

**The Netherlands Programme for the Institutional Strengthening of Post-secondary Education and Training Capacity (NPT)**

**Application for the award of the project**

**Strengthening ICT Training and Research Capacity in the Four Public Universities in Uganda**

Name of the Southern organisation:	Makerere University Faculty of Computing and Information Technology (CIT)
Name of the applicant (lead) organisation:	University of Groningen, The Netherlands
Project number:	NPT-UGA-238
Country:	Uganda
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# I. The Project

## 1. Description

1.1 **Title:** Strengthening ICT Training and Research Capacity in the Four Public Universities in Uganda.

1.2 **Names of the Southern Organisations:**  
Makerere University Faculty of Computing and IT (CIT) (**Lead Institution**)  
Mbarara University of Science and Technology (MUST);  
Kyambogo University (KYU);  
Gulu University (GU);

1.3 **Name of the Dutch Organisation (Leading partner):**  
University of Groningen (RUG)

**Partners in the Consortium:**  
Radboud University Nijmegen (RUN)  
Eindhoven University of Technology (TUE)

1.4 **Country and/or region towards which efforts are directed:**  
Uganda

1.5 **Proposed starting and finishing dates of the project:**  
June 2007- May 2011 (4 years)

1.6 **Estimate of cost:**

a) Budget requested from the NPT:	EUR 5.700.00
b) Contribution from Southern Organisation	EUR 500.000
c) Contribution from other sources:	To be determined

## 1.7 Summary:

The project will address Information and Communication Technology (ICT) capacity building at the four Public Universities in Uganda (MAK, MUST, KYU and GU). Generally speaking, the target group will be University staff and students in the above mentioned institutions and ICT Policy makers. The main activities will require expertise from the Netherlands for support in

- 1) Educational programmes implementation;
- 2) Development of research capacity;
- 3) Training of staff of the four universities at PhD level in ICT either in the Netherlands or in Uganda;
- 4) Strengthening of a Centre of Excellence for Computing and ICT Training and Research at Makerere University.;
- 5) Development of ICT Infrastructure at the four public Universities in Uganda;
- 6) promotion of gender balance in staff and students population
- 7) Enhancing ICT awareness and promotion among the policy makers and the general public.

The Dean of Makerere University Faculty of Computing and IT will coordinate the project within Uganda in close cooperation with the representatives of the four Public Universities in Uganda.

## 2. Background

Uganda has five Public universities, namely Makerere University (MAK), Mbarara University of Science and Technology (MUST), Kyambogo University (KYU), Gulu University (GU) and Busitema University (BU). Busitema University is new University in Eastern Uganda and it will begin admitting students in August 2007. It is currently setting structures and recruiting staff. The other four public Universities are part of an ongoing NPT project (Project Number: Uganda, UGA/068; Netherlands, NPT/UGA/032; Grant number: CF1676) on '*Building a Sustainable ICT Training Capacity in the Public Universities in Uganda*'. Makerere University has a Faculty of Computing and IT with four departments of Computer Science, Information Systems, Information Technology and Networks. Before the end of 2007, the Department of Networks will be split into three departments: Department of Data Communications and Computer Networks, Department of Software Engineering and Department of Computer Engineering. Mbarara University Science and Technology has an Institute of Computer Science with faculty status. Kyambogo University and Gulu University each have a department of Computer Science with plans to transform the departments into Institutes Computer Science.

Since the inception of the project on building a sustainable ICT training capacity in the public universities, on 1st July 2004, there has been growth in the ICT sector and at the public universities in Uganda. Nevertheless these Universities remain at different levels of ICT development and more so each of these Universities requires support to strengthen what has/ was begun in order to enable them make a lasting contribution to the ICT Industry in Uganda and the region.

Despite the outstanding contributions of the above mentioned project, there are still only few PhD holders in ICT at the four public Universities in Uganda (MAK, MUST, KYU and GU) to guide teaching and research up to the intended levels. A Centre of Excellence for Computing and ICT at Makerere University needs to be strengthened further in order to continuously address the human resource gaps within the tertiary institutions, the private and public sectors. The research output is still low compared to the Universities in the developed world. There is insufficient ICT and training infrastructure at the four public Universities. The linkage between the Universities and private sector and government is still weak. There is still need to mainstream gender in teaching and research at all the four public Universities.

### 2.2 The main problems which hamper the development of the sector

Uganda's Vision 2025 incorporates a commitment to education as a development priority. To this effect, the Government of Uganda (GoU) has allocated to the education sector up to 30% of the national budget. In reality, however, expenditure on education is at an average of 19.4% of total government expenditure.

Out of this amount, only a small part has been allocated to the tertiary Education as compared to other education sub-sectors. In 2002/03, funds were shared between the various sub-sectors as follows: 66.7% to primary education, 15% to secondary education, 4.3% to Business Technical Vocational Education and Training (BTVE), 10.4% to tertiary education.

The situation has remained more or less the same today. This year (2007) the Government of Uganda will begin implementation of Universal Secondary Education which will further reduce the budget for tertiary education. This situation has negative consequences for ICT related programmes. The gap between the financial needs of these programmes and the real budgetary allocations will continue to widen.

Together with this overall funding issue, the following problems hamper the development of the sector: insufficient number of qualified staff (i.e. PhD holders) to train personnel at Masters and Doctoral level that would eventually feed into the tertiary institutions, the private and public sectors; ill-trained and under equipped human resources; lack of computers and other accessories assembly plant; inadequate physical infrastructure including ICT infrastructure; unavailability of specialized equipment to enable practical training; inexistence of a fully equipped (both in terms of physical and human resources) Centre of Excellence that can be responsible for the continuous training of the ICT human resource for the universities and other tertiary institutions and specialized ICT Professionals for the private and public sectors. This centre is also to address the local research needs of the private and public sectors that could

spur development of the ICT sector; inadequate number of competent local ICT consultants; inexistence of strong linkages between Universities, Government and the private sector.

### **2.3 The various stakeholders involved in the sector, including the direct and indirect beneficiaries**

The various stakeholders in the sector include the direct beneficiaries (public Universities in Uganda) and the indirect beneficiaries, which include but are not limited to the private Universities and other post secondary academic institutions that train some of their staff at universities, government ministries especially the Office of the President, the Ministry of ICT and the Ministry of Education and Sports, the National Council for Higher Education, the Parliament of Uganda, Uganda Communications Commission, National Information Technology Authority-Uganda, and the public and private sectors including Small and Medium Enterprises (SMEs).

### **2.4 The strengths and weaknesses of the existing post-secondary education and training in the sector or subject area in question**

The Universities have good curricula in place, there are good students enrolled in the programmes, sufficient staff to teach at undergraduate level, and computing equipment in the computing departments is better than other departments in the Universities. However, there is still: (i) insufficient computing equipment to enable practical training of current and prospective students, (ii) few PhD holders to support effectively graduate training, (iii) weak linkages with the private sector as well as government and (iv) the research output is still low.

### **2.5 Specific problem(s) in the sector or subject area which the project is intended to solve**

The present project will address the issues of staffing to enable adequate teaching of existing graduate programmes through staff training at PhD level, setting up ICT infrastructure, building research capacity, establishing collaborations with the private sector and government and promoting gender balance and awareness programs.

### **2.6 The link between national or sectoral level policy and the project**

Uganda's national development policy is encompassed in the Poverty Eradication Action Plan (PEAP) II 2004 which is the country's overarching guiding development strategy. The principles set out in PEAP II guide the formulation of Sector-Wide Approach Plans (SWAPs), including the Education, Health, Water, Justice and other sectors. The PEAP highlights the importance of Education for human development and poverty eradication in Uganda and Education sector reform programmes have been elaborated in the Education Sector Strategic Plan 2004- 2015. One of the key PEAP goals is to increase female enrolment in tertiary education and increase the proportion of women among decision makers since they are the backbone to Uganda's economy.

At the International level, Government has ratified several treaties that guarantee the right to education including the International Covenant of Economic and Social Cultural Rights (1966) and the Millennium Development Goals (MDGs) under the UN Millennium Declaration. The MDGs grew out of the agreements and resolutions of world conferences organized by the United Nations in the past decade and include eradication of poverty, promoting human development through increased education and gender equality.

The National ICT Policy for Uganda has three main areas of focus: Information as a resource for development; mechanisms for accessing information; and ICT as an Industry in areas such as e-business, software development and manufacturing. It also emphasizes the role of ICT in modernization of Agriculture, Eradication of Poverty and Education for all.

All four public Universities have ICT Policies which emphasize ICT human resource and infrastructure development and E-learning. The present project is part of the efforts aiming at the realization of the aforementioned national guiding ambitions and fits well within the institutional ICT frameworks.

### 3. Objectives

#### Overall Objective

The overall objective of the Project is to strengthen the Capacity of Makerere University Faculty of Computing and IT, the Institute of Computer Science at Mbarara University of Science and Technology, the Departments of Computer Science at Kyambogo and Gulu Universities to develop, implement and manage relevant educational and research programmes for poverty alleviation, rural and economic development.

