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Urban Financial Management Phase III

Tunisia

Computerized Property Tax Information System Application

Final Report

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SECTION 1
PROJECT BACKGROUND

1.1 Trends in Urban Financial Management

Secondary cities throughout the developing world are increasingly a focus of attention as their potential role in national development is better understood. Central governments, for political and economic development reasons, are pursuing a policy of decentralization which places an increasing responsibility on local units of government as agents of development. This policy is reflected in a variety of ways, including: restucturing local governments, transfer of authority and resources to the local level, election of local authorities, and increased investments in secondary cities.

The transition during which local governments assume a more important role in political and economic development is neither rapid nor simple. While legislation may create adequate instruments or structures for local action, local units must also be provided with sufficient human and financial resources and sufficient technical and management training. The local population must acquire an understanding of municipal responsibilities and adopt attitudes which support local initiative.

The availability and management of financial resources have emerged as issues in the development of secondary cities. While the central government has traditionally provided a major portion of local resources on a grant basis, the recent world economic downturn has raised doubts about the ability of central budgets to continually bear that burden. In addition, considerable resource potential exists at the local level and local units can, in many cases, be more efficient than central authorities in mobilizing those resources. The issue therefore has become one of maximizing local resource mobilization and management capacities. Key management issues are: mobilizing resources to their potential (requiring information about resource potential and efficient collection techniques), understanding trends in revenue generation in relation to expenditures, and expending resources in an efficient manner.

1.2 Financial Management Trends in Tunisia

While the current municipal structure has existed in Tunisia for over a century and much of the basic legislation has been in place since the early 1900's, the national government has only recently embarked on a policy of decentralization and local government strengthening. In terms of financial management, this change is reflected in many actions. The Fonds Communs (the Tunisian government's revenue sharing program) has been restructured to provide more support to all cities, particularly small ones which generally have meager resources. In 1975, a new business tax was created, based on a firm's sales figures, to provide cities with a more dynamic revenue source than the property tax imposed on business and residential properties. This resource has evolved to contribute significantly to local revenues. The residential property tax has also been modified to produce a greater yield through the removal of the exemption for new construction and the formulation of standardized evaluation criteria.

In addition to central funds made available through the Caisse des Prets et de Soutien aux Collectivites Locales (Tunisia's Local Government Development Loan Fund), many infrastructure programs in secondary cities have been supported by a variety of international assistance programs. Infrastructure improvements are vital to the social and economic development of the recipient cities. They do , however, impose a financial cost on the cities through recurring costs of maintenance and operations and debt service. The ability to recover costs from the beneficiary population and to adequately budget for recurring costs depends largely on the financial management capabilities of the municipal government.

Several secondary cities in Tunisia have also demonstrated their own initiative in improving management and increasing revenue flow. Beginning with a modest but successful experience in automating aspects of the property tax and payroll in Sousse, many cities have taken steps toward computerization. While a few cities have begun computerization of most management systems (property tax, personnel, payroll, municipal properties, accounting, and budgeting), more cities have subcontracted to private firms for data processing of priority areas, particularly payroll and property tax.

Two principal problems are associated with this trend in computer introduction. First, for those cities installing

their own systems, there is little standardization of hardware or software, even though data processing needs are very similar across all cities. (For example, legislation governing the property tax is the same for all cities and budgeting and personnel practices are standardized by administrative requirements from the national level.) Therefore systems tend to be expensive in terms of design cost and single order cost of equipment. The need for an oversight capacity to monitor computerization was recognized by the Prime Minister in a recent speech in which he recommended the creation of a section in the Direction des Collectivites Publiques Locales (DCPL) to advise, coordinate, and provide technical assistance regarding computerization of local administration.

For cities contracting out portions of their data processing, similar problems have been identified. Processing is generally limited to basic hardcopy output (payroll checks or tax notices) without providing the opportunity for improved management which analysis of that data could afford. Analysis of property tax information could yield a variety of useful information pertaining to property evaluations, payment compliance, and development trends. While outside data processing allows more rapid completion of those tasks than could be done manually, it is nevertheless expensive. Kairouan, for example, spent 15,000 dinars to process 1985 tax notices, approximately 75% of expected property tax revenues.

1.3 USAID/Office of Housing Activities in Municipal Financial Management

In view of the need to improve financial management capabilities in general and revenue generation in particular, and to capitalize on trends in computerization, the DCPL requested assistance from the AID Regional Housing Office in Tunis. The development of a prototype tax information system was identified as the highest impact short-term intervention to improve the property tax, one of the most important, yet underutilized, revenue sources. The property tax is particularly suited to standardization and a computerized system could have an immediate and measurable impact on municipal operations.

