

# Computerisation Kinondoni

## A five year learning process

Anne-Marijke Podt, Veronica Igoko, Denise Senmartin

This project brief describes the lessons learned from one of the IICD-supported projects in the sector Governance. It is intended for practitioners in the field who would like to learn from the experience of this project as well as organisations that would like to implement similar systems.



The brief takes much of its learning from the evaluation exercises that have been performed by the project, with the help of IICD and local Monitoring & Evaluation (M&E) partners. This evaluation system consists of questionnaires filled in anonymously by the end users of the project on a yearly basis (all users of the project or a representative sample) and analyses of the data coming out of these questionnaires: user profiles, use and satisfaction, and impact of the project. Additionally, it consists of Focus Group meetings attended by project staff and end users, to reflect on the data and discuss successes, challenges and solutions.

Besides the lessons coming out of the evaluation data and discussions, there are many others that have developed over the years and have been captured by this brief. The brief has been constructed in close collaboration with the project partner, Kinondoni municipality, Tanzania.

### Context

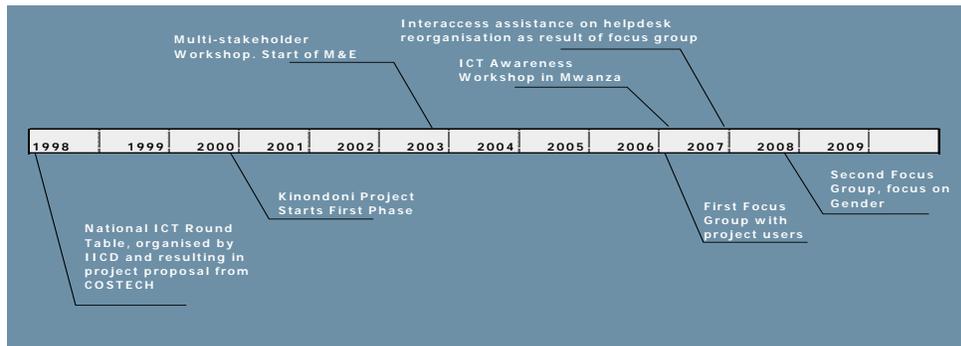
With around half of the population living below the poverty line, Tanzania is on the lowest ranks of UNDP's Human Development Index. In an effort to promote productivity and attract foreign investment, the government has been pursuing a policy of liberalisation and non-intervention as well as a strong focus on decentralisation for the last twenty years.

The project "District Computerisation Kinondoni" is an outcome of the National Information and Communication Technology (ICT) Roundtable workshop organised by IICD and held in Dar es Salaam, the largest city of the country, in July 1998. A study previous to this Roundtable revealed that most of the functions carried out by the District commissioner's office were ineffective and inefficient. Weaknesses included limited transparency due to a lack of information.

<b>General</b>	
Surface Area (sq. km):	9,473,000
Population total:	39.5 mln
Life expectancy:	52
School enrolment, primary:	97.8% net
Human development index:	159 (out of 177 countries)
<b>Access to communication technologies (per 1000 people)</b>	
Mobile subscribers:	52
Internet Users:	9
Personal computers:	11
<b>Project data</b>	
Number of users:	500
Number of beneficiaries:	6000
Target groups:	
Municipal councillors and municipal staff	
Population in Kinondoni municipality:	
1,088,867 (2002 census)	

**Figure 1: Statistics on Tanzania**  
(Sources: World Bank - ICT at a Glance 2005, World Development Indicators 2006, UNDP)





**Figure 2:** Timeline of the IICD supported Kinondoni Computerisation project.

With little access to information, the responsible people in the municipality could neither make the right decisions nor monitor relevant developments. This crippled and impaired strategic vision, and resulted in inefficient resource utilisation.

Therefore, the project aimed to improve governance in the Kinondoni district, one of the municipal authorities in Dar es Salaam, through the use of ICT.

Kinondoni is one of three districts in Dar es Salaam. It consists of 27 wards (sections) with a total of over one million inhabitants. The municipality has 6000 staff members and was mainly chosen because it is home to the *Commission of Science and Technology* (COSTECH), one of the implementing partners in the project.

At the time of implementation of the project at Kinondoni, some initiatives that used ICT for (local) governance in Tanzania were known, such as an initiative by UNDP to collect data for a national database and a system for financial transactions in government institutions. However, all of these initiatives were designed and implemented top-down, and none of them led to a broad and institutionalized use of ICTs.