*Indicators for the achievement of the overall objective:*

- *New research and educational programmes have been developed and are running successfully*
- *The new programmes have been developed through cooperation with support and feedback from the government and industry, ensuring that the programmes are relevant and will contribute to the development of Uganda*

#### Specific Objectives

A. To build a sustainable ICT human resource capacity at all the four Public Universities;

*Indicators for the achievement of objective A:*

- *The ICT human resource capacity has increased considerably, with 4 PhD's for GU, 3 for KyU, 5 for MUST and 18 for MAK by 2011.*

B. To strengthen ICT educational programmes at the four Public Universities;

*Indicators for the achievement of objective B:*

- *By 2011 the educational programmes have improved significantly, delivering graduates with competencies comparable to those of graduates from similar programmes in the Northern Institutions*

C. To strengthen a joint (for all Public Universities) research programme;

*Indicators for the achievement of objective C:*

- *The joint research programme is strengthened through staff development, publications, and new research lines are developed.*

D. To improve the ICT and Teaching Infrastructure at the four Public Universities;

*Indicators for the achievement of objective D:*

- *By 2007 the ICT and Teaching Infrastructure at the four Public Universities has been improved through the purchase and installation of new equipment, and the training of staff by 2009.*

E. To strengthen the Centre of Excellence in Computing and ICT at Makerere University;

*Indicators for the achievement of objective E:*

- *By 2007 the Centre of Excellence in Computing and ICT is completed and fully equipped.*

F. To promote gender-balance in both the number of academic staff as in the number of students and to contribute to the Uganda government's plans to increase the number of women participating in ICT/ Science and Technology;

*Indicators for the achievement of objective F:*

- *The percentage of staff and students who are women is steadily increased during the project.*
- *Gender awareness promotion activities have had impact on gender policy within the 4 universities as well as on national level.*

G. To strengthen relations and collaboration among the Universities, ICT Industry and the government.

*Indicators for the achievement of objective G:*

- *By 2011 the relations and collaboration between universities, ICT industry and government have been strengthened*

## **Results of the project (planned outputs)**

### **A: On Sustainable ICT Human Capacity**

- By 2011, ten (10) members of staff (1 from Gulu University, 1 from Kyambogo University, 2 from Mbarara University of Science and Technology and 6 from Makerere University) will obtain PhD Degrees in ICT disciplines from the institutions (s) in the Netherlands.
- By 2011, twenty (20) members of staff (3 from Gulu University, 2 from Kyambogo University, 3 from Mbarara University of Science and Technology and 12 from Makerere University) will obtain PhD Degrees in ICT disciplines from Makerere University. Each of the 20 Ph.D. Students will have three short research visits of two months to an institution in The Netherlands during the four years of the project.

*Indicators for the achievement of the planned results of objective A:*

- *Number of PhD graduates with degrees from NL by 2011*
- *Number of PhD graduates with degrees from Uganda by 2011*

### **B: On Strengthening ICT Educational programmes**

- By 2011, Ugandan lecturers will have acquired better methods of teaching and course delivery
- By 2011, Ugandan lecturers will have gained the competency to teach courses delivered by the Dutch experts
- By 2011, the competencies of the graduates from the public Universities completing degree programmes supported by the project will be comparable to those of graduates from similar programmes in the Northern Institutions.
- By 2011, the performance objectives of the degree programmes supported by the project will be comparable to those at the Northern Institutions
- By 2008, the status of former ICT graduates including their employment status and a Tracer Study report will be in place.

*Indicators for the achievement of the planned results of objective B:*

- *Lecturers have improved their skills due to workshops and support from Dutch experts by 2011*
- *By 2011, the revised curriculum builds the same competencies and to the same extend as the competencies graduates from similar programmes in the Northern Institutions*
- *By 2011 the performance objectives of the programmes are comparable to those at the Northern Institutions*
- *Former ICT are traced and their (employment) status statistics are mentioned in a Tracer Study by 2008*

### **C: On Strengthening a Joint Research Programme**

- By 2011, at least 120 papers (30 papers per year) will be published in refereed international journals and books.
- By 2011, four (4) International Conferences on Computing and ICT Research Proceedings books would have been produced.
- By 2011, at least eight (8) issues of an International Journal on Computing and ICT Research would have been produced.
- By 2011, twenty (20) experienced Ugandan Researchers (non-students) (5 per year) would be in place as result of Dutch Experts mentoring
- By 2008 a joint research program with researchers from the Universities, ICT Industry and Policy Makers shall be in place and this program is expected to last 4 years. At the end of each year, a joint research dissemination workshop will be organized (See results on collaboration among the universities and ICT Industry and the Government).

- By 2008 there will be strengthened contract research (research partnerships with the private and public sectors).
- By 2008, 70 computers and UPS will have been purchased to support researchers at the four public Universities.

*Indicators for the achievement of the planned results of objective C:*

- *Number of papers published per year and the total number at the end of the project period*
- *Every year in the project one international conference takes place and the proceedings are published*
- *Number of issues published per year and the total number at the end of the project period*
- *Number of Ugandan researchers obtaining valuable research experience in NL per year*
- *Joint research programme has been developed.*
- *From 2008, a workshop takes place once a year*
- *Number of contracts for contract research per year from 2008*
- *Number of computers and UPS purchased by 2008*

#### **D. On Improvement of ICT and Training Infrastructure**

- By 2007, a networked computer laboratory of 1000 computers will be in place at Makerere University Faculty of Computing and IT; a networked computer laboratory of 50 computers will be in place at each of the other universities (MUST, Kyambogo and Gulu)
- By 2007, four (4) interactive white boards and 4 projectors will have been procured for equal distribution to the four public universities.
- By 2009, at least 2000 (academic) staff will have been trained in ICT skills.

*Indicators for the achievement of the planned results of objective D:*

- *4 computer laboratories are in place by 2007*
- *number of computers per laboratory*
- *Each university has a whiteboard and a projector by 2007*
- *Number of staff trained in ICT skills by 2009*

#### **E. On Strengthening the Centre of Excellence**

- By 2007 a Desktop Publishing Unit will be in place to enable publication of handbooks, proceedings books, books including theses and dissertations, journal issues, flyers, news paper supplements, reports e.g. annual reports and workshop/ project reports etc.
- By 2007 an advanced Multimedia laboratory that will support innovation and research in multimedia technology and applications will be in place.
- By 2007 an Advanced Geographical Information Systems (GIS) laboratory to be used for scientific investigations, resource management, asset management, Environmental Impact Assessment, Urban planning, cartography, criminology, sales, marketing, and route planning will be in place.
- By 2007 the floor to house the Centre of Excellence on the new Faculty of Computing and IT Building under construction will be completed and furnished.

*Indicators for the achievement of the planned results of objective E:*

- *Desktop Publishing Unit is functional by the end of 2007*
- *Multimedia laboratory is in place by the end of 2007*
- *GIS laboratory is in place by the end of 2007*
- *The construction and equipment of the Centre of Excellence is completed by the end of 2007*

#### **F. On Promotion of Gender Balance**

- By end of 2007, at least 40% of the PhD training scholarships will be filled by the female academic staff.
- By 2008, good policies on gender will be in place at the four public Universities
- By 2009, gender will have been mainstreamed in teaching and research at the public Universities

- By 2011, reports on good practices on gender awareness and promotion, and gender and ICT will be in place.
- By 2011 there will be a likely improvement in male: female staff ratio at the public universities as a result of the good gender policies and affirmative action
- By 2011, the number of female students on ICT/ Science and Technology programmes is likely to have improved as a result of the gender awareness and promotion programs targeting primary and secondary school leavers (prospective University students).
- By 2011 the ICT departments/ institutes/faculties will have positively influenced gender policy at national level

*Indicators for the achievement of the planned results of objective F:*

- *Percentage of female staff selected for PhD training in 2007*
- *Gender-balance policies are implemented by 2008*
- *By 2009 awareness of and support to gender-balance had increased*
- *Good practice reports are available by 2011*
- *Increase of the percentage of female staff per university in 2011*
- *Increase of the percentage of female ICT/ Science and Technology students per university in 2011*
- *Gender-balance awareness activities and published good practices have had notable impact on national gender policy in the field of ICT/ Science and Technology*

### **G. On Collaboration among the universities and ICT Industry and the Government**

- By 2011 at least 80% of the ICT advisors on Government projects will be from the Universities
- By 2011 more than 50% of the ICT consultancies will be undertaken by local experts either from the Universities or the private sector
- By 2011 there will be at least 10 spin-off companies from ICT incubation centres based at Universities
- By 2011 value addition on research outputs would have tremendously improved.
- By 2011 there will be strengthened cooperation and collaboration between ICT academic institutions in the Netherlands and in Uganda and between the four public universities in Uganda.
- By 2011 commendable funding from the private sector to the Universities' programs will be in place.
- By 2011 collaborative research projects funded by the private sector will be in place.
- By 2011 more ICT jobs will be in place
- By 2011 delivery of government services will have improved as a result of the collaboration among the government and the Universities and the private sector

*Indicators for the achievement of the planned results of objective G:*

- *Percentage of ICT government advisors from universities in 2011*
- *Percentage of ICT consultancies undertaken by local experts in 2011*
- *Number of spin off companies in 2011*
- *Research outputs show great benefit from the collaboration through relevant feedback and new project proposals*
- *Collaboration between institutions has extended and intensified leading to joint research projects and publications*
- *The private sector helps to improve the quality of the educational programmes through funding*
- *The private sector finances relevant research projects*
- *Increase of ICT jobs between 2007 and 2011*
- *Research projects and educational programmes improve through feedback reports from government and private sector*

Strategies on how to attain these objectives and results are described in chapter 4.1.

## **4. Strategy**

The strategy and general approach proposed by the consortium in order to achieve the specific as well as the overall objectives of the project are outlined below (section 4.1). In section 4.1.1 first the members of the project consortium (the University of Groningen (RUG), Radboud University Nijmegen (RUN), and Eindhoven University of Technology (TUE)) are introduced. Then, tailor-made strategies are proposed for achieving the specific objectives of the project, in line with the project components as introduced in Chapter 3 and further elaborated in section 4.1.2. The resulting project activities plan is introduced in the summary workplan in section 4.2 and presented in an elaborate form in Annex 2. The summary work plan also represents the link between project activities, inputs and anticipated outputs. The summary inputs (in section 4.3) represent the link between project activities, inputs and project resources and outputs/results. A tentative project planning (Gantt Chart) is provided on page 17. The project Logical Framework in Annex 1 summarizes objectives, outputs, verifiable indicators and contextual assumptions.

### **4.1. Project Approach and Strategy**

The proposed strategy originates from experience from and knowledge of achievements in the project “Building a Sustainable ICT Training Capacity in the Public Universities in Uganda”, and on the objectives, aspirations and current capacities of the four Ugandan institutions as documented in the project outline. An important factor in the proposed strategy is the fact that the Dutch consortium partners strive for long-term research-based cooperation with the Ugandan partner universities, even beyond the project period.

To prepare the current proposal an orientation visit was made to Uganda by the University of Groningen and the Radboud University Nijmegen, during which a series of meetings with key project participants, in particular with Ugandan project leader Prof. Venansius Baryamureeba, took place. The acquired ideas and information have been used to shape the proposed project approach.