During the first phase of the prototype system development, it was decided that a microcomputer based system would best fulfill project goals. The low cost of microcomputer systems would allow most Tunisian cities to

invest in the equipment and recover the cost in a relatively short time. The system could be dedicated to one operation while local officials plan for larger more costly systems and networks incorporating existing microcomputer equipment in the future.

From March to May of 1983, RTI, in collaboration with the DCPL and the Centre National de l'Informatique (CNI) designed a prototype system to accommodate from 500 to 20,000 properties, depending on the hardware configuration. The prototype modeled the existing tax system procedures as legislated, but could improve on and speed records management. All current operations in the assessment, notification, and collection system are replicated and all required printed notices and reports are provided. In addition, because of the speed at which the system operates and the amount of information which may be accessed, notification/collection procedures may be performed more rapidly and collection problems may be quickly identified. The system also permits future standardization of property assessments and analysis of information on housing stock, costs, tenure, and access to municipal services.

The prototype system was programmed using the database management software "dBase II" which can be used on most commercially available microcomputers. The menu-driven system is designed for operation by users with no formal training in computer programming.

SECTION 2
OPERATIONALIZING THE PROTOTYPE TAX INFORMATION SYSTEM

2.1. Project Goals and Initial Design

To follow on the earlier activities in prototype design, RTI was asked to operationalize the system through installation in a secondary city and train the various actors involved in system operation, maintenance and dissemination. The goal of the project, therefore, was to bring the system into operation in a pilot city and to ensure that the requisite technical knowledge existed to permit the system to be installed in other cities. Because the project was designed within the context of improved financial management, a training program was also proposed to train municipal officials in financial management techniques and the relationship of the computerized system to improved management. The following tasks were designed to accomplish the project goals.

Task 1 Preparatory Activities

--Selection of a demonstration city based on criteria of: (1) the representativeness of the local government in terms of size, mix of housing, and general growth patterns, (2) the local government's interest in tax collection improvement and relative inexperience with computerization, and (3) the ease of access to Tunis for the benefit of Ministry, CNI, contractor staff, and visiting officials from other cities.

--Reconnaissance visit to assess the requirements of the site regarding such factors as the structure of local administration, the municipal personnel charged with tax administration, and the number of property records, assessment procedures, etc. In addition, the general capabilities of the computerized system were to be explained to municipal representatives.

--Drafting of a detailed implementation work plan with information on the level of effort, scheduling of activities, and level of expertise required.

Task 2 Hardware Selection

--Hardware needs assessment of the demonstration city

--Assessment of the availability, delivery time, price, and service support capability for microcomputer equipment in Tunisia

--Decision regarding whether to purchase the hardware in the U.S. or Tunisia

--Purchase and transport of the equipment

Task 3 System Implementation

--Testing of hardware in Tunis to assure its proper operating condition

--Transport and installation of hardware in the demonstration city

--On-site testing of the hardware and software by a team including CNI representatives. Entry of actual municipal data was to take place at this time, including the property characteristic data gathered during a trial assessment conducted by local tax office staff.

Task 4 Training Programs

--Design of training appropriate for the agencies participating in the project team.

--Delivery of training to Tunisian officials in conjunction with the system installation and testing in a demonstration city.

Task 5 Public Education Program

--Design and delivery of a program to train local staff in modern management techniques and to permit citizens to become more aware of municipal operations.

--Design and delivery of a series of workshops for elected officials and municipal staff in financial management techniques, including techniques for program planning and budgeting, budget control, and capital budgeting.

2.2. Project Implementation

2.2.1 Reconnaissance Visit

In November 1983, RTI conducted a reconnaissance visit to participate in the selection of the pilot city, to discuss the detailed implementation of the project, and to interview microcomputer dealers and thereby compare their hardware, prices, and support capabilities.

Discussions with the DCPL and RHUDO/Tunis involved the selection of a site which would be representative of secondary cities yet close enough to Tunis to facilitate the participation of DCPL and CNI staff in the test of the hardware and software. The team visited Hammam-Lif and Beja, a third possible site, Kairouan, having been visited earlier. As a result of the discussions, a two-phased implementation plan was developed. Hammam-Lif, near Tunis, was chosen as the initial test site. The participation of the Mayor, Mr. Bousofara, also Chairman of the Association of Tunisian Cities, would be important in publicizing the system. Kairouan was chosen for the actual installation of the system. Based on this decision, a detailed work plan was prepared.