### Target group and objectives

The target group (users) for the project are the municipality staff, who directly interact with the information. Citizens benefit from

the project as well since the information provided by the staff members is more accurate and faster to get, for example on information of land titles.

Users of the Kinondoni project are a diverse group comprising of managers, administrative technical and support staff. The last two groups take up one third of the target group. Gender balance has not been an issue in the project, with both genders hovering around 50% throughout the years. However, women tend to be overrepresented in the support staff group (75% women). The target group is evenly distributed by age, with 73% between 31-50 years old. In terms of education, more than half of the users have tertiary education (an average of 60% over the years), though this number has been diminishing somewhat over the years.

Since the inception of the project, the users participating have been asked about their motivation to participate in the project (although all of them were part of the project because their department was, this question was aimed at their personal incentives). Many indicate that they want to learn about ICTs, but more importantly they indicate that they would like to use this knowledge to improve the work of the municipality. In their words "to improve work performance by making it easy to provide accurate work/reports in time and for less costs" and "to keep proper land holding records, reduce conflicts and improve revenue collection through land tax".



Central to the project is the bottom-up approach. Staff members have been involved in the identification of the information they need and in development of useful ICT applications for their work.

The pilot phase of the project started in 2000 and addressed three areas of computerisation: education, health, and birth, marriage and death registration. The ICT service now facilitates record keeping, transparency on taxations (tax collection and expenditure, budgeting, information sharing) amongst different departments, and quick solutions on land conflict management. A Geographical Information System (GIS) has been applied for land title data, which enables the calculation and collection of property tax. This system has 22 people checking information in the municipality; physically going door-to-door. Five people input the data into a website.

Key elements of the project have been:

- Improved data and workflows with emphasis on needs at operational levels;
- Enhanced storage and accessibility of data;
- Improved data analysis and decision-making at district level based on data from relevant sectors (education, health, land).

Another important aspect of the project is to sensitise (local) government on the possibilities of ICT to improve its functioning.

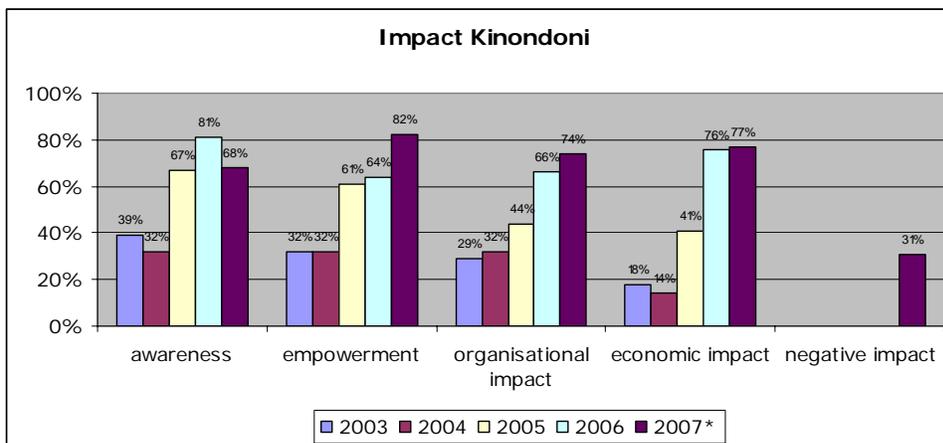
As a result of better planning, improved communication and linking up of information, the municipality aims to deliver better quality services to the community and, at the same time, enhance municipal revenues.

## Impact

Impact of the District Computerisation has been analysed for 5 years now, giving a good understanding of the development of the project over time. Starting in 2003, the project collected questionnaires with 180 users of the project (municipal staff).

Impact here is measured by asking users to respond on a 7-point scale (strongly disagree to strongly agree) and then combining these statements into 5 constructs: awareness, empowerment, impact on the organisation, economic impact and negative impact. The data collected also looks at the profile of the users, their satisfaction and use of the project.

The measures of organisational impact has greatly risen over the years. This includes dealing with the impact on the decentralisation process, report writing, transparency of the government and improvement of municipal services. However, as the data shows, the process of making a real impact on the organisation has been a lengthy one.



**Figure 3:** Impact of the Kinondoni project.

\* Due to changes in the questionnaire, data in 2007 was analysed differently resulting in slightly different outcomes. Also, 2007 was the first year to measure negative impact.