The consortium partners consider the underlying strategy and work plan proposals as an approach to project implementation which needs to be further discussed with the Ugandan project partners and other stakeholders during the Inception Phase of the project. The consortium partners are open to adjustments and corrections resulting from these discussions, to improve the project planning and implementation and make sure that the project is in all respects a demand-driven Ugandan project, with a secure base for sustainable long-term relations with the Dutch universities.

#### **4.1.1. Composition of the Consortium for the project**

For the implementation of the project the expertise of several Dutch experts will be engaged. A brief introduction of the various contributing expert groups follows (see also Annex 8).

##### **Consortium RUG, RUN and TUE**

For this project, the University of Groningen (RUG) has again formed a consortium with the Radboud University Nijmegen (RUN). RUG and RUN were also consortium partners in the project called “Building a Sustainable ICT Training Capacity in the Public Universities in Uganda”, which can be considered as the first phase of this new project. Both partners find the cooperation very constructive and fruitful, and they have the experience that the institutions complement each other. This is also the reason that RUG and RUN became consortium partners in a big NPT ICT project in Mozambique (NPT/MOZ/034). Consequently, the decision to continue together in the second phase of the ICT project with the public universities in Uganda was a logical one.

Considering the large number of PhD’s and research exposure visits that are planned in this project, the capacity of RUG and RUN would not be sufficient to give all researchers the support and supervision in the expertise fields they might need. Therefore, RUG and RUN have asked Eindhoven University of Technology (TUE) to join the consortium. RUN and TUE are already cooperating in the field of ICT in the LaQuSo (Laboratory for Quality Software) project. RUG and TUE are linked through RUG project member Prof. Wortmann, who formerly worked at TUE and still has many

contacts there. Besides this specific contact, RUG works with many other research-groups in Eindhoven.

### ***University of Groningen***

The University of Groningen (RUG), founded in 1614, is actively engaged in international cooperation and knowledge transfer to partner universities in Africa and Asia. The relationships between RUG and partner universities are based on equal footing, long-term relations in education and research, and they are diverse and very fruitful. From RUG various faculties and academic groups are engaged in multiple cooperation projects, both scientific projects as well as projects concerning capacity building and staff development (see also Annexes 6 and 7). For the proposed project with these four public universities in Uganda, expertise from the following faculties, groups and departments will be mobilised.

#### *Department of Mathematics and Computing Science (Faculty of Mathematics & Natural sciences)*

Research groups:

- Software Engineering and Architecture
- Fundamental Computing
- Intelligent Systems
- Scientific Visualization and Computer Graphics
- Bioinformatics

#### *Kapteyn Institute of Astronomy (Faculty of Mathematics & Natural sciences)*

#### *Information Sciences/Humanities Computing (Faculty of Arts)*

#### *Department of Artificial Intelligence (Faculty of Behavioural and Social Sciences)*

#### *Department of Information Systems (Faculty of Management & Organization)*

### ***Radboud University Nijmegen***

The Institute for Computing and Information Sciences is the institute of the Faculty of Science that is responsible for the integrated research programme in Computer Science and Information Science. The following research groups are available for this project:

*Information Knowledge & Systems*

*Informatics for Technical Applications*

*Information Science*

*Management of Software Projects*

*Security and Correctness of Software*

### ***Eindhoven University of Technology***

The Technische Universiteit Eindhoven (TUE) intends to be a research-driven, design-oriented university of technology, with the primary objective of providing young people with an academic education within the engineering science & technology domain. In this context it seeks cooperation with partner universities all over the world. TUE is part of different networks such as CLUSTER and CESAER. CLUSTER is a network of co-operating universities of technology in Europe. There are 10 participating universities in the CLUSTER Consortium. The Conference of European Schools for Advanced Engineering Education and Research – CESAER evolved from an ERASMUS Network. There is also a tradition of cooperating with partner universities in developing countries such as China and India.

#### *Department of Mathematics and Computer Science*

The Division of Computer Science of the Department of Mathematics and Computer Science will be the part of TUE involved in this. The mission of the Division of Computer Science is to be leading in the science and engineering of software systems. The research and education focuses on two related and complementary themes: (1) Design methods and algorithmics for large-scale, reliable software systems, and (2) Verification and validation of software systems. In particular the following two research groups will actively participate in this project:

- *Architecture of Information Systems*

- *Software Engineering and Technology*

The respective contributing departments have committed several staff members to this project. The list of staff members can be found in chapter 4.3, and their CV's and statements of availability are in Annex 3. More elaborate information on these departments can be found in Annex 8.

### ***South-South cooperation***

Although the consortium consists of 3 universities from the Netherlands, the input of institutions from the South is considered an asset to this project. Makerere University has contacts with many African Universities (in Nairobi, Kenya and in Pretoria, South Africa to name but a few). The consortium will discuss modalities to engage Southern institutions in the project with the Ugandan partners in the Inception phase. The input could mainly be used to strengthen the research component of the project, and to the network with other Southern universities.

In the project "Building a sustainable ICT Training capacity in the Public Universities in Uganda" a Long Term Expert was appointed. There is a possibility that the person who filled this position, Dr. Patrick Ogao shall join Makerere University. This would be a perfect example of sustainability which is a very important issue in capacity building programmes. The consortium wants to investigate whether it is possible to finance part of this appointment with project resources. This is not to finance the academic part of the job, but to conduct teaching missions in the framework of the project on behalf of the other three universities. These project activities can also be made available for local consultants when adequate expertise is not available in the consortium.

Furthermore, the RUG-RUN-TUE consortium has asked the director of Educator One Consulting (eDONEC) to participate in the project, as we believe he could give a valuable contribution at the workshops on collaboration with the government in private sector and share his experiences in other African countries. EDONEC provides services and solutions in the area of Business Intelligence, Business Development, ICTs & Education, and supporting the development world within Africa and to the rest of the world (more information on eDONEC can be found in annex 8).

## **4.1.2. Key elements of the consortium's approach**

### ***Academic Advisory Board***

To ensure a long-term sustainable research cooperation and a continuous stimulation of joint research activities between the partners in the North and the partners in the South, each institution (both in the North and the South) will nominate a "champion" to guard, foster and stimulate joint research activities. An Academic Advisory Board will be created comprising the champions from all of the institutions involved. In the case of the Northern partners, these champions will be full-time professors who are (1) actively involved in research activities at their institutions, while (2) at the same time not too heavily involved in managerial activities at these institutions. This latter requirement will ensure that these champions can devote enough time to their tasks of fostering research collaboration between the Northern and Southern partners.

It is the desire of the partners in the North to let these champions continue their work beyond the duration of the project, leading to a lasting collaboration between the involved institutions, also seeking alternative sources of research funding.

### ***Research collaboration***

True collaboration can only materialize if all parties involved experience a clear contribution to their own goals. North-South research collaboration should therefore be based on a linkage between research interests from both sides, and should capitalize on mutual benefits. To this end,

approximately 10 **collaborative themes** will be selected which are as close as possible to research interests from groups in both the North and the South. The Academic Advisory Board (both Northern and Southern representatives), the academic supervisor and the Ugandan project leader will make this selection during the inception phase. The selected themes serve as focal points for both research and teaching related activities in the project.

For each of the selected themes it is expected that collaboration is started between a group of researchers from the North and a group of (potential) researchers in the South. The actual North-South collaboration will be centred on a pair of principle investigators (one in the North and one in the South). The principle investigators, and their groups, are expected to commit themselves explicitly to the collaborative goals of the project. Each theme will involve three PhD students (one of which will do a PhD in the Netherlands), where the two principle investigators will act as co-supervisors. Each group in the North is required to:

- Conduct missions to Uganda, half of which focus on supervision of PhD students, and half of which focus on teaching.
- Host visits by the Ugandan PhD students.
- Host visits by the Ugandan principle investigator.
- Ensure a presence of their group at the annual SREC conference at least once during the project period.

Each group in the South is required to:

- Host the visits by researchers from the North.
- Have their principle investigator visit the associated group in the North.
- Have their PhD students visit the associated group in the North.
- Ensure a presence of their group at the annual SREC conference at least once during the project period.

### ***Selection and supervision of PhD candidates***

The selection of the PhD students will take as (one of its) inputs the collaborative themes as identified by the Academic Advisory Board. The students apply for one of the themes, and the Board selects 30 candidates. After the selection of the PhD candidates, a pair of potential supervisors will be sought for each PhD student, where each pair of supervisors consists of a supervisor from an institution from the North and one from the South. To initiate the PhD project, each PhD student will visit the supervisor in the North for an initial period of two months. After this two month period it will be decided which PhD projects fit best at the institutions in the North or in the South. The supervisor pair will then become a supervisor/co-supervisor (in Dutch: promotor/co-promotor) depending on the chosen location. By deliberately using a supervisor/co-supervisor pair existing of a North/South pairing, we expect to create additional commitment to the North/South collaboration between the partners.

In the period following the initial two month period, the PhD students doing their projects at the Northern institutions will in principle be expected to conduct their research activities at these institutions for the first two years of their projects (needless to say that they are allowed to visit Uganda during summer and Christmas holidays). In the third year the research will be conducted at the institution in the South, while the last year (wrapping up the PhD project) will necessarily take place at the institution in the North. Thus, a sandwich construction of 75% in the Netherlands and 25% in Uganda will be established, which will ensure that candidates can graduate within the prescribed four years. Furthermore, just like for all PhD candidates at Dutch universities, there will be a go/no go decision after one year. This will encourage students to work hard from day one of their research.

### ***Curriculum***

In the further development of the curricula of the institutions in the South, the focus will be on the improvement of course materials as well as skills and abilities of the lecturers. To this end, we aim to:

1. Have lecturers from the North teach (compressed in time) *their* courses to relevant staff in the South, and help these latter staff members with integrating these materials in their own

courses where applicable. Note: these courses could be delivered locally, or by means of video conferencing techniques (or a combination of both).

2. Have lecturers from the South visit lecturers from the North to jointly work on the elaboration of teaching materials.
3. Aid lecturers from the South in the involvement of students in research activities related to the taught courses, thus instigating a research mentality in the students' minds.

To stimulate the traditional academic linkage between teaching and research, the above activities should be tied to research collaborations where possible. The missions for teaching support will be combined with research activities where possible in order to make the most efficient use of the available expertise.