2.2.2 Detailed Work Plan

Discussions during the reconnaissance trip of November 1983 led to a draft work plan circulated by RTI to project participants in December and January. At this time USAID/RHUDO reviewed and approved the detailed work plan. By the end of February all parties had approved the work plan, signed by:

Mr. Mohammed Saad
Assistant Director
Directorate of Local Governments
Government of Tunisia

Mr. Alouini
Mayor of Kairouan and Vice-President of the
Federation of Tunisian Municipalities

Mr. Bousofara
Mayor of Hammam-Lif and President of the
Federation of Tunisian Municipalities

Mr. Moncef Marouane
Director of Projects
National Center for Data Processing
Government of Tunisia

Dr. James S. McCullough
Director, Office for International Programs
Research Triangle Institute

The project activities were divided into the following major categories according to the detailed work plan. Each task is followed by a discussion of task implementation.

Activity: Equipment Purchase

WORK PLAN

RTI will forward the results of its study of microcomputers and peripheral equipment needed for the application site, the survey of vendors in Tunisia, and a purchase recommendation to the Directorate of Local Governments (DCPL), the National Center for Data Processing (CNI), the USAID Regional Housing and Urban Development Office in Tunis (RHUDO/Tunis), and the Office of Information Resources Management at AID/Washington. USAID will decide whether to procure the equipment in the U.S. or in Tunisia and, upon the agreement of all parties as to the equipment to be purchased, RTI will order the equipment and, as necessary, arrange for shipping to Tunisia. DCPL will take the steps necessary to procure permits for importation to Tunisia and for duty-free passage through customs. RHUDO/Tunis will prepare the forms requesting duty-free importation.

IMPLEMENTATION OF WORK PLAN

The database management software (dBASE II) used for the development of the Property Tax Records System application was selected so as to be compatible with a wide range of microcomputer hardware on the market. This flexibility offered a wide choice of micro-computer hardware, depending on the factors such as price, availability, and support services in Tunisia. Two RTI staff persons, therefore, started work during the reconnaissance visit in November 1983 to select a machine and a vendor. The assessment involved visits to five vendors and discussions with representatives from CNI.

The analysis led to the selection of the IBM PC because of its competitive price and the superior maintenance capability of the local vendor. The decision to buy in the U.S. and ship to Tunisia was the result of both better price and faster delivery in the U.S. than in Tunisia. The choice of a hard disk for peripheral data storage proved to be the

most time-consuming aspect of equipment selection. At CNI's strong insistence, RTI agreed to purchase two IBM hard disks instead of the one non-IBM disk that RTI had earlier recommended. The trade-off was the lower price and more flexibility that the non-IBM disk represented and the higher-price and local dealer service that the IBM product represented.

Negotiations regarding the choice of equipment lasted into February, after which RTI ordered the hardware and software. By the end of April RTI had tested the equipment and shipped it to Tunisia. Subsequent problems encountered by DCPL with Tunisian customs prohibited the recovery of the computer equipment until early fall of 1984. RTI staff subsequently traveled to Tunisia to conduct initial on-site tests and training in Hammam-Lif.

Activity: Test and Training at Hammam-Lif

WORK PLAN

Equipment Installation:

Once the computer equipment has passed customs and has been delivered to DCPL, RTI will be responsible for transfer of the equipment to Hammam-Lif and its installation at the town hall. Town officials of Hammam-Lif will be responsible for designating and preparing office space to accommodate the computer during the test phase.

Preparation of Existing Documents:

Tax officials at Hammam-Lif, working with RTI and DCPL will select a sample of property tax files (approximately 500 records) for entry into the automated system. These records will be selected so that the properties represented will be the same properties to be surveyed later for housing characteristic data. Data from these records will be entered into the Property Tax File of the automated system. Appeals data for the test records will likewise be entered to the system to create the Appeals File. It will be the responsibility of the Tax Collections Office at Hammam-Lif to provide payment data for entry into automated files for the properties selected for the test. These data will include an arrears amount for the end of the 1983 tax year and subsequent payments made during the 1984 tax year.

Entry of Existing Data:

Provision of a person for data entry will be the responsibility of municipal officials at Hammam-Lif; RTI,

DCPL, and CNI will participate and oversee data entry operations. All staff participating in the training and testing of the tax system will have the opportunity to participate in data entry as part of their training.