The organisational impact is illustrated by the observation of municipal staff that complaints by citizens have been reduced due to good use of ICT. This is also expressed in comments from users like: "The project does away with corruption issues, it shortens work, it keeps memory for a long time and it reduces the use of stationary" and "Records can be kept and retrieved, edited and reproduced". The organisation of the municipal services has improved, these being now faster as a result.

With the presence of the GIS, citizens no longer have to wait to get an overview of the land rent or plots of land in the municipality, as information is readily accessible.

The number of complaints by clients has also gone down considerably and transparency has increased. The municipal website now has a suggestion box and all counsellors now have their own e-mail address so citizens can send their ideas, questions and suggestions. These has resulted in many comments of appreciation from the public, and is being used by Kinondoni residents. For example, one citizen asked his counsellor for extra clean-ups in his neighbourhood, attaching digital pictures to show the pile up of garbage in his street.

The ICT services have also resulted in higher revenues for the municipality: revenues increased 88% since the introduction of the



**Figure 4:** Billboard in Kinondoni. Before, random advertisements were being pasted on the municipal billboards. Now, the counsel can keep track of each billboard in the municipality, another example that has increased municipal revenue.

services in 2005. Some of this increase in revenues flows back into the ICT department in order to keep the services sustainable.

As a unintended negative impact of the project, users saw the fact that "a change in technology temporarily disturbs the way in which everybody works". Senior staff and staff with higher levels of education, having greater expectations of the new technologies in terms of speed and efficiency, were concerned by technological failures.

In some years the project seems to impact women more than men, and people with lower levels of education saw more impact than those with secondary and especially tertiary education. When this was discussed in Focus Group meetings, it was explained that the women often occupy the lower level positions in the organisations (secretaries and other support staff) which is supported by a strong correlation between gender and level of education. In these positions, women tend to be the ones working with the ICTs in practice, as their (male) bosses often are too busy to do this. Especially during the last few years, women have been very strongly represented during Focus Group meetings both in numbers and in participation in the discussions. Discussion revealed why empowerment was perceived high: women claimed it made them feel good to have all these new skills that even their bosses sometimes did not have

## Lessons learned

It took time to integrate ICTs in the municipality and there are two lessons learned to be stressed.

Change management is an important aspect of a project and several steps were taken to address it. First, training on ICTs was organised for a large group and secondly, a two day workshop was held bringing all stakeholders together to explore the role of ICT in the municipality. This paved the way for a real acceptance and use of ICTs in the municipality. Participants to these trainings and workshops discovered the importance of information for their work and saw it as a 'duty' to share it. Thus, the master ICT plan

and continuing training for staff became acceptable and desirable parts of the workload in the municipality.

Change management was also an important theme during awareness and replication workshops for local governments held in 2006 and 2007. The replication workshop in 2006 was attended by 13 municipalities from different parts of Tanzania. The awareness raising workshop, looking at broader topics and with themes on agriculture and health as well as local governance, focused on the area of Magu and Mwanza, near Lake Victoria.

Secondly, clear communication processes and guidelines are required, as well as clear assignment of responsibilities. Computerisation in Kinondoni implied information sharing, which requires communication. A key points of focus should be to test and prioritise changes, to communicate clearly, to assign responsibilities and to reinforce changes. An important part of change management was also convincing and persuading several heads of departments and services to comply with the new work practices and to adapt their roles accordingly. A good change manager, which in the case of Kinondoni was the IT manager, is a prerequisite for a large and political organisation such as a municipality undergoing such a change.

## Challenges

The largest challenge for the project is currently related to training. Although a large group of people has been trained, much more training, especially of end users (the municipality staff) is still needed. Extra revenues have been used to hire more, very much needed, ICT technical staff, but as all departments need to benefit from the extra revenues, this money is not enough to put in place large scale training. Currently the municipality has 6000 staff members and 300 workstations, which have been purchased by the municipality itself. About 500 users of the workstations have been trained so far, but some of these users are no longer working in the municipality. This staff turnover means that training will have to be a continuous effort.

Particularly needed is training of lower level staff, such as secretaries. As became clear through evaluation data and Focus Group discussions, more than the (trained) managers, the (untrained) secretaries are often the ones having to work with ICTs in practice. Much more funds are needed to take on the end user training for them.

