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**IMPORTANT CONSIDERATIONS RELATING TO THE
ESTABLISHMENT OF THE TITLE REGISTRATION
SYSTEM IN URBAN AREAS
EFS TECHNICAL REPORT NO. 25**

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System in the Ministry of Justice

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Relationship and Commitment to Improve the
Registration System in Urban Areas

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Mandate with our Partners for Urban Registration

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Acronyms

BPI/R	Business Process Improvement/Re-engineering
CIF	Cadastral Information Form
EDO	ESA District Office
EFS	Egypt Financial Services Project
EHFC	Egyptian Housing Finance Company
EPO	ESA Province Office
ESA	Egyptian Survey Authority
GIS	Geographic Information System
GO	Governorate Office
GOE	Government of Egypt
GPS	Global Positioning System
ILD	Institute for Liberty and Democracy
KRA	Key Results Area
LIS	Land Information System
MFA	Mortgage Finance Authority
MSAD	Ministry of State for Administrative Development
MOF	Ministry of Finance
MOJ	Ministry of Justice
NO	Notary Office
PEA	Project Execution Agreement
PIN	Parcel Identification Number
PPP	Public Private Partnership
REPD	Real Estate Publicity Department
RO	Registry Office
SDI	Spatial Data Infrastructure
TDL	Training Development Laboratory
UCD	Universal Cadastral Database
USAID	United States Agency for International Development

1 Introduction

As of the beginning of the 20th century, the Government realized the importance of real estate registration. It has conducted studies necessary to establish a registration system that combines the legal and survey basics necessary to establish the registration system of real estate units, and there is plenty of literature about the advantages of the Title Registration over the Deed Registration system.

A decision was made to adopt the Title Registration system, based on a recommendation by the study conducted by Sir Ernest Dowson during the period from 1917-1921. Sir Ernest Dowson did not differentiate between registration of agricultural land or real estate units located within the urban areas.

When the Government decided to adopt the Title Registration system and it was approved by the Parliamentary Council in 1927, the Egyptian General Survey Authority (ESA) had piloted the system in Monofeyya Governorate. Thereafter, preparatory steps were taken to implement the system according to the budget allocations made available by the State.

ESA had identified the work plan relating to the cadastral work as if the system was actually implemented, before the promulgation of the law, which confused those studying the system and created a misconception that there is no difference between law 114 for 1946 relating to Real Estate Publicity, and law 142 for 1946 relating to Title Registration system. In reality, in early 1920's, the Authority came up with a work plan, and started implementing it as if the current law was the Title Registration law.

In the light of the work plan set by the Authority in the twenties of the past century, the Authority started drawing city maps (mostly on the scale of 1:500) accompanied by ownership data collection, but the Authority and the REPD never applied the Registration System in full in any urban area.

Despite of the awareness of the importance of Title Registration in cities and its economic and social impact, however, the promulgation of the Mortgage law and the growing focus on activating the real estate market necessitated setting priorities to real estate registration and creating a dynamic real estate market.

Though I was initially requested to prepare a report about reorganization of the survey offices and REPD at the governorate and district levels, I think it is important to review what, in my opinion, needs to be taken into consideration in the current project, particularly that the World Bank explicitly states that the researches and technical assistance should be directed towards building an effective system that according to the World Bank thinks the current project should complete. The financing provided by the Bank should be directed towards actual production and implementation of system in the urban areas that the financing will cover.

2 Important Considerations that need to be Addressed in the Title Registration System

2.1 Cooperation between the ESA and the REPD

The ESA used to perform real estate registration as per law 18 and 19 for 1923. This involved both the survey aspect and the legal aspect but did not include notarization which used to be performed by national courts until the Publicity Law # 114 for 1946 was promulgated.

During the period when the ESA performed this role, not only did it do a good job, but it did a praise-worthy job in setting an initial system, issuing maps for areas that were resurveyed, and producing new ownership survey books. These books helped identify property features, and listed all transactions related to properties including title rights and obligations as per the requirements of the title registration system. These books were compiled for 3,001,820 feddans until July 1945.