Test of Processing and Output:

DCPL, CNI, RTI, and Hammam-Lif will participate in routines to test the processing and output of the tax system. The rolls and notices will be printed under varying test conditions to ensure that the system performs according to all legal and administrative requirements. RTI will be responsible for costs to print forms for the rolls and notices. The search and edit functions will be demonstrated to show that these are fully operable.

Survey and Entry of Housing Characteristic Data:

Town officials from Hammam-Lif and Kairouan will be responsible for assuring that personnel are available for performing the survey of housing data. Two teams of two persons each will conduct the housing survey of properties during a two week period. Data entry will be the responsibility of tax officials from Hammam-Lif, with RTI and CNI supervision. RTI will be responsible for providing copies of survey sheets for recording characteristic data. Municipal officials will be responsible for developing and carrying out a public education campaign to announce steps to improve the management of the property tax system. Such a campaign will be initiated to correspond to the time when teams begin their survey work.

Analysis of Data:

DCPL, CNI, and RTI personnel will work together to review and perform analysis of the data entered to the tax system with the purpose of exploring automated methods of improving the uniformity of property tax assessment. Likewise, payment and appeals data will be analyzed to develop procedures whereby the automated system can be used to improve collections and process appeals more efficiently and fairly.

Training of CNI in dBASE:

RTI will furnish CNI with dBASE II software on floppy disk along with documentation furnished by the software developer in English and French. The software will be compatible with the make of microcomputer selected for the project. It will be CNI's responsibility to assign a programmer/analyst who will serve as liaison to the project and who will receive training in the data base management software and in the hardware used in the system.

Training in Microcomputers for DCPL and Municipal Staffs:

It will be RTI's responsibility to ensure that the representatives from DCPL and the municipal staffs from Hammam-Lif and Kairouan are introduced to microcomputer operation as the first step in training them to use the property tax system. This training will focus on the use of the operating system and the care of the computer equipment and electronic data storage media. A training program provided by the selected vendor may be used for this phase.

Training in the Property Tax System:

Following the general introduction to microcomputers, RTI will conduct training sessions for DCPL and municipal staffs in the conceptual design, record layout, functions, and reporting capabilities of the automated property tax system. Specific training exercises will be performed as an ongoing activity during the test. Members of the project team will meet with local officials to discuss the adoption of standard policies and procedures to ensure effective management of the property tax system.

IMPLEMENTATION OF WORK PLAN

The purposes of the December 1984 trip were the following: (1) to train Tunisian officials in the operation of the automated property tax information system, (2) to test the hardware and software on site in a local government tax office, and (3) to enter actual data on property characteristics for subsequent analysis.

Microcomputer Training Program:

Participants learned how to enter, edit, and search for records in the property tax files and to print the various system reports and notices. Participants in the training course were:

--From Hammam-Lif:

Mr. Djemai Khemais, Tax Office Manager
Mr. Jalloul Ferchichi, Municipal Accountant
Mr. Kamel Bouchami, Tax Receipts Clerk
Mr. Mosbah Tarek, Municipal Accountant

--From Kairouan:

Mr. Jemaa Troudi, Tax Supervisor
Mr. Salem Rafraf, Municipal Accountant

In addition, Mr. Kelifa Sakly, Programmer-Analyst from CNI, participated in the training course both as student and advisor to the other trainees. He also took lessons in dBASE II instructed by RTI staff.

The length of the training period proved to be appropriate for the local government technicians with no previous computer experience. As expected, learning to use the query language for search expressions proved to be the most difficult aspect of the training; this subject was given close attention with the result that trainees did learn how to use these logical statements to search the data base. Not surprisingly, source documentation preparation for data entry proved to be a time-consuming task. Much editing was required because data were not entered consistently the first time, but this experience was useful in emphasizing the importance of careful planning of data entry operations to minimize duplication of effort. Although none of the trainees had any experience with a typing keyboard, by the end of two weeks, all could operate the system with acceptable speed. The need for a trained keyboard operator for extensive data entry, however, was made evident to trainees. RTI trainers made a second microcomputer available to trainees during the entire period making for a quite acceptable ratio of six persons to two machines.

The training period would have proved more effective had the DCPL sent a representative to learn in some detail the operation of the automated system, thereby enabling that agency to better evaluate the system and training without the need for lengthy meetings and reports. Other matters, however, prohibited DCPL's close participation. Closer contact on the part of DCPL with this and subsequent stages of the system's implementation would have put the agency in a better position to direct and evaluate the project.