### ***Centre of Excellence***

The Centre of Excellence is going to be an ICT centre with high quality resources for ICT education and research that will support the whole region. The Centre is set up at a central location for reasons of sustainability and efficiency, and with the aim to encourage and support joint research projects between all stakeholders. The RUG-RUN-TUE consortium supports this approach and considers the completion and furnishing of the Centre of Excellence as the first priority at the start of the project. It would facilitate many other project activities such as staff training in ICT, and the strengthening of joint research with other universities and collaboration with government and industry.

As noted above in Section 3, "Objectives", the Center of Excellence will minimally house a publishing center, a multi-media laboratory and a GIS Centre. It is to be expected that some of the research activities supported by the programme proposed here will likewise find their place in the Centre, but we do not wish to wait until these have proven successful before utilizing the Centre further.

The consortium would like to present a few ideas, not yet elaborate plans but food for discussion with the Ugandan universities, on how to encourage contract research at the Centre of excellence, and fortify cooperation between universities in the North and the South:

The Centre of Excellence could identify offer projects to be carried out by a team of Ugandan and Dutch students. These projects have been defined by a Ugandan company. The relevance of the project is the motivation to make an initial investment by supporting the travelling expenses of the Dutch students. Typically, the project team consists of 2 Ugandan and 2 Dutch students, and will last 2 months. Afterwards the result of the project will be evaluated by the company, a positive evaluation will lead to the payment by the company of an equal bonus to all students working on that project.

Another idea:

Projects could also be defined at the Northern universities. A possibility that could be investigated is to identify projects with northern industrial partners. Dutch students and Ugandan students would each execute half of the project on the basis of outsourcing.

### ***Videoconferencing***

Videoconferencing can be used for communication between all universities, North - South, and South South. This would facilitate communication between groups, and it would offer the possibility of face-to face meetings without physical proximity. The videoconferencing facilities could also be used for remote lecturing. A professor in the Netherlands could give a lecture to Ugandan students while remaining in the Netherlands. This would not replace all travel, but would be a useful addition, offering more access to Dutch expertise. Another possibility is pod cast recordings. The recordings would ensure that Ugandan students would have access to the lectures whenever they wish, it would offer greater flexibility. These recordings would also be accessible for Gulu, where the Dutch experts are still not allowed to travel and where the internet access is not sufficient for remote lecturing. Technical aspects related to the use of videoconferencing and actual modalities of the use will be discussed during the Inception phase.

### ***Gender balance***

Quite a number of results are described to achieve the gender balance objective. During the project ‘Building a Sustainable ICT Training Capacity in the Public Universities in Uganda’, the consortium noticed that Makerere University together with the other Ugandan universities is very capable of organising gender awareness activities without much intervention from Northern Universities. Therefore the Consortium has decided not to present a complete plan of activities on this subject, but to discuss during the first few months of the project what activities the Ugandan universities have envisaged, and the Consortium will make suggestions and offer expertise where needed. TUE has a specific ‘Women in Science’ programme to promote gender balance, and it would be of interest to all parties (including the Dutch universities where gender balance is also an issue) to discuss the Makerere approach, the TUE approach and some other views in order to develop new ideas on this subject, and plan the activities for this project accordingly.

### ***Collaboration with the government and the private sector***

When reading the outline, it is clear that the Ugandan universities have already some very clear ideas on how to encourage collaboration between the universities and the government and industry. Therefore, the Consortium proposes to hold a seminar on this subject early on in the project to discuss these ideas, to develop new ideas or elaborate existing plans. Stakeholders from the government and the private sector would also participate in the seminar. The RUG-RUN-TUE consortium would send experts with much experience in the field of joint projects with the government and/or private sector to this seminar, e.g. senior staff of the RUG Transfer and Liaison Group. The plan of activities on this component will be based on the findings of that seminar.

#### **4.1.3. Addressing Dutch priorities in development assistance**

The objectives of the project, as well as the operationalisation proposed in this document, are conform to Dutch development assistance priorities such as regards ownership, poverty reduction and attention to issues of good governance, gender mainstreaming and sustainable development.

- **Ownership** is central in the NPT programme. The present proposal follows the main line of the "NPT Outline" formulated by Makerere University. The RUG-RUN-TUE consortium has already discussed the main strategy of this proposal with the Ugandan project leader during a short preparatory visit, and the proposal will also serve as a basis for further discussion and determination of the joint project strategy during the inception phase. The project documents will be adjusted to the joint wishes during the inception phase. During the further project period, new or revised activities will be decided upon by mutual agreement. Proposed activities may change in the course of the project to better cater to the needs of the Ugandan universities and to better achieve the project’s objectives. The management structure of the project (see section 4.5) clearly expresses the principle of equality and partnership. The proposed strategy for executing the project conforms in every possible way to one of the key objectives of Dutch development policy, namely of ownership of the Southern partner (see also above).
- **Gender issues** Within the project, there is great emphasis on promoting gender-balance in both the number of academic staff as in the number of students of the four universities. To recruit more female students, gender awareness campaigns will be held at schools. In order to raise the rate of female staff gender policies will be developed and implemented. The gender-balance policies and reports on good practices that will be published will not only help to mainstream gender at the universities but it will also influence government policy on this issue.
- **Poverty alleviation, MDG’s and good governance:** In the view of the Dutch Government, good governance and development of higher quality education and efficient service delivery in the public sector are priorities in poverty alleviation, achievement of MDG’s and improved social well-being. The four Ugandan Universities have major responsibilities towards these goals. The project therefore not only aims at improving the education and research programmes in order to deliver better qualified graduates, but the project also aims at improving collaboration with the public and

private sector, through joint research projects and through delivering competent local consultants, in order to better meet the requirements of the Ugandan society in the field of ICT.

## 4.2 Planning of Activities

The planning of activities for the project includes an Inception Phase (elaborated below), specific proposals for activities during the first 12 months of the project (including a detailed budget) and a more indicative workplan and budget for the remaining project period. For a more elaborate overview we refer the reader to Annex 2 (Workplan) and Annex 5 (Proposed Budget). A tentative chronological activity plan in the form of a Gantt chart is included (see page 17). A summarized overview of inputs is given in section 4.3.

### *Project structure and workplan*

Largely in accordance with the NPT project outline and objectives (see chapter 3), the RUG-RUN-TUE consortium proposes to structure the workplan into the following main components:

Proposed project components	Work Package	Specific Activities (tentative)
Inception Phase	IP	IP1-IP2
Building a sustainable ICT Human Resource Capacity	A	A1-A3
Strengthening ICT Educational Programmes	B	B1-B4
Strengthening Joint Research Programme	C	C1-C8
Improvement of ICT and Teaching Infrastructure	D	D1
Strengthening the Centre of Excellence in Computing and ICT	E	E1
Promotion of Gender Balance	F	F1
Collaboration among Universities, ICT Industry and Government	G	G1-G2
Project Management, Coordination and Quality control	PM	PM 1- PM 5

The Workplan is further elaborated in Annex 2.

### **Inception Phase**

The project will start with the Inception Phase as soon as possible after Nuffic has given approval and contractual arrangements have been handled, probably already in June 2007. The Inception Phase will enable the Ugandan universities and the co-implementing RUG-RUN-TUE consortium to agree on the final strategy and initial project activities, and thus specify required project resources and the allocation of the proposed budget. Guiding principles of the proposed expertise should be effectiveness, efficiency and overall contribution to the project objectives.

As the parties are already acquainted, it is expected that the inception phase can be relatively short and efficient. However, as the new project will have a different content from the project ‘Building a Sustainable ICT Training Capacity in the Public Universities in Uganda’, all parties will use the inception phase to jointly form the project strategy and the plan of activities for 2007. Although this project is in many ways a second phase to the project ‘Building a Sustainable ICT Training Capacity in the Public Universities in Uganda’, all parties should beware not to assume automatically that they already know the needs and expectations of the other parties.

Gantt chart



### ***Proposed activities for the Inception Phase***

Annex 2 presents a more elaborate activity plan for the project Inception Phase. It contains the following activities:

#### **IP 1: Coordination and Management mission to Uganda**

A mission from the academic supervisor to Uganda will take place, probably in June 2007. The organisation of the project will be addressed and there will be discussions on the plan of operations and the activities for 2007. The adaptation of the project documents will be started, and further elaborated through e-mail after the mission. The workplan for 2007 will be compiled and the budget will be split in two parts so that it fits in the tripartite arrangement which is applicable. These documents will be submitted to Nuffic with a request to release funds to enable the construction of the Centre of Excellence which is essential for many other activities. The completion and furnishing of the Centre is therefore a major priority.

#### **IP 2: Academic Advisory Board mission to Uganda**

The Dutch Academic Advisory Board, consisting of one full professor representing each university in the consortium, will travel to Uganda to discuss the set up of the large research component of the project. Together with the champions of the four Ugandan universities, they will identify the needs of the Ugandan universities, they will identify the collaborative themes and they will develop a joint research strategy. PhD Candidates will be selected. The Academic Advisory Board will be supported by a secretary who will incorporate all agreements and decisions in a report and the project documents. The revised project documents, and the inception phase report will be further discussed by the Academic Advisory Board and the Ugandan project leader and completed. Both parties will sign the documents and they will be submitted to Nuffic for approval.

### ***Outputs of the Inception Phase***

The output of the inception phase should be a single document containing the following:

- A report on the inception phase.
- An amended integral project document (based on the project proposal submitted by the Dutch partner) reflecting the results of the inception phase. The document should consider the recommendations of the Tender Evaluation Committee and the conditions stipulated in the grant award.
- A detailed work plan and budget for at least one full calendar year; more tentative planning and budgeting for the remaining project period (planning and budgeting on a calendar-year basis).
- An amended logical framework (including indicators, means and verification).
- A summary of the adjustments made to the budget and the logical framework (for easy comparison with the budget and the logical framework of the proposal).
- A clear written endorsement of the entire document from both partners.

### **Project activity planning**

A tentative chronological planning of major project activities is indicated in the Gantt Chart (page 17). Planning of activities for the first twelve months of the project will be intensively discussed during the first introductory visit from the academic supervisor to Uganda (June 2007). For years 2-4 of the project, the planning will be adapted in accordance with project progress. This will be agreed upon by the Joint Project Coordination Team and reported to Nuffic.