This may resolve a lot of the queries that were raised within the PFAP project report that presumed that the Authority did not differentiate between the Title Registration System, and the Deed Registration System. In preparation for the implementation of the Title Registration System, the Authority was performing full registration work in accordance with the Title Registration System.

In appreciation of the role played by the ESA and due to its success in registration under laws 18 and 19 for 1923, and in creating the mechanisms necessary for implementing the Title Registration System as a preparatory step before enacting the law, a proposal was made to assign the publicity work to the ESA, and due to a legal aspect in the registration process, this idea was introduced (the explanatory note for law # 114 for 1946 relating to the establishment of the REPD).

After the REPD law was promulgated, the publicity work remained shared between the REPD and the ESA, whereby the REPD performed the legal aspect, and the ESA performed the surveying aspect.

Therefore, unifying the publicity authorities remained unimplemented entirely since the competent departments assisting in the work related to publicity and registration remained as a part of the ESA.

In this respect I should note that the ESA was established as a cadastral entity since its establishment in 1898. It initially started as a financial cadastre and then became in charge of the legal cadastre and registration in general in accordance with laws 18 and 19 for 1923, which means that all the Authority departments were basically responsible for about 80% of cadastral work. The rest was related to the geodetic network and topographic maps, most of which serve the cadastre, which means that separation between departments supporting real estate registration is not feasible, and the Authority should be looked at as an entire entity that is primarily concerned with services for real estate registration.

2.2 Efforts exerted for the purpose of coordination between the two entities

After the executive regulations of the Title Registration System were issued in 1975, assigning a prominent role to the ESA in implementation, the need emerged for the collaboration between the REPD and the ESA to take a more legal format. This was formalized by the Presidential Decree number 1164 for 1971 for establishing a council for title registration with representatives from the REPD, and Survey Authority. To achieve the same goal, the Title Registration Fund was established covering all the competencies of the Title Registration Council and eventually replaced it. This was formalized by law 56 for 1978, and Presidential decree number 401 for 1979 which was issued to establish the board of directors of the Title Registration Fund from representatives from the REPD and the ESA.

Despite the existence of the Title Registration Fund and its identified tasks as per the law to coordinate between REPD, and the ESA, nevertheless, the actual implementation did not result in positive outcomes.

2.3 Consistent government efforts to resolve lack of coordination between the ESA and the REPD.

In 1965 and 1966, the Minister of Justice formed a committee, which he personally chaired, with the membership of representatives from the REPD, the ESA, and the Central Agency for Organization and Administration to study the relationship between engineering offices of the Authority and the REPD and the coordination between the two entities to ensure that there is no duplication in effort, and to simplify procedures. The committee reached a decision that reads as follows: "The importance of unifying the entity in charge of implementing REPD and Title Registration System instead of splitting them between the Ministry of Justice and the Ministry of Irrigation. This can be achieved by entrusting one entity the supervision of REPD offices, and Engineering Offices, and associated departments in order to achieve organizational efficiency, simplify procedures, and prevent duplicate efforts".

In Nov 4, 1968, the Administrative Reform Committee of the Ministry of Justice, emerging from the Legislative and Legal Reform Committee stressed the importance of implementing the recommendation previously approved by the Executive Council (Cabinet) to merge the REPD and the ESA.

The workshop on Real Estate Publicity Laws in Arab Countries that was organized by the Arab League (Arab Research and Studies Institute in Cairo, March 1972) came up with a recommendation to unify the entities in charge of survey, ownership verification, settlement of disputes, publicity of transactions, registration and others in order to facilitate coordination, in both countries that apply or do not apply the Title Registration System, in order to avoid creating hardships for the clients and unnecessarily disrupting the publicity process.

A report that was published in 6/7/1977 by the Central Agency for Organization and Administration which was requested to research the reasons for the phenomena of confiscating state and private lands included a recommendation to merge the REPD with ESA in one entity handling real estate affairs.

