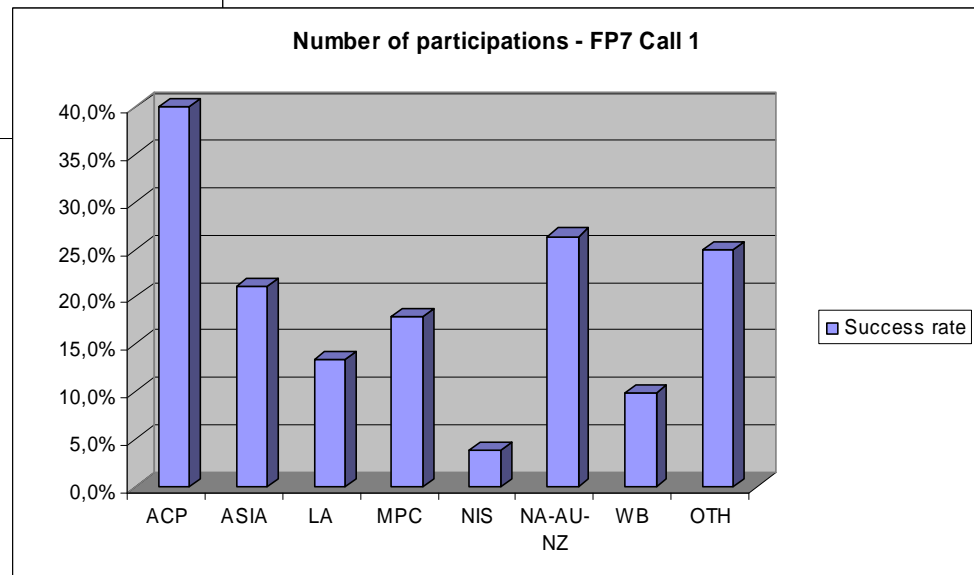
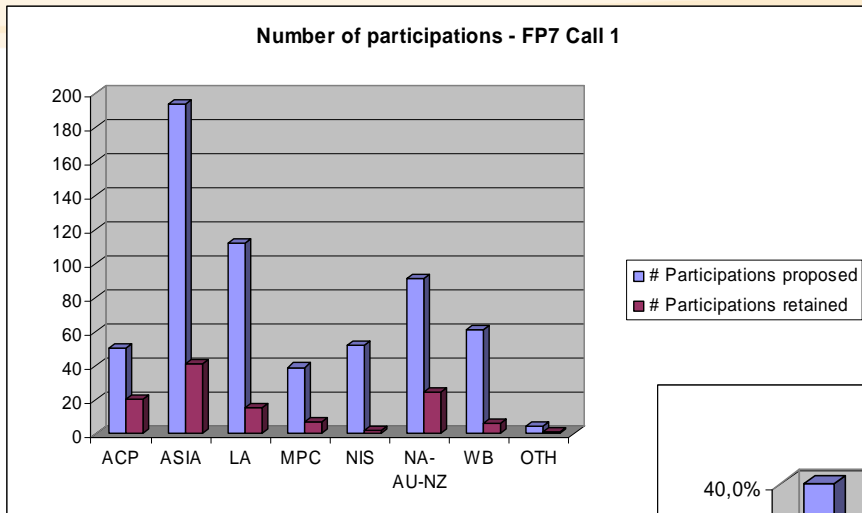
MOZAMBIQUE

What?

✓ ICT for Risk and
Disaster Management



Africa(/Caraib/Pacific): a high success rate in FP7 call 1



Summary

- First phase of FP7 is now completed with 3 major calls evaluated
- Sub-Saharan African participation has already increased in FP7 with respect to FP6 levels
- Work Programme 2009-10 has been published and call 4 has been launched (deadline 1/2/09)
- General opening of the Programme (allowing the funding of partners from International Cooperation Partner Countries) and large number of 'targeted opening'
- In addition, new scheme focused on the uptake of ICT technologies in developing economies (5M Euro / call 6)
- Part of a more ambitious strategy towards cooperation with 3rd countries
- Cooperation could also be strengthened in longer term research with a view to developing long-term scientific partnerships



More information

- FP7 call information: cordis.europa.eu/fp7/
- FP7 ICT Programme : cordis.europa.eu/fp7/ict/

