

Ex-Post Evaluation
on
the Government ICT Infrastructure
in Angola Project

The Export-Import Bank of Korea
(Government Agency for EDCF)

EDCF Evaluation Team
(Evaluated by Kookmin University)

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I . Project Overview

1. Project Details

- Name of the Project: Government ICT Infrastructure in Angola Project
- Name of the Borrower: The Ministry of Finance
- Project Executing Agency: National Commission for Information Technologies
- Amount of the Loan: An amount in Korean Won not exceeding the equivalent of USD 35 Million
- Terms of the Loan
 - Interest rate: 0.5% per annum
 - Maturity: 30 years including a grace period of 10 years

2. Project Purpose

- The Project aimed to construct the National Data Center (NDC), which would serve as key infrastructure for establishing the information society in Angola. It also aimed to develop ICT manpower and build a pilot network by connecting educational and research networks to share knowledge and expertise.

3. Project Scope

- The main scope of the Project was to construct the NDC to collect and manage government information and data in Angola.

- The NDC aimed at providing necessary standards for ICT operations in the government of Angola including SW and guidelines
- As a pilot project, it would connect local universities and colleges in Luanda through the mesh-WiFi network, and would test the possibility of expanding it to the rest of the country
- The Project also included capacity building for ICT engineers and technicians as well as necessary consultations in order to operate the NDC properly

II. Introduction

- The purpose of this ex-post evaluation report is to review the outcomes of the Government ICT Infrastructure in Angola Project (hereafter the "Project") and to draw lessons and policy implications for similar projects in the future. The Project aimed to construct the National Data Center as a hub of e-government and government network management. The Project consisted of three parts: 1) creating the NDC, 2) connecting pilot research and education networks, and 3) fostering skilled ICT manpower.

- The Project was a typical e-government loan project of EDCF aimed to increase the efficiency, effectiveness, and transparency in public administration and to improve the quality of public services. Improving the public sector first was expected to increase the awareness about ICT and information society development among public employees and later raise the awareness of the general public.

- This was the first project undertaken by the government of Angola as part of the "Information Society Implementation Plan" and the "Long-term ICT Infrastructure Development Plan" in order to overcome the vulnerability of the infrastructure of its own ICT sector. The government of Angola was eager to build its own "National Data Center" in order to accumulate government-level administrative data and establish a knowledge sharing network between universities and research institutes to nurture human resources in the ICT sector.

- The ex-post evaluation found that the construction of the NDC and pilot research and education networks were successfully completed as planned, but developing human resources in ICT and Operation & Management (O&M) was not fully realized because the recipient

agency, National Commission for Information Technology (CNTI), did not provide necessary manpower to be trained and educated through on-the-job training program offered by the PMC (Project Management Company). In addition, the Public Administration Network (PAN) that was originally planned to begin its construction in 2007 with the Chinese aid did not even start until 2010. As a result, the NDC could not be used until 2014.

- However, the Project itself was implemented well through the close cooperation between EDCF and the PMC. After the completion of PAN in 2014, the CNTI has been trying to utilize the NDC as the key ICT infrastructure for e-government in Angola.

III. Methods and Outcomes of Evaluation

1. Methods of Evaluation

- We have engaged in an ex-post evaluation by applying several evaluation guidelines provided by the International Development Cooperation Committee within the Office of the Prime Minister, EDCF evaluation manual, and EDCF ex-post evaluation report guidelines. We have adopted the OECD DAC's model for performance evaluation by using six criteria: relevance, efficiency, effectiveness, impact, sustainability, and cross-cutting issues.

2. Outcomes of Evaluation

- The Project was evaluated as "partially successful" according to the evaluation guidelines provided by EDCF. The overall score of this ex-post evaluation on five criteria except the cross-cutting issues was 2.4 out of 4.0 as shown in the table below.

<Total Evaluation Chart>

Evaluation Criteria	Weighted Value	Classification	Value
Relevance	20%	Relevant	3.0
Efficiency	20%	Efficient	3.0
Effectiveness	20%	Effective	2.0
Impact	20%	Influential	2.0
Sustainability	20%	Sustainable	2.0
Comprehensive Evaluation Score		Partially Successful	2.4/4.0

A. Relevance

- The Project was selected based upon the needs of the government of Angola and was highly relevant to EDCF's support strategy. It was

aligned with upper level economic development plans of Angola as well. However, it turned out that various risk factors had not been considered in the F/S (Feasibility Study). Hence, a careful risk management plan was not fully developed at the planning stage of the Project.

B. Efficiency

- This Project was successfully implemented in terms of time and budget. There had been lots of changes in the Project. The biggest problem was that the NDC's location had changed twice. When the location was altered, architectural designs had to be modified as well. Depending upon the changes in architectural design, many construction materials need to be changed. Despite these significant changes that could affect budget increase and time required, the PMC successfully managed all the processes, and the Project was completed within the given budget.