Another report that was published on 6/5/1984 by the central Agency for Organization and Administration indicated that there is difficulty in coordination between the two major entities involved in Title Registration System and these are the ESA which operates as a part of the Ministry of Irrigation, and the REPD which is part of the Ministry of Justice due to different leaderships, and the lack of implementation efficiency by the Board of Directors of the Title

Registration Fund in this respect, resulting in dissatisfied public, complicated procedures, and loss of accountability. The report suggested establishment of a General Authority for Real Estate Ownership to combine the REPD and ESA.

In 1984, the Department of Justice and Legislation of the National Council for Services and Social Development, which is one of the national specialized councils, recommended establishing a general authority that combines the ESA and the REPD.

Furthermore, in a report submitted by the Branch of Justice and Legislation to the National Council for Services and Social Development in 22/3/1997 included a recommendation to form a joint council that includes the Ministers of Justice, Irrigation and Water Resources, and Finance to be in charge of coordination between the REPD, ESA, and Real Estate Tax Department to achieve the following:

- Coordination between entities and best use of resources and simplification of procedures.
- Surveying and documenting private ownership and state ownership of lands and properties.
- Building and updating a database of geographical data related to lands and real estate properties.
- The council may invite whoever it sees appropriate of ministry representatives, and other involved entities such as the Ministry of Agriculture, Ministry of Housing and Development, Ministry of Endowments, and Ministry of Defense.

Based on a study conducted by the Central Agency for Organization and Administration, a draft presidential decree was prepared to establish the General Authority for Title Registration Project in 1996. The decree stated that the Authority aims at finalizing the Title Registration System for agricultural lands, and employing the same system for vacant lands, and Urban areas wide. It also stated that this Authority will coordinate between the ESA, and the REPD.

If we add to that the study conducted by the World Bank, which was referred to by the inception project report, we will find that it recommends unifying entities in charge of real estate registration to be conducted by one entity. The report indicated that all real estate registration tasks could be classified as administrative procedures and that in case entities are unified, it should better be done under the umbrella of the entity in charge of cadastral survey.

Luckily, the Cabinet, and particularly the Prime Minister direction consistently supports completing implementation of the Title Registration System in agricultural lands, establishing the Title Registration System in urban areas, and implementing the Title Registration System law there. The coordination between the REPD and the ESA has been researched and decisions were made to:

- Automate the Title Registration System in agricultural lands, and identify the roles of the REPD and the ESA with the assistance of the Ministry of Communication and Information which undertakes the coordination role.
- Forming a committee to study real estate registration in urban areas. The committee should constitute members from the Ministry of Communications and Information, and the Ministry of Administrative Development to ensure appropriate coordination.
- The current project to study registration in urban areas, and to be supervised by his Highness the Minister of Administrative Development, with the involvement of the project management, the ESA and the REPD.

This lengthy talk about coordination between the ESA and the REPD is intentional to demonstrate its importance, and to ensure that the existing lack of coordination problem has to be a major issue addressed by the current project, and that an objective study in this respect needs to be prepared under the supervision of the Project Advisory Committee. Due to the current political support to real estate registration, the project recommendations will find a positive response from decision makers.

2.4 Introducing some modifications on laws related to real estate registration laws

There are laws that are directly related to real estate registration operations and these are:

- Real Estate Publicity law number 114 for 1964
- The executive regulations of the above law which was published in the official gazette in 24/8/1946 modified by ministerial decrees number 948 for 1976 and 3003 for 1979. Then law number 25 for 1976 was published to modify some of the provisions for the real estate publicity law.
- Real estate title registration law number 142 for 1964.
- Executive regulations of the real estate title registration law number 825 for 1975.
- Law number 68 for 1947 relating to notarization.
- Law number 119 for 1952
- Law number 70 for 1946 relating to publicity duties, charges and taxes enforced by other laws.

The Justice and Legislation Committee of the National Council for Services and Social Development studied the aforementioned laws, and suggested specific modifications. A copy of these modifications was previously submitted to the Legal Advisor of the project.

Forming a special committee for legislations at the earliest is highly recommended. It is also advisable that the committee should contain advisors in cadastral survey to work with the legal advisors in order to recommend modifications of the laws and relevant executive regulations.