Some difficulty was encountered in obtaining characteristic information on properties in Hammam-Lif during the training period; initial efforts yielded very few cases. It seems the difficulty lay principally in property owners' unwillingness to allow agents fo the municipal government to enter their properties and to abserve and note details about housing characteristics. Local officials in Hammam-Lif acknowledged their inability to convince the town's inhabitants to cooperate with the assessment teams. In a meeting called by Mr. Saad with all trainees and supervisors present, it was decided that municipal employees' properties be used for this test. By contrast,

during a trial assessment performed two months later in the installation target site, Kairouan, landowners complied more readily with tax assessors in providing characteristic data. Despite the initial problems encountered in Hammam-Lif, the experience of the Tax Office Supervisor from Kairouan points up that such characteristic data can be gathered with reasonable effort. Automation cannot be expected to resolve problems in towns where there is resistance on the part of property owners or a lack of initiative on the part of assessment agents.

Testing of Hardware and Software on Site

The hardware passed all diagnostic tests without problem and functioned without fault during the test period. The tax system programs written in the applications programming language of dBASE II functioned well. During the testing and training, participants systematically made comments and suggestions for changes to the programming: these discussions resulted in consensus that the calculation of tax amounts be performed automatically by the system.

Disk Storage Concerns

During the training session in Hammam-Lif RTI staff learned through interviews with the Tax Office Supervisor from Kairouan that the recently completed assessment (the previous assessment had been conducted 5 years earlier) had boosted the rolls to 30,000 tax records. This figure contrasted with a 12,000 record figure discussed in earlier plans for the Kairouan installation. Closer examination revealed that many properties were being split up for tax assessment purposes into multiple records. For example, a house might have been constructed in 1960 and an extension or second floor added in 1970, and the another in 1980. Each extension or addition would be assigned a new construction date and assessed separately, creating three records in one owner-occupied residence. Because of the administrative burden this multiple-record recording causes and the limits of disk storage capacity, this issue was brought to the attention of Mr. Saad in a meeting on 17 December. He expressed concern over the proliferation of tax records and proposed alternatives, based on his experience supervising the assessment in Sousse, to keep records to a minimum. RTI since then has encouraged DCPL to set out guidelines and instructions to assist tax officials in limiting the proliferation of multiple records for single-family dwellings. To accommodate more records within the limited disk storage space available, RTI reduced the number of fields and the size of certain fields in the Property Tax file, principally by eliminating the fields for the name and address of the owner's agent ("mandataire").

Entry of Data for Subsequent Analysis

Complete tax data--current tax roll information, housing and neighborhood characteristic data, appeals data, arrears and current year payment information--for sixty-six properties were entered to the automated files during the course of the two-week training period. DCPL, CNI and RTI discussed the analysis of housing characteristic data to arrive at a preliminary understanding of the relationships between characteristics and the rental value of properties. It was agreed that CNI would work at the direction of DCPL to provide computer support for the analysis of such data. No further details for such cooperation between DCPL and CNI regarding the computerized data analysis were established. While a subcontractual relationship between RTI and CNI had originally been envisaged, CNI chose to participate in the project on a non-contractual basis. Rather, CNI was interested in continuing with the project in order to establish a good relationship with local governments as potential clients for microcomputer systems. At the close of the project, the Town of Kairouan and CNI had reached an understanding about future software support for the property tax system installation in Kairouan. CNI officials also expressed intentions to further refine property tax software for microcomputers.

2.2.3. Installation at Kairouan

WORK PLAN

Equipment Installation:

Following the test phase, RTI will be responsible for transporting the computer equipment to suitable office space provided by municipal officials in Kairouan. RTI will examine the equipment once it is on-site in Kairouan to ensure that it is properly installed and ready for entry of tax data.

Orientation and Staff Training:

RTI, DCPL, and CNI representatives will work together to present to municipal officials in Kairouan the results of the system test at Hammam-Lif and to make recommendations for successful implementation in Kairouan. As needed, sessions will be taught by DCPL and RTI staffs to refresh those tax and collections offices' staff members who participated in the test at Hammam-Lif and to introduce staff members who did not participate in earlier training on the automated system.