## **4.3 Proposed inputs**

The staff members involved can be divided in two categories: those involved in expert support, and those who have overall and managerial tasks (mostly) combined with expert support. The academic supervisor and the three members of the academic advisory board belong to the latter category and are

involved in nearly all components. The project coordinator is not involved in expert support but very much in project management. These are the key staff members in the project on the Dutch side. The level of involvement of the staff members who will give exclusively expert support will depend on the demand of particular fields of expertise of the Ugandan universities. A table of proposed team members per university can be found here. More elaborate descriptions of the departments of these staff members can be found in annex 8, and their CV's and statements of availability can be found in annex 3. A summarized overview of other inputs is given directly after this table (page 22).

#### University of Groningen

Name of Expert	Position/Role/Field of Expertise (P/R/E)	Component
Prof. Dr. John Nerbonne	P: Chair of the Department of Information Science R: Academic supervisor, PhD supervisor, curriculum development E: Computational Linguistics	IP, A, B, C, PM
Prof. Dr. Gerard Renardel	P: Head of the Fundamental Computing research group R: Member of the Academic Advisory Board, PhD supervisor, curriculum development E: Equational reasoning, Decision support systems, Programming methodology and Multi-agent systems	IP, A, B, C, PM
Prof. dr. J.B.T.M. Roerdink	P: Head of the Scientific Visualization & Computer Graphics research group R: PhD supervisor, curriculum development E: Computer Graphics and Visualization	A, B, C
Prof. Dr. Marco Aiello	P: Head of the Distributed Systems and Software Engineering group R: PhD supervisor, Curriculum development E: spatial distribution of computation, spatial representation, and spatial reasoning	A, B, C
Prof. L.R.B. Schomaker	P: Director of the Artificial Intelligence Research Group R: PhD co-supervisor, curriculum development E: pattern-recognition problems, handwriting recognition, writer identification, handwritten-manuscript retrieval	A, B, C
Prof. R.C. Jansen	P: Head of the Groningen Bioinformatics Centre R: PhD supervisor, curriculum development E: BioInformatics	A, B, C
Prof. J.M. van der Hulst	P: Director of the Kapteyn Astronomical Institute R: PhD supervisor, curriculum development E: Astronomy and Astronomical visualization	A, B, C
Prof. J.C. Wortman	P: Chair of the Information Systems Department (FMO) R: PhD supervisor, curriculum development E:	A, B, C
Dr. E.A. Koster	P: Lecturer R: PhD co-supervisor, curriculum development E: GIS and Web technology	A, B, C
Dr. Gosse Bouma	P: Lecturer R: PhD co-supervisor, curriculum development E: Computational and theoretical syntax, Corpus linguistics, Finite state methods for NLP, and Question Answering	A, B, C
Dr. Michael Wilkinson	P: Lecturer R: PhD co-supervisor, curriculum development E: computer vision, image processing and analysis, and simulation and visualization	A, B, C
Dr. Michael Biehl	P: Lecturer R: PhD co-supervisor, curriculum development E: Theory and application of machine learning techniques, Modelling and simulation of complex physical systems	A, B, C

Dr. Ir. Ineke Ganzeveld	P: Senior staff member of Academic Affairs R: Facilitator of Quality Assurance workshops E: Quality Assurance of RUG Educational and Research programmes	B
Drs. Marnix Pool	P: Director of the RUG Holding Company R: Facilitator workshop on collaboration with industry and government E: Negotiation Skills, Investments, Financial Management	G
Ms. Drs. Annemieke Galema	P: Vice-Director Transfer and Liaison Group R: Facilitator workshop on collaboration with industry and government E: Research Management, Knowledge Transfer, Liaison	G
Mr. Erik Haarbrink	P: Coordinator International Cooperation and Financial manager R: Project coordinator E: Project management, financial management	IP, PM

### Radboud University Nijmegen

Name of Expert	Position / Role; Field of Expertise (P/R/E)	Component
Prof. dr. ir. Th. P. van der Weide	P: Head of the Information & Knowledge Systems Department R: Member of the Academic Advisory Board, PhD supervisor, Curriculum development E: Information Systems and Information Retrieval	IP, A, B, C
Prof. Dr. H.A. [Erik] Proper	P: Principal Investigator R: PhD supervisor, Curriculum development E: Information System Architecture	IP, A, B, C
Dr. Janos Sarbo	P: Researcher and Lecturer R: PhD co-supervisor, course development E: Cognition and Knowledge Representation	A, B, C
Dr. Patrick van Bommel	P: Researcher and Lecturer R: PhD co-supervisor, course development E: Information Modelling and Document Systems.	A, B, C
Dr. Freek Wiedijk	P: Researcher, Lecturer R: PhD co-supervisor, Curriculum development E: Interactive Theorem Proving.	A, B, C
Dr. Erik Barendsen	P: Head of the Teaching Institute R: PhD co-supervisor, curriculum development E: : logic, foundations of computing science: rewriting systems, lambda calculus, semantics, static analysis, research methodology education: didactics, curriculum development	A, B, C
Prof. dr. Frits Vaandrager	P: Head of Department Informatics for Technical Application R: PhD supervisor, curriculum development E: Embedded Systems	A, B, C
Dr. Theo Schouten	P: Researcher and Lecturer R: PhD co-supervisor, curriculum development E: Image Processing, Video Processing, Real Time Systems, Embedded Systems, Computer Graphics, Multi Processor Systems, Neural Networks, Pattern Recognition, Computer Networks	A, B, C
Dr. S.J.B.A. Hoppenbrouwers	P: Researcher and Lecturer R: PhD co-supervisor, , curriculum development E: Modeling Processes in System Development	A, B, C

**Eindhoven University of Technology**

<b>Name of Expert</b>	<b>Position/Role/Field of Expertise (P/R/E)</b>	<b>Component</b>
Prof. Dr. W.M.P. van der Aalst	P: Chair of the AIS group R: Member of the Academic Advisory Board, Academic supervisor, PhD supervisor, curriculum development E: Information Systems	IP, A, B, C, PM
Prof. Dr. K.M. van Hee	P: Dean of the Department of Mathematics and Computer Science R: PhD supervisor, curriculum development E: Equational reasoning, Decision support systems, Programming methodology and Multi-agent systems	A, B, C
Prof.dr. M.G.J. van den Brand	P: Chair of the Software Engineering and Technology group R: PhD supervisor, curriculum development E: Software engineering and code analysis	A, B, C

**Other available expertise**

<b>Name of Expert</b>	<b>Position/Role/Field of Expertise (P/R/E)</b>	<b>Component</b>
Dr. Karl Dittrich	P: Director of the Netherlands-Flemish Accreditation Board R: Member of the QC&A Board E: Accreditation of Higher education	PM
Dr. Henk van Linde	P: Independent ICT consultant, former Director of SURF Foundation R: Member of the QC&A Board E: Consultancy and Management of ICT	PM
Dr. Serge Bayala	P: Director of eDONEC, Burkina Faso R: Facilitator workshop on collaboration of universities with industry and government E: Promotion of ICT in Education and Research at African universities	G

#### 4.2 Summary proposed inputs

Activity No.	Activity Name	Inputs NL staff (k€)	Inputs UG & local staff (k€)	Visits UG staff	Training UG staff	Investments	Operational
IP1	Mission Academic supervisor	€ 7,954	UG staff time	-	-	-	-
IP2	Mission Academic Advisory Board	€ 45,260	UG staff time	-	-	-	-
A1	30 PhD programmes commence	-	UG staff time	30 staff to NL	2 months in NL	-	-
A2	10 PhD programmes in NL	-	UG staff time	10 staff to NL	34 months in NL	-	-
A3	20 PhD programmes at Makerere	-	UG staff time	20 staff to NL	2*2 months in NL	-	-
B1	20 Teaching and Academic support missions	€ 235,340	UG staff time	-	-	-	-
B2	Annual Quality assurance workshops	-	UG staff time	-	-	-	€ 57,000
B3	ICT Skills training	-	UG staff time	-	academic staff	-	-
B4	Tracer studies of ICT graduates	€ 280,960	UG staff time	-	-	-	-
C1	20 research missions from NL to UG	-	UG staff time	-	-	-	-
C2	20 research working visits from UG to NL	-	UG staff time	20 staff to NL	2 months in NL	-	-
C3	Annual Research conference in Kampala	€ 268,920	UG staff time	-	-	-	€ 57,000
C4	UG staff visiting conferences abroad	-	UG staff time	-	-	-	-
C5	Publishing 8 journal issues	-	UG staff time	-	-	-	-
C6	Annual workshop on Modern Univ. & res. Man.	-	UG staff time	-	-	-	€ 57,000
C7	Purchase of 70 computer for res. staff	-	UG staff time	-	-	€ 70,000	-
C8	Operational costs research programme	-	UG staff time	-	-	-	€ 100,000
D1	Investments ICT & teaching Infrastructure	-	UG staff time	-	-	€ 840,500	-
E1	Furnishing + investments Centre of Excellence	-	UG staff time	-	-	€ 828,500	-
F1	Promotion of gender balance	-	UG staff time	-	-	-	-
G1	Annual joint research dissem. and consultative workshop	In B1 & C1	UG staff time	-	6 UG staff	-	€ 57,000
G2	Participation in joint ICT incubation projects	-	UG staff time	-	-	-	-
PM1	Project management in Uganda	-	€ 192,000	-	-	-	-
PM2	Mission project leader to NL	-	€ 8,820	-	-	-	-
PM3	Project management supervision in NL, incl input acad. Adv. board	€ 251,055	-	-	-	-	-
PM4	Mission acad. Supervisor & project coordinator to UG	€ 71,758	UG staff time	-	-	-	-
PM5	Quality control & Mid term review	€ 33,014	UG staff time	-	-	-	-

#### **4.4 Internal project coordination**

As the project concerns four universities in Uganda and three universities in the Netherlands, it is necessary to pay proper attention to the internal project coordination and evaluation and communication of the project's progress and results to the various stakeholders. It is proposed that coordination, progress monitoring, evaluation and dissemination of (mid-term) results within the project will take place along the following lines:

- Every year, the Ugandan project leader and the Dutch academic supervisor of the project will – on the basis of the information provided by the project coordinators – prepare a joint annual progress report on the activities of the project, and the level of achievement of results and objectives.
- Annually, financial statements at Makerere University and at the University of Groningen will be audited by an independent (external) audit firm. These statements will be submitted by the University of Groningen and Makerere University to NUFFIC separately, accompanied by the external auditors reports.
- On the basis of the progress reports, which include reports of the various activities and executed missions, and an overview of the achievement of results and objectives based on the logical framework, the project supervisors discuss the need for readjustments of the planned activities to be carried out in the coming period. For this purpose, the Ugandan project leader and the academic supervisor or project coordinator (NL) meet every year for a monitoring and planning session
- Visits of RUG-RUN-TUE project experts or visits/miscellaneous activities of Ugandan staff will be reported in the form of Mission/Activity Reports.
- Half way through the project, a mid-term review will take place by three external experts in the field of ICT and/or Education. The Dutch members of the independent ‘Quality Control and Advice Board’, Dr. Karl Dittrich and Dr. Henk van Linde, will be the same as in the project ‘Building a Sustainable ICT Training Capacity in the Public Universities in Uganda’ as their evaluation was much appreciated by all parties and stakeholders involved. As in the first project, the Ugandan universities will appoint the third member of the QC&A Board. The planning of activities may be altered, even significantly, if the QC&A Board decides that a different course of action should be taken in order to achieve the project's objectives, and both the Ugandan and Dutch partners agree on the adaptation of the planning of activities.

#### **4.5 Project organisation and management**

A diagram showing the project's structure is presented in Annex 4. The project organisation on the Ugandan and the Dutch side have been represented in a symmetrical way. Both have an overall project leader/academic supervisor, both coordinate the involvement of other participating universities and both sides are supported by a project management team. The Academic Advisory Board has members from Uganda and the Netherlands. Communication between the Ugandan universities and the Dutch universities will mainly but not exclusively be channelled through the projectleader/ academic supervisor and through the academic advisory board. As the project proceeds and the joint research develops, more and more direct lines will be established between researchers from the participating universities.

##### ***Project organisation and management in the Netherlands***

Prof. Dr. John Nerbonne (Chair of the Department of Information Science, University of Groningen) will act as the overall academic supervisor of the project. Furthermore, the Dutch side of the academic advisory board will be established of full professors of RUG, TUE and RUN. The academic advisory board advises the academic supervisor on PhD research issues and other academic affairs, and they mobilise staff from their institutions for project activities. Both the academic supervisor and the academic advisory board receive assistance for coordination of all day-to-day project affairs from the project management team at the Office for International Relations of RUG. The Office for International Relations will provide support through a Project Coordinator, a financial officer, and a project assistant. The Office for International Relations will coordinate all project administrative and financial matters for the project team, and will be the liaison with Nuffic for the Dutch consortium. A diagram showing the consortium's structure is presented in Annex 12.

The academic supervisor, the academic advisory board, and the project management team will meet at least twice a year. There will be a meeting with all involved staff members of the RUG-RUN-TUE consortium once every year.

#### 4.6 Proposed budget

For an elaborate budget overview reference is made to Annex 5. Below, Table 4.6.1 gives a summary of the budget allocations for the main project components.

**Budget summary Table 4.6.1**

Project Component		Subtotal (in Euro)
IP	Inception Phase	53,214
A	Building a sustainable ICT Human Resource Capacity	1,158,400
B	Strengthening ICT Educational Programmes	402,340
C	Strengthening Joint Research Programme	815,120
D	Improvement of ICT and Teaching Infrastructure	840,500
E	Strengthening the Centre of Excellence in Computing and ICT	828,500
F	Promotion of Gender Balance	152,500
G	Collaboration among Universities, ICT Industry and Government	481,792
PM	Project Management, Coordination and Quality control	695,647
<b>Contingencies 5 %</b>		<b>271,401</b>
<b>Overall total</b>		<b>5,699,414</b>

As indicated by Nuffic, a **tripartite** budget arrangement will be settled with the lead applicant in the Netherlands (University of Groningen - RUG) and the lead institution in Uganda, Makerere University.

#### 4.7 Feasibility of the project

The project is ambitious in scope but not overambitious. The Dutch consortium is well acquainted with the achievements of the first project, and has every confidence in the commitment and the strong sense of ownership of the Ugandan universities and the project leadership at Makerere University. As several members of the future project team have already seen the impressive building where the Centre of Excellence will be housed, and the possibilities it offers to the future developments in the ICT sector of Uganda, it is recognised that it should be possible to complete the building and equip this Centre in 2007. It is also important that the Centre should be completed so soon, as it will form the basis for other project activities such as education and research, but also the services to the government and the private sector. We know the Ugandan project leader has ample experience in the preparation for bids to contract local firms who can complete the Centre and has a dedicated team around him that is deeply involved in the realization of the project leader's vision for Uganda, to become leader in ICT.

Concerning the PhD candidates, the number of candidates seems at first glance to be quite large. However, the number of PhD who will do their research at a Dutch university is 10, which should pose no problems for a consortium of three Dutch universities where at each university several departments have expressed their full commitment to this project. This commitment is mainly inspired by the quality and dedication of the students in the project "Building a Sustainable ICT Capacity in the Public Universities in Uganda". Furthermore, in order to achieve the highest possible success rate of PhD graduation after four year, the Dutch consortium has decided to have the PhD candidates in the

Netherlands for 3 years out of 4, as described in chapter 4.1.2. The large number of PhD's in Uganda has led to the establishment of the academic advisory board, as the placement of these researchers at the 3 Dutch Universities will take careful planning by staff members who are well acquainted with the availability of academic expertise at their own institutions, and who are as full professors in a position to mobilise and motivate the required expertise within the respective consortium partners. .

For the same reason, this academic advisory board will also be involved in the identification of expert staff for the curriculum development missions.

The consortium believes in the feasibility of this project. All three Dutch universities have experience in the execution of such projects, RUG for example has been involved in over 40 projects in nearly 30 years. Thanks to the project 'Building a Sustainable ICT Capacity in the Public Universities in Uganda', the consortium knows the four Ugandan universities, their project leader and the sub-coordinators very well. As the mid-term review by independent experts has evaluated, the four Ugandan universities and the Dutch partners RUG and RUN have already (nearly) completed one project together successfully. This fact provides us full confidence that this new project will also prove to be successful.

#### **4.8 Sustainability of project results**

The following issues will contribute to the long-term sustainability of the project's anticipated outputs:

- 1) As stated above, the institutional and personal commitment of the four Ugandan universities is strong
- 2) Creating a strong sense of ownership and self-directive attitude on the part of the stakeholders of the Ugandan universities will be one of the most important methods to achieve sustainability. Therefore, in all project activities the external project partners will opt more for a role of advisers and coaches than as full executors of project activities. For example, during the project 'Building a Sustainable ICT Training Capacity in the Public Universities in Uganda' Makerere University has shown that it is more than capable of organising e.g. gender awareness workshops. The consortium can offer an expert as key-note speaker, but we know we can fully trust the organisation of such a workshop to Makerere University.
- 3) As increasingly the tuition fees paid by students will be the source of funds to sustain the project's results, for many activities the project funding will decrease each year. For example, the funding for the Quality Assurance workshops starts with 20.000 euro in year 1 and will gradually be decreased to 10.000 in year 4. The International Annual Conference will start with an amount of 40.000 euro support from the project, which will be gradually decreased to 15.000 euro in year 4.
- 4) As the collaboration with government and industry intensifies, the demand of academic ICT research and services from the government and industry to the universities is expected to increase. The collaboration will also generate funds as the Universities will receive remuneration for their services.
- 5) Continuing commitment by project partners RUG, RUN and TUE. Long-term sustainability of project results will be enhanced through the willingness of the project partners to make available minor support to the partners in Uganda, after the formal project term has ended in 2010. This is in line with the philosophy of both institutions with regards to international cooperation with Southern partner universities. In particular the joint research lines on the collaborative themes will be established with the specific objective of long-term cooperation between the Dutch and the Ugandan universities

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## **II The applicant organization**

### **5 Identity**

- Full legal name: Rijksuniversiteit Groningen / University of Groningen
- Legal status: Public Institution, WHW article 11
- Acronym: RUG
- Official Address: Broerstraat 5, 9712 CP Groningen, The Netherlands
- Postal Address: P.O. Box 72, 9700 AB Groningen, The Netherlands
- Legal Representative: Dr. S. K. Kuipers, President of the Executive Board
- Contact Person: Mrs. Drs. M. C. Gardeur-Veltman, Head of the Office for International Relations
- Telephone number: +31 (0)50 363 5420
- Fax number: +31 (0)50 363 7100
- E-mail address: m.c.gardeur-veltman@rug.nl
- Website: [www.rug.nl](http://www.rug.nl)

### **6 Description of the (lead) applicant organisation and consortium partners**

For this particular project the University of Groningen (RUG) has formed a consortium with Radboud University Nijmegen and Eindhoven University of Technology. Some of the reasons for this have been introduced in Part I of the proposal. In the sections below it will be shown that the consortium partners combine academic expertise of high quality and a broad scope with practical knowledge and experience in a range of issues. This expertise has been applied in several earlier projects, in a number of institutes for higher education in African and Asian countries.

#### **6.1 History of the (lead) applicant organisation**

The University of Groningen is a classical university involving all the major academic disciplines organised in ten faculties. It belongs to the oldest generation of European universities and was founded in 1614. Current enrolment is over 23,000 students, with some 2000 students coming from abroad (more than 95 different nationalities). The University of Groningen offers the fullest ranges of academic and technical education available in any university in the Netherlands and is the only general university in the Netherlands that can offer Engineering BSc and MSc degrees. All faculties offer bachelor and master courses and degrees. PhD's and research masters are organised in graduate schools. Currently, around 900 PhD candidates are preparing their theses. The university also provides professional training courses for teachers, chemists, doctors, dentists, accountants and information experts and involves specialised institutes such as in nuclear physics, pharmaceuticals, and energy and environmental studies. The university employs some 6,000 academic and non-academic members of staff. The University of Groningen is one of the main research centres of the Netherlands. It receives most of its funding from public sources and is governed by an independent body.