Following are some of the other laws that relate to real estate registration in urban areas:

- Law number 3 for 1982 related to urban planning.
- Local Government Law number 43 for 1979 modified by law number 50 for 1981.
- Law number 237 for 1977 pertaining to construction work and its executive regulations which was modified by ministerial decree number 357 for 1983.
- Law number 116 for 1983 relating to modification of some provisions of the agriculture law promulgated by law 53 for 1966 especially where it concerns encroachment on agricultural lands by construction.
- Irrigation law promulgated by law number 12 for 1984 which identifies the boundaries of the Mediterranean Sea shores that should not be transgressed upon.
- Law number 4 for 1994 promulgating the environment law of which article 73 stipulates "No construction is allowed on the sea shores of the Arabic Republic of Egypt for a distance of 200 meters of the sea shore line except after obtaining the approval of the relevant administrative entity in charge of coordination with the Environment Affairs Department, and implementing the executive regulations of this law and following the relevant procedures and adhering to terms and conditions stipulated upon in that respect."
- Law number 84 for 1968 relating to public roads.
- Law number 10 for 1990 relating to appropriation of properties for public benefit.
- Law number 222 for 1955 relating to imposing an improvement duty on properties that are improved due to public benefit work.

- Law number 49 for 1977 relating to rental and sale of properties and controlling the relationship between the tenant and the landlord.
- Law number 14 for 1981 modified by law number 15 for 1982 relating to cooperative housing.
- Law number 59 for 1979 relating to the new urban communities.
- Law number 7 for 1991 relating to provisions related to private state ownership.
- Law number 136 for 1981 involving some provisions relating to rent and sale of properties and regulating the relationship between the landlord and tenant.
- Law number 117 for 1983 relating to protection of antiquities.
- Law number 38 for 1967 relating to public sanitation.
- Law number 56 for 1954 relating to tax on buildings modified by laws number 549 for 1955 and 294 for 1960 and 46 for 1971.
- Law number 5 for 1966 relating to cemeteries.
- Law number 230 for 1996 relating to foreigners possession of real estate properties and vacant lands.
- Law number 28 for 1981 related to civil aviation.

2.5 Administrative Boundaries

It is important to identify the administrative boundaries that are controlled by the local government law promulgated by law number 43 for 1979 modified by law number 50 for 1981 of which the first article stipulates "The local government units are the governorates, districts, cities, suburbs, and villages, each of which has its own legal personality, the boundaries, or renaming of which can only be done as follows:

- Governorates: by virtue of a presidential decree. The governorate could be one city.
- Districts, cities, and suburbs: by a Prime Minister's decree after obtaining the approval of the local public council in the governorate.
- Villages: by a governor's decree based on a suggestion of the local public council in the governorate.

Articles 1 and 2 of the executive regulations of the local government law promulgated by prime ministerial decree number 707 for 1979 modified by decree number 314 for 1983 stipulated the following:

Article (1): Dividing the Republic into governorates, districts, cities, or villages can only be performed based on the natural, demographic, economic, and urban characteristics of each unit. The population aspect should be considered while dividing cities into suburbs, as well as the integration of the services and production units based on the rules and situations for which a ministerial decree is issued.

Article (2): A Presidential decree is issued based on the prime minister's suggestion to establish governorates and identify their boundaries, rename them or cancel them. A Prime Minister's decree is issued to establish districts, cities, and suburbs and identify their boundaries, rename or cancel them based on a suggestion from the concerned minister at the local government and after obtaining the approval of the local public council of the governorate. A Governor's decree is issued to establish villages, identify their boundaries, rename or cancel them based on a suggestion submitted by the local public council of the concerned district with the approval of the local public council at the governorate level.

Upon visiting the headquarters of the company in charge of survey work in the two pilot areas, it was noticed that there are no clear administrative boundaries that identify the responsibility boundaries of the engineering office of the ESA and of the Real Estate Registration office that is managed by the REPD. It is very important to agree on

administrative boundaries at different levels (governorate, suburb, etc.) and mark those boundaries on maps. Committees that have members from the competent authorities (police, local government, education, health, real estate taxes, survey, and REPD) contribute to identifying those boundaries.