Entry of Existing Data:

Data entry will be the responsibility of municipal officials. Based on experience gained from the test site, a plan for entering tax records for properties on the Master Roll will be devised by the municipality, in consultation with DCPL and RTI staff. Data entry will begin according to this plan.

Survey and Entry of Housing Characteristic Data:

Based on experience at the test site, a plan will be established by the municipality to gather housing characteristic data and to enter these into the automated files. At this time also, plans will be made for a campaign to educate the public about the municipality's efforts to improve the administration of property taxes, first to improve citizen participation with survey efforts and then to link fairer assessments and more effective collection to improved municipal services.

IMPLEMENTATION OF WORK PLAN

In February of 1985 the computer equipment was transferred from Hammam-Lif to Kairouan and installed in the office of the Tax Supervisor. RTI staff travelled to Kairouan that same month to set up the computer and to continue training local staff in how to operationalize the automated system. RTI staff conducted a subsequent visit in May to follow up on the progress in implementing the system.

Once the computer equipment was installed in Kairouan, the Tax Supervisor conducted a test of the system with the entry of over 300 properties. This trial led him to request several programming changes in the Property Tax and Characteristic files. The principal changes were (1) to add a field to describe the type and use of buildings, (2) to increase the space for property owner names due to the frequent occurrence of multiple owners for a single property, and (3) to expand the property tax number to accommodate more properties in the future without losing the ability to assign numbers sequentially along streets and avenues. Changes to file layouts required subsequent detailed changes to system reports, tax notices, tax rolls, summary collection reports etc., a time-consuming task which was completed in June following the final project trip. RTI staff judge the number and type of changes made to the system to have been at a level to be expected within such a project and necessary for the effective operation of

the automated system in Kairouan. RTI concludes that whether further customization and modification of the software would be advisable before installation in other Tunisian municipalities is a decision best made by the DCPL.

As a result of further experimentation with the system in Kairouan, RTI staff and the Tax Supervisor were able to lay out a plan for tax system inputs and outputs for the upcoming year (See Appendix A). This plan is based on the major decision to transfer property tax data already input on computer by a service firm to the disk of the Tax Office's computer. This task is the municipality's responsibility and will be accomplished by contracting the services of the same firm which had input tax records during the just-completed assessment. This will allow the municipality to prepare annual rolls and notices on the computer system.

With a reliable database of properties, the tax office staff will have as its major task for the remainder of the year the recording of payments and balances of past due accounts on the new system. Entering these latter data, past due balances, is a major obstacle given the close to ten years of arrears past due on many accounts and the few employees available in the Tax Collector's office. In RTI's discussions with the Tax Collector there was little indication that the Ministry of Finance would make more personnel available for this task. On the Municipality's part, the hope was that funds could be budgeted to contract with an accounting firm to provide staff to assist the Tax Collector's Office in calculating property tax arrears. If the Municipality fails to record all arrears data this year, then it should at least make progress in resolving this accumulating problem: once on the microcomputer files, arrears will be updated annually by the automated system.

According to current plans, characteristic data for Kairouan's properties will not be fully recorded until the supplemental assessment in 1988. New properties registered with the Municipality, however, will include characteristic information immediately upon their entry to the system. A trial sample of 300 properties in Kairouan have been assessed using the data categories of the automated system and these will be entered yet this tax year gain experience about how best to gather and enter these data in the future. See Appendix A for a schedule of system inputs and outputs for the upcoming year.

2.2.4. Management Training Course

WORK PLAN

Distribution of Training Materials:

RTI will be responsible for preparing and making available training materials related to urban financial management (materials such as reference documents and workbooks) to course participants.

Training Sessions:

These will be tailored to the needs of participating officials. Training sessions will be selected from among those already prepared by RTI on subjects related to local financial management systems and techniques.

IMPLEMENTATION OF WORK PLAN

During the final project trip RTI staff conducted a three day seminar in municipal financial management techniques for the officials in Kairouan. Six senior and mid-level officials attended. The seminar served to place in the minds of municipal staff the impetus behind the automation project; namely, improved local financial management and more accountable local government. Subjects covered during the seminar included revenue and expenditure trend analysis, service delivery assessment, data available from the computerized system to assist financial management, and techniques for programming and planning in annual budgets. Participants were provided with analytic techniques and case study material for other countries. They repeated the analysis using data for Tunisia and Kairouan.

The training materials were later reviewed with the Director of the DCPL, who expressed interest in their use at the national level.