#### **6.2 Legal status**

The University of Groningen is a public institution established by Act of Law (WHW). The formal statement is registered with Nuffic (Annex 11).

#### **6.3 What are the main activities of your organization (and of the other consortium members) at present?**

The core activities of the *University of Groningen* are scientific education and research, and the provision of services to society. The University of Groningen is committed to its host city, to the North of the Netherlands and to the Netherlands as a whole. It has assigned itself the task of being a European university in the Netherlands: an international university where the best students from all over the world engage in study and research, at high academic levels and in an agreeable universal

spirit. Its focus on research is a leading principle, performing across the spectrum of academic disciplines, from Theology to Engineering, and taking advantage of the multi- and interdisciplinary potential this provides. Its learning environment is active and activating, giving students the room to make their own choices for their own development. The Central Office of the University is its central administration as well as its central support facility, providing services to the Executive Board and the faculties alike, from the President and the Rector Magnificus down to the individual staff member and student. The Office for International Relations is part of the Central Office of the University.

The University of Groningen has long been committed to an active internationalisation policy. The University of Groningen has, for example, for many years been a member of the Coimbra Group. The Coimbra Group is a network of European comprehensive research universities.

The internationalisation policy also prominently includes long-term relations with linkage partners in Uganda, Tanzania, Mozambique, Ghana, Eritrea, Burkina Faso, South Africa, Vietnam, Indonesia, and China (see also Annex 8). The objective of the University of Groningen is to develop such relations into relations of academic cooperation based on the principles of equality and partnership. The interfaculty Centre for Development Studies and the Office for International Relations of the university play an important role in the development of partnership relations.

### ***Radboud University Nijmegen***

The Radboud University Nijmegen is a student-oriented research university, located in the southeast of the Netherlands. Established in 1923, it is now one of the country's leading academic communities, with over sixteen thousand students in eight faculties and approximately ninety study programmes (about forty Bachelor's and more than fifty Master's programmes). In outlook and scope, the Radboud University Nijmegen is a truly international institution with two hundred and fifty staff members from abroad and over a thousand foreign students. There are many international courses and programmes in which Dutch and foreign students participate together.

The international dimension is an essential aspect of the Radboud University Nijmegen, where it forms an integral part of education and research, and is inextricably bound up with the quality thereof. Internationalisation is also a crucial factor in social service. The internationalisation policy of Radboud University Nijmegen is carried out at both central and decentralised levels, and manifests itself in, among other things, the mobility of both students and teachers. Sixty percent of the research conducted at Radboud University Nijmegen is multidisciplinary. The twenty-four high-quality research institutes are at the forefront of a number of fields. These institutes offer unique opportunities to undergraduates, postgraduates and PhD students alike.

### ***Eindhoven University of Technology***

Eindhoven University of Technology (TUE) was established in 1956. The university now has 9 departments and provides 11 Bachelor's degree programmes, 1 special Bachelor's programme, 18 Master's degree programmes, 8 special Master's programmes, 4 educational Master's programmes (mathematics, physics, chemistry and computer science), 8 post-doctoral programmes for technological designers (Professional Doctorate in Engineering, PDEng) and various post-doctoral courses and programmes (Doctor of Philosophy, PhD).

The TUE has around 3000 employees, 240 professors, 7200 students, 250 PDEng students, 600 PhD students, 25,000 graduate engineers, 1000 graduate technological designers and 2000 PhDs.

The TUE has established a partnership with the Delft University of Technology and the University of Twente in the form of a Federation of Universities of Technology in the Netherlands. These three universities of technology are an important knowledge partner for industry and government in the field of advanced technology.

The TUE is part of the European CESAER, Santander and CLUSTER university networks, and has partnerships with universities around the world.

## **6.4 What is the management structure of the lead applicant organization?**

The management structure of the University of Groningen, as far as relevant for the present project, is as follows.

Overall responsibility lies with the three members of the Executive Board, including the Rector Magnificus, Prof. Dr. Frans Zwarts. President of the Executive Board is Dr. S. K. Kuipers, Prof. Dr. Koos Duppen is Vice-President.

The University of Groningen has ten faculties: Arts, Theology, Philosophy, Law, Medical Sciences, Mathematics & Natural Sciences, Economics, Management & Organisation, Behavioural & Social Sciences, and Spatial Sciences. The Executive Board and the Faculties are supported by five large service centres: the Central Office of the University, the Internal Service Department, the Computing Centre, the University Library, and the Language Centre.

Numerous units are specifically aimed at facilitating the internationalisation process at the University of Groningen: the Office for International Relations, the International Service Desk, the Language Centre, and the Faculty International Offices. The Office for International Relations is a distinct unit within the Central Office of the University. It has a staff of 23 people, amongst whom the coordinators for International Cooperation, the financial officers and the project assistants are especially relevant in the context of this project.

## 7 Expertise

### 7.1 Expertise in the subject area of the project

#### **University of Groningen**

An important aspect of the University of Groningen's internationalisation is the co-operation with universities in developing countries. Its primary objective is to increase the capacity and the quality of human resources in developing countries. However, the intention of the University of Groningen is to reach an academic co-operation that is equal in quality on both sides and which is in the interest of the institutions involved. For this project several faculties and departments of the University of Groningen are very much interested to cooperate:

#### *Department of Mathematics and Computing Science (Faculty of Mathematics & Natural sciences)*

There are 5 research groups on Computing Science in the Department, the first four of which will participate in this project:

- Software Engineering and Architecture
- Fundamental Computing
- Intelligent Systems
- Scientific Visualization and Computer Graphics
- Bioinformatics

Most of the research is interdisciplinary, and part of it has direct relevance for the IT industry. The expertise of the group in educational programmes is based on hands-on experience with the design and maintenance of the curricula.

#### *Kapteyn Institute (Faculty of Mathematics & Natural sciences)*

Astronomical research is organised in the Kapteyn Institute. The main areas of research include Structure, dynamics & kinematics of galaxies, Formation & evolution of galaxies, Cosmology & cosmic structure formation, Physics of interstellar matter & star formation, and Astronomical instrumentation.

#### *Information Sciences/Humanities Computing (Faculty of Arts)*

Information Science straddles the borderline between traditional Arts studies (languages, culture, history and art history) and information technology. The Information Sciences research takes place at

the Centre for Language and Cognition Groningen. For this project, the Computational Linguistics research group is most relevant.

*Department of Artificial Intelligence (Faculty of Behavioural and Social Sciences)*

The Artificial Intelligence and Cognitive Engineering (ALICE) institute of Groningen University, The Netherlands, is involved in Artificial Intelligence and Cognitive Engineering research. With Computing Science, an interest in formal modelling is shared, where these models may be symbolic, statistical or hybrid in nature. The research programme covers three interrelated areas in Artificial Intelligence: Cognitive modelling, Multi-agent systems, Autonomous and perceptive systems, and Language, Sound and Cognition.

*Department of Information Systems (Faculty of Management & Organization)*

The Department of Information Systems focuses on the analysis, design and management of information- and knowledge processes, and the way these processes may change (often radically) with the application of modern ICT.

More elaborate information on these departments can be found in annex 8.

**Radboud University Nijmegen**

The Institute for Computing and Information Sciences is the institute of the Faculty of Science that is responsible for the integrated research programme in Computer Science and Information Science. The mission of the ICIS is to develop (formal, mathematical) theories, methods and tools to support the specification, design, analysis and evaluation of computer based systems, starting with the identification and formalisation of requirements. Our research aims at improving the quality of software, with specific emphasis on reliability, security, and architecture and system alignment. The following research groups are available for this project:

*Informatics for technical applications*

To carry out fundamental research on formal methods and tools for the specification, design, analysis and testing of computer systems for technical applications (in particular embedded systems and protocols), and demonstrate and assess the effectiveness of using these methods and tools in the industrial software development process.

*Software technology*

To develop theory, methods and tools for specification, programming (in particular functional and generic programming techniques), static analyses (especially type systems), and dynamic analyses (with a focus on specification and model-based testing) to support designers and developers in the construction and verification of reliable software.

*Security of systems*

To develop theories, formal methods and tools that contribute to the security of protocols and software, and contribute to ongoing developments and debates on socially relevant issues such as privacy, open source, electronic voting, biometric passports, etc.

*Foundations*

To develop and study formal languages and logical theories involving algorithms, proofs, processes, computations, correctness and complexity, as well as developing and experimenting with computer tools that support these languages and logics.

*Information and knowledge systems*

To perform fundamental and applied research around the theme of knowledge-intensive systems, i.e. systems that can elicit, structure and process implicitly and explicitly represented knowledge of a

problem or domain, drawing upon ideas, methods and techniques from information systems and artificial intelligence.

### **Eindhoven University of Technology**

*Department of Mathematics and Computer Science (W&I)*

The Department of Mathematics and Computing Science is subdivided into two Divisions, one for computer science and one for mathematics. The Division of Computer Science consists of seven research groups:

- Information Systems
- Formal Methods
- Software Engineering and Technology
- System Architecture and Networking
- System Design and Analysis
- Algorithms
- Visualization

In its research the department focuses on generic aspects of the design of software systems. In particular, focus is on the following two related and complementary themes:

- Design methods and algorithmics for large-scale, reliable software systems.
- Verification and validation of software systems.

Within these themes, the department aims at developing universally applicable methods and techniques. To achieve this it complements theoretical research with empirical research, develops software tools, and tests and applies techniques on concrete software systems.

The Division has an exchange programme with the Centrum for Wiskunde en Informatica (CWI) in Amsterdam. It participates in the Embedded Systems Institute (ESI), a national research institute located in Eindhoven. At the moment, this institute has as participants three universities (TU/e, TU Delft, and UT), three companies (ASML, Océ, and Philips), and TNO. Internationally, the Department participates in a European cooperation in the organization of training activities for PhD-students and young scientists through the European Educational Forum (EEF), of which the bureau is hosted by the Department.