Another challenge is the assistance provided by the IT staff. With only four staff members, they are seriously understaffed. In the 2007 focus group meeting, the technical assistance (or lack thereof) was an important point of discussion. Users claimed it was difficult to reach them and sometimes to understand the technical language used by ICT staff. ICT staff felt overwhelmed by the large quantity of requests for assistance, often for very basic problems related to the lack of end user training as described above. During the focus group meeting, many ideas were presented (such as basic trouble shooting posters in the staff offices) and one concrete question came out: Can IICD help us in reorganising the ICT helpdesk? As an answer, in November 2007 a consultant of *InterAccess* (one of IICD's private partners) with experience in ICT workflow organisation spent a week in Kinondoni to work with them on issues like:

- How to register calls in a log;
- How to estimate the time it takes to solve and issue (and communicate this to the client);
- How to organise tasks of staff members;
- How to make sure every department has a key ICT person, so people can approach them first.

## Next steps and future plans

The project has served as a model for successful ICT applications developed in a bottom-up process. In the longer term, such an approach will prove essential to making decentralisation viable in a large country like Tanzania. The increased transparency and accountability will enhance democratic processes. The spin-off it had on local governments in other parts of Tanzania is proof of the approach's value. The Kinondoni Municipal Council is regularly requested by



other authorities (both national and international) to share their experiences.

In June 2007, SWOPNET, the National ICT for Development Network in Tanzania, organised an ICT workshop in Mwanza, a region in the Tanzanian Lake zone, focussed on the sharing of knowledge of the lessons learned from the Kinondoni experience and other ICT projects. Local governments of Mwanza and Magu attended and ten members of the Mwanza municipality undertook a study visit to Kinondoni to see the project and to use this example as input for the development of their own ICT strategy. Other municipalities have, on their own initiative, visited the project in 2007 including the Municipalities of Morogoro, Tanga, Dodoma and Zanzibar. In October 2007, Veronica Igoko, the ICT coordinator of Kinondoni, shared the Kinondoni story during the workshop on eGovernment for Local Authorities in Nairobi, Kenya. The project has been also mentioned as an example of the Tanzania eGovernment efforts in videoconferences organised by the World Bank.

To promote further sharing, IICD supports Kinondoni in several exercises for the systematisation of the outcomes of the project, by means of publications or multimedia applications. These products can be used both for knowledge sharing and to support the project in their search for much needed funds.

Currently, the ICT strategic plan is in need of revision and the municipality and IICD are working on it. With the support of IICD, the originally developed master plan will be revisited and suggestions for improvement will be drawn. Thereafter, a workshop is planned to share experiences with Kinondoni staff and the core group of consultants that have been involved in the project over the years. They will expose their experiences to Tanzanian universities, government officials and consultants.

This strategy review will document:

- The existing situation (staffing, capacity, benefits, obstacles on implementation, etc) as compared to the strategy;
- Lessons that can be learned;
- The way forward, especially regarding GIS and finance, and if possible also regarding customer service, education and health.

## Contact information

For this project:

- Ms. Veronica Igoko, Kinondoni Municipality, [msmalangwa@yahoo.com](mailto:msmalangwa@yahoo.com)
- Mr. Nic Moens, Country manager Tanzania, IICD, [nmoens@iicd.org](mailto:nmoens@iicd.org)

For this brief, IICD, its Evaluation system and Thematic approach:

- Ms. Anne-Marijke Podt, Officer Monitoring and Evaluation IICD, [ampodt@iicd.org](mailto:ampodt@iicd.org)
- Ms. Denise Senmartin, Officer Knowledge Sharing IICD, [dsenmartin@iicd.org](mailto:dsenmartin@iicd.org)

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## Links

- Project partner COSTECH - [www.costech.or.tz](http://www.costech.or.tz)
- Kinondoni Municipal Counsel - [www.kinondonimunicipality.go.tz](http://www.kinondonimunicipality.go.tz)
- Summary Learning Report Kinondoni 2007 - [www.iicd.org/files/2007LearningReportKinondoni.pdf](http://www.iicd.org/files/2007LearningReportKinondoni.pdf)
- IICD: [www.iicd.org](http://www.iicd.org)
- A view of IICD's online evaluation tool: [www.demosurvey.iicd.org](http://www.demosurvey.iicd.org)

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*IICD – P.O. Box 11586, 2502 HL The Hague, the Netherlands, +31-(0)70-3117311, [information@iicd.org](mailto:information@iicd.org).*