This is related to the possibility of establishing a system or numbering real estate units based on the hierarchy of administrative boundaries down to parcel number (if it will be adopted). It is also related to the issuance of a Decree from the Minister of Justice to identify the area where the title registration system shall be applied.

2.6 Strategic Plan

It is important upon starting to implement the real estate registration system in urban areas that the ESA has a defined vision and mission so that it can work towards implementing this mission and vision.

The ESA previously prepared a strategic plan that it has been implementing since 1995 and it has been developed by the USAID project that supports the ESA and is being implemented by an American company and the German project assisted in completing the plan and funding the continued service of two advisors (an American and an Egyptian advisor) until the completion of the plan.

- The plan included 200 strategies, each identifying a goal and means of achieving it. The plan covered various aspects including preparing a draft Presidential decree that reformulates the vision, mission, activities of the Authority and sets the scene for increasing the Authority revenues, and covering its expenses. A new organizational structure was developed to address different levels starting with the board of directors to central departments, general departments, and departments.
- The plan covered different areas such as establishing a new geodetic reference that serves the establishment of new digital cadastral databases, and establishing a new highly accurate geodetic network that utilizes satellite and receivers for The Global Positioning System (GPS). The strategic plan also addressed improving performance and utilizing top notch technologies in production lines and in the Authority offices.
- The plan also tackled the financial and administrative systems and creation of units to estimate costs, and set up a plan to automate the Finance and Administration Departments.
- Furthermore, the plan addressed the relationship between the Authority and the public, and recommended the establishment of a database of Authority clients, and users, and this database has already been built.
- It also addressed the competition between the Authority and other entities and recommended cooperation and coordination between the Authority and these entities allowing completion of tasks through more than one entity.
- In addition, the plan addressed financing resources and donor agencies.
- It also addressed the training provided by public and private universities and institutes such as the AUC, and meetings held between the Authority and these entities to introduce the way the Authority operates and identify the training programs necessary to improve performance.

- One of the most important objectives of the work plan is for the Authority to follow the modern management techniques such as the Total Quality Management, and identify the work flow of various operations performed by the Authority and that progress is achieved towards attaining the satisfaction of the public who use the Authority products and services.
 - The Authority established an office in charge of modernization to study strategies, identify priorities, and develop work plans for implementing priority strategies, and regularly updating the strategic plan since it is not static because there are changing factors that require consistent change.
 - One of the most prominent achievements of the strategic plan was the involvement of the Authority employees in the development of the strategic plan. It was a good opportunity to find out what others in the Authority do. It also involved meetings that the Authority Chairman participated in country wide to introduce the strategic plan. The Chairman also participated in all strategic plan development meetings, and did not miss one.
- In addition to the effort exerted, this plan cost more than 0.5 million dollars, and a funding of this magnificence could have never been possible without the USAID support that was available at that time.

N.B.: A copy of the strategic plan of the project was copied and distributed to the project advisors, but that small booklet is supported by many reference books that are available with the ESA explaining each strategy in detail.

- I intentionally wanted to provide this lengthy explanation to clarify that the current direction to have a vision, mission and activities does not come from vacuum, and that any attempts in this direction should benefit from previous efforts. I would also like to add that the previously mentioned strategic plan has become updatable, and actually needs update in the light of the new situation, especially after the transformation of the ESA to become an economic authority, and its regulatory role in organizing survey works as the regulator, and utilizing the private sector to implement some of the work assigned by the Authority.

It should be noted that one of the strategies included in the strategic plan (1995) was to pave the road for establishing a strong private sector in survey, maps, and geographic information systems

2.7 Geodetic Network

I would like to refer here to a paper titled “Development of AWGS - 84 Based Datum for The Arab Republic of Egypt” written by Eng. Mohamed Mosaad Ibrahim, the former Chairman of the ESA, and Mr. Scott Powell, the Geodetic Survey Advisor financed by the USAID and the German GTZ to work for the Authority. The Project received a copy of to paper.