C. Effectiveness

- This Project was evaluated as "partially effective." Most outputs of the Project were provided as planned although significant delays were inevitable. The NDC, research and education networks, and human resource training for ICT personnel were evaluated as partially effective. The main reason for the delay was changing demands from the CNTI while the Director of CNTI admitted its own accountability for the delay. More serious problems that limited the effectiveness of the Project were found in terms of facility utilization, operation delays in the NDC, difficulties in maintenance services, transfer of education and research networks to the Ministry of Education, and outflow of ICT experts into the private sector.

D. Impacts

- The mid- to long-term impact of the Project seems to be quite limited given that the NDC is not yet fully utilized. According to our survey of the CNTI and NDC officials, the revitalization of the NDC had a positive impact on increasing the awareness of the importance of e-government in Angola. From the users' perspectives, the NDC has a positive impact on increasing the awareness of the needs of integrated management of government data as well. But as of now, the NDC is not fully trusted by other government organizations, and there seems a long way to go before sharing information among government organizations and undergoing administrative reform for more efficient and transparent public services.

E. Sustainability

- It was found that the CNTI fully understood the importance of the NDC and was making continuous efforts to expand its organization, functions, manpower, and budget. Those who are working in the CNTI and the NDC also demonstrated high ownership and organizational loyalty. These would positively affect the sustainability of the Project. However, the CNTI was having a hard time in acquiring the necessary budget to fully activate the NDC. It was also trying to acquire the necessary human resources for proper O&M of NDC facilities and equipment. However, it was not an easy task although the upper level ministry had high interest in e-government and ICT policies in general. Considering the characteristics of the NDC as government-wide infrastructure, it would be important that high public officials in the government of Angola, especially high political figures, pay consistent attention and enact legal mandate for utilizing the NDC across all government organizations.

F. Cross-cutting Issues

- The evaluation showed that the Project did not have problems in cross-cutting issues including gender and/or environment.

IV. Lessons Learned and Recommendations

1. Lessons Learned

1.1 Success Factors

- The Project is "partially successful" because the output of the Project was not used for quite a while even though it was completed as originally planned. This is why the Project has shown limited success in terms of impacts and/or sustainability.

- It should be noted that EDCF and the PMC closely cooperated to complete the Project as planned regardless of the frequent changes in the Project scope and contents. In particular, the PMC had been very flexible in accommodating frequently changing demands from the CNTI including location changes and extended warranty periods.

- It is expected that the CNTI's continued efforts to connect the NDC and PAN as well as to increase the utilization of NDC facilities would contribute to the revitalization of the NDC as key infrastructure for e-government in Angola.

1.2 Limitations

- At the planning stage of this Project, the F/S had been conducted by the recipient country. Due to this, various risk factors were not fully considered and appropriate risk management plans were not prepared.

- The NDC is key infrastructure for e-government, but several preconditions had to be met before its potential benefits could be realized. First of all, each ministry had to establish its own website and digitalization, and then connect them with each other. Since PAN

was not ready until 2014, the NDC could not be used for four years even after its completion.

- In addition, the CNTI was not able to provide necessary O&M technicians to be trained, due to which sustainability of the Project decreased significantly.
- Through the field research, we found that the CNTI was trying to build up O&M capacity by conducting internal training and education. However, it was simply not enough to effectively operate the NDC.

2. Recommendations

- It is strongly recommended that in selecting an e-government project all necessary preconditions be considered including the level of economic development, level of ICT development, administrative needs, etc. After the selection, an e-government road-map should be established first. Priorities have to be determined in a specific project based upon the full consideration of all conditions.
- In order to fully realize the potential benefits of ICT projects, it is important to obtain proper supply experts in both ICT and O&M for equipment and facilities. Once ICT experts and O&M technicians are secured, they have to be retrained and further educated regularly to help them adapt themselves to technology development and equipment advancement. In addition, training and education for the rest of the people in the organization to disseminate technical know-how and information of new technologies learned is also important because ICT engineers and technicians who learn the newest technologies are likely to easily move to the private sector.

- Performing appropriate O&M is important to increase the sustainability of any ODA projects. In general, the warranty period for the ODA project on e-government is one year. But depending upon the scope and contents of e-government projects and the level of ICT technology of the recipient country, warranty period can be adjusted. If necessary, an extended warranty period and extra O&M services may be given separately.

- Given the current situation of the NDC, it would take some time for the situation to normalize. In addition, the government of Angola has completed the construction of PAN. It is about time to set up various application services. Depending upon priorities, e-tax, e-customs, citizen registration, immigration, and e-finance are possible candidates. The revitalization of the NDC can be accelerated by implementing these key application services.