Recently the Department started a joint Master's program with the Manipal Institute for Higher Education (MAHE, Manipal, India), where selected students from MAHE do the first year of their Master's studies at MAHE and the second year at the TU/e (including an internship with one of the participating companies). More information on this programme can be found in annex 7.

The respective contributing departments of the three consortium partners have committed several staff as indicated in Annex 3. These staff will play a role either as short mission experts or as supervisor for Ugandan staff doing their PhD in the Netherlands or as co-promotor for Ugandan staff doing their PhD in Uganda visiting the Netherlands.

## **7.2 Expertise in enhancing developing countries' capacity for post-secondary education and training**

### ***University of Groningen***

The University of Groningen has made internationalisation an integrated part of its policy on research and education and gives priority to cooperation with universities and institutions in developing countries. The intention of the University of Groningen is to develop partnerships into relations of academic cooperation on a basis of equality. In Annex 8 an overview is presented of the institutional

partnerships and linkages of the University of Groningen. The most important ones are with institutions in Uganda, Tanzania, Mozambique, Ghana, Eritrea, Burkina Faso, Vietnam and South Africa. All partnerships are long-term links with an emphasis on institution building and human resource development for mutual benefit. This tradition of long and intensive collaboration has gained the University of Groningen and its staff a wide experience in supporting capacity building programmes in the fields of training and research, university management, and academic disciplines such as Economics, Business & Public Administration, Law, ICT and Rural Development. Such programmes also include the aspect of dissemination as well as communication with public and private stakeholders in the partner university country (sometimes region). A more elaborate description of the RUG track record in international capacity building programmes for higher education can be found in Annexes 6, 7 and 8. Two important sections within the university are specialised in facilitating the co-operation with institutes in developing countries: the *Office for International Relations* and the *Centre for Development Studies (CDS)*.

## 8 Capacity to manage and implement projects

For this NPT project Prof. Dr. John Nerbonne will be the overall academic supervisor in charge of the RUG-RUN-TUE consortium. Prof. Nerbonne is Chair of the Department of Information Science at the Faculty of Arts at the University of Groningen. He was also involved in the first phase of this NPT project, called “Building a Sustainable ICT Training Capacity in the Public Universities in Uganda”, as supervisor of PhD candidate Mr. Geoffrey Andogah.

*The Office for International Relations (BIS)* of the University of Groningen is the professional centre of the university dealing with issues concerning international academic cooperation. Because of the idea that internationalisation is an integrated part of the RUG policy on research and education, BIS is part of the Department for Academic Affairs and international Relations in the Central Office of the university. The Office for International Relations is responsible for the cooperation with partner institutes in developing and industrialised countries and has more than 30 years of experience in administrating cooperation agreements and monitoring cooperation projects. Cooperation with universities in developing countries dates back to the early 1970s and covers all disciplines. Whenever possible, the Office for International Relations links the university’s academic networks in developing countries to its networks in the industrialised countries. The Office for International Relations consists of 23 staff (19,2 full-time equivalent), including policy makers, project coordinators, project assistants, and financial officers: 3,5 full-time equivalent staff is specialised in coordinating, monitoring and administrating cooperation projects with partners in developing countries. The main responsibilities of the RUG Office for International Relations are given below.

### **Main responsibilities of the Office for International Relations (BIS-RUG)**

- Academic development cooperation: advice, guidance and assistance for academic partners in developing countries, especially in the field of education and research; advice and assistance in support of project proposals for external funding (European Union, Dutch Ministry of Foreign Affairs, World Bank, others); administration of (university) grants for researchers from developing countries; administration of funds for post-graduate research in developing countries.
- Other international academic cooperation: policy recommendations concerning institutional cooperation with universities in industrialised countries, particularly those in the EU, Eastern Europe, New-Zealand, North America and Japan; participation in university networks e.g. Coïmbra Group, mediation in applications to the EU and the Dutch Government connected with projects for study and research abroad; coordination of the RUG policy concerning the Dutch Academic Institutes abroad; coordination of the student exchange programmes with the USA (ISEP) and New Zealand; management of resources for international academic cooperation.
- International Service Desk (see below).

From within the university organisation there is broad and world-class support for international cooperation. All cooperation projects are supervised by an Academic Supervisor (full professor or director) from one of the Faculties. Support for innovative ICT infrastructure and applications is provided (in a range of projects) by the interfaculty Computing Centre. The Computing Centre hosts state-of-the-art computing facilities with support staff and a diverse suite of specific software applications. The University Library supports access to information resources (nowadays mostly digital) for staff, students and partners worldwide. Library staff supports the development of dedicated websites for particular projects or studies. The RUG Centre for Development Studies (CDS) facilitates especially academic aspects of North-South collaboration relations. The Centre for Development Studies has a wide range of activities that are all aimed at promoting research collaboration and education in the field of development, and publishing dissertations and Research Reports.

The **International Service Desk (ISD)** informs guests who have decided to come to the University of Groningen or who are already here, or their contact persons within the university, on visa procedures, registration, work permits, residence permits, taxes, finances, scholarships, health insurance, medical care, housing, facilities, travel information and matters concerning everyday life. The ISD coordinates a number of social events for all international guests, from the central introduction ceremony to trips to museums et cetera. In some instances, notably in the case of the regular guests of the Office for International Relations and guests of the Executive Board of the University, the ISD offers direct assistance in arranging visa, work permits, housing, health insurance, scholarships, et cetera.

In Annexes 6, 7 and 8 further information is provided on the cooperation with universities in developing countries during the past years.

## 9 Consortium Partners

In this table information is given about the institutions that will conduct the project together with the University of Groningen (leading partner).

	<i>Leading Partner</i>	<b>Consortium Partner</b>	<b>Consortium Partner</b>
Full legal name	Rijksuniversiteit Groningen (RUG)	Radboud Universiteit Nijmegen	Technische Universiteit Eindhoven
Legal status	Public institution established by Act of Law	Private-not for profit Foundation	Public institution established by Act of Law
Registration ID	N.A.	KvK.nr. 41055629	N.A.
Official address	P.O. Box 72 9700 AB Groningen, the Netherlands	P.O. Box 9102 6500 HC Nijmegen, the Netherlands	P.O. Box 513 5600 MB Eindhoven
Legal representative	Dr. S.K. Kuipers Voorzitter College van Bestuur	Ir. R.J. de Wijkerslooth-de Weerdesteyn Voorzitter College van Bestuur	Ing. A.H. Lundqvist Voorzitter College van Bestuur
Contact person	Mrs. Drs. M.C.Gardeur-Veltman	Mrs. Drs. P.L.A.M. Haarhuis	Mevr. M.A. van Buul-de Greef
Telephone number	+31 50 3635476	+31-24-3615659	+31 40 2472733
Fax number	+31 50 3637100	+31-24-3612757	+31 40 2463992
E-mail address	m.c.gardeur-veltman@rug.nl	externerelaties@er.ru.nl	m.a.van.buul@tue.nl
Number of staff members (permanent and non-permanent)	6.000 employees	4.173 employees	3.000 employees
History of collaboration with the applicant organisation	n.a.	NPT projects ‘Building a Sustainable ICT Training Capacity in the Public Universities in Uganda’ and ‘Capacity Building In ICT In Mozambique’	N.A.
Role and involvement in preparing the proposed project	Drafting project proposal; applicant organisation, discussion project set-up with consortium partners	Co-drafting the project approach and workplan, introducing strict quality standards	Commenting on project approach and workplan
Role and involvement in implementing the proposed project	Project leadership, management, coordination, financial administration from Dutch side; management approaches development, quality assurance, monitoring & evaluation systems Support development of educational program, research and PhD programs	Support development of educational program, research and PhD programs, Participation in Academic Advisory Board	Support to development of educational program, research and PhD programs, , Participation in Academic Advisory Board

In Annex 13, the signed Consortium Agreement is presented. An organisational diagram of the Applicant Organisation is attached as Annex 12A, and a diagram of the Consortium is in Annex 12B.

## **10 Declaration by the applicant organisation regarding the acceptance of the obligations in the grant**

I, the undersigned, being the legal representative for the applicant organisation, certify that:

I have read the terms of the grant award for NPT project implementation and know what my organisation's obligations will be (see Annexes 6 and 7 of the tender document). The organisation which I represent accepts all the obligations as specified in the grant award.

Name: Dr. S.K. Kuipers  
Position: President Executive Board

Signature:

Date and place: Groningen, May 2007

## **11 Statement by the Applicant Organisation**

I, the undersigned, being the legal representative of the Applicant Organisation certify that:

1. team members proposed in this tender who for some reason are unable to perform their project duties (for example illness, no longer in service, etc.) will be replaced, at no extra cost, by equally or higher qualified persons.
2. the applicant organisation is not bankrupt or being wound up, is not having its affairs administrated by courts, has not entered into an arrangement with creditors, has not suspended activities, nor is it affected by any other legal procedure of this type;
3. the applicant organisation is not acting as an intermediary, but is directly responsible for the preparation and management of the project;
4. the information supplied in this tender is correct and complete; and
5. both the applicant organisation and any partner organisation(s) meet the requirements specified in Section 3.1.1. of the tender document and are thus eligible.

Name: Dr. S.K. Kuipers  
Position: President Executive Board

Signature:

Date and place: Groningen, May 2007

## List of abbreviations

AAB	Academic Advisory Board
BIS-RUG	Bureau Internationale Samenwerking RUG / Office for International Relations
CDS-RUG	Centre for Development Studies
GU	Gulu University
HE	Higher Education
ICT	Information and Communication Technology
ISD	International Service Desk (part of the Office for International Relations of the RUG)
KyU	Kyambogo University
MA/MSc	Master of Arts/Master of Sciences
MAK	Makerere University
MDGs	Millennium Development Goals
MHO	Medefinancieringsprogramma Hoger Onderwijs/Joint Financing Programme for Higher Education (of Nuffic)
MUST	Mbarara University of Science and Technology
NL	Netherlands
NPT	Netherlands Programme for the Institutional Strengthening of Post-Secondary Education and Training Capacity
NUFFIC	The Netherlands Organisation for International Cooperation in Higher Education
QC&A	Quality Control & Advice
RUG	University of Groningen
RUN	Radboud University Nijmegen
TUE	Eindhoven University of Technology

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