Following is a summary of the paper:

- The USAID, the GTZ, and the FINIDA provided technical support to the ESA relating to multiple topographic and cadastral maps, and intensively used GPS to produce such data, and using GPS ultimately means using WGS-84 as a reference in computation and adjustment.

- Until these maps are produced using the Egyptian Geodetic Reference based on Helmett 1907, the accuracy of the data will be affected.
- Using the current coordinates network which identifies the width of each zone at 4 degrees from the longitude increases the magnitude of errors on the borders as a result of scale factor, and the distance between the borders and the central Meridian, especially with the use of digital cadastral work methods.
- Under the supervision of the Authority, the USAID project studied the existing geodetic network, and a number of defects were identified requiring the committee to recommend establishing a new highly accurate geodetic network that is 1/10 million then establishing a less accurate network 1/1 million, then intensifying the network so that the distance between different points is 4 kilometers, and this network should be the reference for traverse points used to measure land boundaries.

Based on the above, the following was implemented:

- Establishing a highly accuracy network (1/10 million) composed of 30 points, the distance between them is 200 kilometers each. The network includes some of the first class points of the older network.
- Establishing a precise network 1/1 million for a number of 112 covering the most heavily populated agricultural areas.
- Using the geodetic reference WGS – 84.
- Employment of coordinates network that is 3 degrees wide, which is considered a modification of the international 6 degree system UTM.

The committee was formed of professors working in geodetic field in universities, and Authority personnel working in geodetic area, and topographic and cadastral maps, to approve work plan to transform to the geodetic reference. The first production of this system was maps produced on the scale of 1/50,000 in the western desert using satellite images, and utilizing the geodetic reference, and the new coordinates system using the French government technical grant funds.

Another paper was submitted by the current project to the ESA Chairman explaining the position of the new geodetic reference, and the need to implement it. The paper demonstrated that the Authority is about to undertake new large scale projects if they use the geodetic reference and if the new coordinates system is used, most of the Authority data would be transformed to this reference, and the remaining data would be easy to transform, especially during the maps update phase.

The projects referred to are:

- Conversion of 100,000 maps to the digital system at a scale of 1/1000 covering 17 governorates. This conversion is possible if companies are supplied with four control points in each map to be transformed into the new system.
- The Housing Ministry project in charge of drawing basic maps for all cities (except for Cairo and Alexandria), and villages. It would be better to use the geodetic network and the GPS in this project to intensify the network and produce control points necessary for aerial triangulation. This is performed using the new geodetic reference and the new coordinates system.
- Real estate registration of urban areas which will implement this system in the cities of the Republic, priorities for which will be set based on available budget. The most important product of this system is Active GPS Stations that is proposed by the current project which will entail establishing 4 points covering Greater Cairo area.

I think that the distribution of these points should be done through a national network covering populated areas allowing use of GPS to produce land **control** points, and to identify boundaries for cadastral maps.

2.8 Aerial photography and production of digital maps

A decision has been made to implement the real estate registration in cities using the Title Registration System, and the coverage will be systematic and gradual in areas for which the Minister of Justice issues a ministerial decree to implement the system. Therefore, I think that survey of land parcels and building using the land survey methods including GPS will be very costly, and even if financing is available it will be a very lengthy process. Considering other faster methods is advisable such as aerial photography, and utilizing photogrammetry used to produce digital maps, which are completed in the field and boundaries are identified. This map is considered an index map. Previously compiled data can be collected for lands and buildings registered under Publicity Department Law No. 114 for 1946. For every property registered under this law, there has to be a mutation form indicating the dimension of sides, and diagonals that are used to compute area. This form can then be scanned into a digital image and attached to the parcel record.

For lands and buildings that have not been registered, a number of field groups composed of two persons could be formed, and these can use simple laser equipments to examine the land, measure sides, and diagonals, and attach it to the parcel record.

As for apartments, if architectural drawings exist, it can be scanned and kept in a digital image format and attached to the parcel record, provided there is one drawing for repeated floor designs, and other drawing for each different design, identifying shared areas versus apartments.