It should be noted that plans to conduct a public education campaign to coincide with property assessment failed to materialize during the project. First, during training and testing in Hammam-Lif, the municipality was not prepared, for whatever reasons, to communicate with the public about activities related to the property tax assessment. Second, during subsequent phases in Kairouan, the timing for such a campaign was wrong. A 5-year reassessment had just been completed in late 1984 and appeals continued through the summer of 1985. Thus, the

most improtant step in dealing with the public, property assessment, took place according to a plan already agreed to by the municipality at a time before the project started activities in Kairouan. Public education campaigns, in the end, failed to be treated, given the priorities of the various actors involved in the project.

2.2.5. Conclusions

Based on experience in operationalizing the microcomputer property tax records system, RTI draws the following conclusions:

--the system (the commercially available software, the microcomputer hardware, and the programming) is a viable and appropriate tool for local property tax operations in Tunisia

--operation of the system can be taught to municipal officials responsible for local property tax administration in a short amount of time (two weeks intensive training followed by two week-long consultations)

--adoption of the system is a straightforward procedure involving the automation of tasks in a manner which is not so different from previous manual operations as to be greatly disruptive

--support personnel for maintenance of the hardware and software are available in Tunisia and can be called upon by local governments

--the move away from large, expensive mainframe computer equipment to low-cost microcomputer systems for data processing applications like property tax records management can be an appropriate strategy for Tunisia municipalities

RTI's experience with property tax application project as well as with other microcomputer projects in developing countries with the similar objective of introducing this technology into new environments leads to conclusions about how the project could have been improved:

--additional consulting visits, once the initial training was completed, would have been helpful in supporting the local tax office operations. Continuing operational support is particularly important in a pilot project where the support of other like organizations is not

available. In other RTI projects involving the introduction of microcomputer technology in pilot situations, operational follow-up has proven effective in continuing to augment organizations' computing competence.

--a better match between disk storage capacity and the number of property records would have been achieved with a single unit 20 MG hard disk or installation in a municipality with fewer properties. The constraints of the choice of hardware and site are discussed above. The hardware market today, almost two years after the selection of the equipment for this project, allows for more and faster hard disk storage at a better price than previously. The most significant drawback for local officials is that the disk storage now in use at the Kairouan installation does not allow space for other municipal applications: more hardware will be required for these. A very positive result of hardware innovation is that new microcomputers such as the IBM AT and comparable machines will be an option available to municipalities of Kairouan's size when an upgrade of capabilities is called for, for operating the tax system software or for other applications.

Much has happened in the domain of microcomputers in Tunisia since the initial reconnaissance visit in the fall of 1983. The growth in the use of microcomputers has mushroomed: interviews with programmers and analysts in Tunisia confirm what RTI has witnessed all over the Third World; namely, that microcomputers will have an even bigger impact there than in the U.S. where computers have been used for decades. The result is that a swell of microcomputer firms are finding work in the private sector in Tunisia in 1985. RTI trusts that this project will help local governments move sooner rather than later to catch the wave and put microcomputers to use in many areas of local administration.

SECTION 3
PROJECT MONITORING AND EVALUATION

Follow-up of the property tax system's operationalization is the best way for all parties involved to continue to learn from this experience. USAID, DCPL, CNI, the Town of Kairouan, and RTI each have a stake in seeing to it that the system is used to its potential. Project monitoring will disclose the extent to which Kairouan officials master the system and successfully integrate it into normal operations. Monitoring will also identify corrections which could improve future applications of the system. Two principal aspects of monitoring are (1) the municipality's assessment of whether or not this system meets the objective of improving tax record management at the local level and (2) the DCPL's (and USAID's) assessment of whether or not this project has potential for replication at the national level.

3.1. Monitoring System Performance

Performance of the automated property tax system in the Kairouan Tax Office can be monitored by reviewing:

--Adherence to the schedule of data entry and printed outputs;

--Competence exhibited by local Tax Office staff in using the system;

--Degree to which hardware and software maintenance problems are resolved by the local staff in conjunction with local computer vendors and CNI;

--Integrity and reliability of the property tax database.

3.2. Assessment of Project Success

In the broadest sense, the success of installing and operationalizing the automated property tax system in a

pilot municipality will be proven by the extent to which the Town of Kairouan makes use of this tool to improve property tax administration. Specific indicators of a successful project would be:

--the extent to which microcomputer technology proves a cost-effective, workable way to manage the time-consuming recordkeeping tasks involved in property tax administration,

--the degree to which property tax collection is improved by use of the automated system,

--the degree to which the Town makes cost-effective decisions, based on their experience with this system, about automating various municipal operations in the future, and

--the extent of adoption of the automated property tax record system by other municipalities.

Techniques employed by RTI in conducting UFM assessment and training may be used for evaluation purposes to measure project impact:

--Comparison of tax collection amounts and rates pre- and post-installation;

--Comparison of tax collection amounts and rates with those of other Tunisian towns.

And, in addition, some measures specific to property tax administrative costs are appropriate for project evaluation:

--Comparison of pre- and post-installation expenditures for processing records and producing notices and rolls;

--Comparison of Kairouan's and other Tunisian towns' expenditures for processing records and producing notices and rolls;

--Timeliness of operations, including time required to send out various notices, time to conduct the appeals process, time to produce monthly and quarterly collection status reports, etc.

SECTION 4
RECOMMENDATIONS FOR FUTURE ACTIVITIES IN URBAN FINANCIAL MANAGEMENT

Follow-on activities to this initial AID-funded activity in urban financial management can be described in the limited context of the tax information system or in the broader and ultimately more significant context of financial management improvements. There are indeed a significant number of actions in each area which could maintain the interest and momentum of the current project.

4.1. Tax System-related Activities

Recommendations under this heading largely pertain to monitoring the prototype's performance and supporting efforts to disseminate its application. Potential activities consist of:

1. Ongoing assistance in monitoring the system's performance and bringing the system to full use;

2. Preparation of publicity materials describing the system, its application in Kairouan, and how new systems can be obtained by other cities;

3. Technical assistance to other cities seeking to install a copy of the system.

4.2. General Financial Management Activities

Recommendations under this heading pertain to a broad scope of activities which could rationalize current trends in computerization and support DCPL activities in local government strengthening. Because they are national in scope, the DCPL would be primarily responsible for these activities and therefore the recipient of any outside assistance in the area. In fact, most of the recommendations are aimed at providing the DCPL staff with the ability (in terms of technical expertise and materials) to play a more active role in coordinating local computerization and in

strengthening local management capabilities. Recommendations are therefore presented as potential DCPL activities which could be the object of international assistance depending on the needs of DCPL staff. Activities pertaining to computerization include:

1. Technical assistance to cities in the selection and purchase of hardware and assistance in bulk purchase of hardware;

2. Development of standardized software for key applications including payroll, accounting and budgeting, personnel and property management. (DCPL could perform this function itself or provide the expertise to oversee the development by another organization.);

3. Training for municipalities in computer applications or as in #2, technical expertise to oversee the preparation and organization of training;

4. Liason to the private sector in the distribution of software and coordination of maintenance contracting; and

5. Development of internal staff capability to conduct computer analysis of municipal data to monitor trends, analyze annual budgets, and review loan requests.

Activities pertaining to general management strengthening include:

1. Reinforcement of staff analytic capability to quantitatively monitor and evaluate financial performance across all local governments;

2. Technical assistance to local governments, through seminars or direct assistance, to improve their capacity to analyze their financial performance, service provision and cost (the Manual on Financial Management Analysis could be the basis for one such set of seminars);

3. Provision of additional mechanisms for information exchange among local officials at the service level, particularly to disseminate experiences of the better performing cities.

APPENDIX A

CALENDAR OF INPUTS AND OUTPUTS
KAIROUAN TAX OFFICE

For Year Period beginning May 1985

TASKS	5/85	9/85	1/86	5/86
DATA ENTRY				
PROPERTY TAX FILE	*C D E A B F J H			
CHARACTERISTIC FILE		(SUPPLEMENTAL ASSESSMENT 1988 -->)		
PAYMENT FILE	X X X X (WEEKLY)	X X X X X X X X X X X X X X X X X X X X X X X X		
APPEALS FILE		(SUPPLEMENTAL ASSESSMENT 1988 -->)		
PRINTOUTS				
ANNUAL TAX ROLL			X	
MASTER TAX ROLL			(NEXT FULL ASSESSMENT 1990 -->)	
1ST ASSESSMENT NOTICE			*A B C D E F G H	
2ND ASSESSMENT NOTICE			*A B C D E F G H	
1ST BILLING			*A B C E etc.	
2ND BILLING			*A B etc.	
NOTICE OF SEIZURE			(AT END OF TAX YEAR -->)	
QUARTERLY TAX REPORT				X

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* To be printed and distributed by zone (indicated by alphabetic character for each zone)