In case there are no architectural drawings, land survey people can collect the necessary info to produce such drawings.

2.9 Private Sector

There is no doubt that using private sector in work related to implementation of the title registration law in urban areas will have a positive impact on speedy implementation of work, but the ESA employs more than ten thousand employees. However, in the light of expenses spent on modernizing the Authority in the form of equipment, techniques, and internal and external employee training, and at the same time not having the ability to legally terminate employee, (whose number is gradually decreasing, as there number four years ago was thirteen thousand while currently they are ten thousand employees) the Authority should benefit from this number in establishing the system until the initial registration.

The private sector should be used in this phase in assignments identified by the Authority such as:

- Establishing land control necessary for aerial triangulation.
- Creating digital maps using land survey methods.
- Creating architectural drawings for apartments in buildings that do not have them.

During the same period of implementation, the Authority should assume its role to encourage building a private sector that can be utilized in survey tasks following the initial registration provided the following is available:

- Specifications and standards for cadastral survey work.
- A manual explaining how every task is done in detail.
- Cadastral Law or Code of Practice, which is available in many other countries.
- A training center for Authority personnel, and for private sector workers providing programs for classroom training and on the job training.
- A system for practice licensing after passing the training examination, provided the license is granted by the Authority or the Surveyors Association that is to be established. Other international entities could be used such as the Royal Institutions of Chartered Surveyors in England.
- A transitional period is allowed to the Authority to finalize implementation of the above steps.

3 Proposed Changes in ESA and REPD Offices

The ESA has been working on reforming its operations since the late eighties of the last century. A number of technical assistance programs provided by different countries such as Finland, Germany, USA, Netherlands, Finland once more, and then finally Sweden have assisted in this respect. The assistance provided was in the form of equipment, methods of operation, and training of engineers and technicians working for the Authority. The reform addressed the cadastre and real estate registration through three projects; the German project financed by GTZ, the American project financed by the USAID and finally the Finish project financed by FINIDA that is being implemented in Damanhour. I would like to highlight the impact of each project on the organization inside the Authority offices:

3.1 The German Project (Multi purpose Cadastre)

The project started with great ambitions to create the Cadastre and the Title Registration System database that could be taken as the basis for an information system based on the land parcel. A number of seminars involving multiple entities such as the Ministry of Agriculture and Irrigation, The Ministry of Health... etc., were organized in partnership with the stakeholders which are the REPD, the ESA, and RETD, to explain the multi purpose cadastre. A number of units were established within the project in Aswan to educate participants on how to benefit from the system, and everybody was in agreement that the system will be beneficial. However, upon implementation, everybody lost their enthusiasm, even the stakeholders including REPD and the RETD.

The pilot implemented in Kumombo District in Aswan demonstrated the importance of having a public relations department within the organizational structure of the directorate. Even though the media role through the Ministry of Communication, radio, television and journalism is immense, but the local role played by the public relations department in the survey directorate is more important, as it has first hand contact with public available in the area where the system will be implemented through seminars, and posters that promote the awareness of importance of implementing the system so that they can participate effectively in implementing it by making themselves available during survey to assist in identifying their land boundaries, and to follow up on implementation steps until they receive the notice identifying rights and obligations attached to their parcel, and respond or make their appeals on the right timing.

The second lesson learnt was in the mechanism introduced by the project in extracting data from the text database (survey book). The current project may have a look at this mechanism, because those in charge are still working for the ESA, and the project documents are still available. A seminar could be arranged where Eng. Hesham Saad, and Eng. Tarek Gouda can present the project and lessons learnt.

The third lesson is the method that was used to update the database, which contradicts with what the project currently proposes in relation to limiting the role of engineering offices, and increasing the role played by the survey directorate. Following is an extract from a report on updating the database:

“The updating work is presently done on district and governorate level. The tendency of the strategic plan to transfer most of the actual field work to the district level with the basic principles and should be supported.”

It was also found that in order to guarantee good management and quality assurance systems, and to ensure safety of data, the data relevant to a particular governorate must be maintained in the survey province office.

Study showed that it is beneficial to maintain the existing data update system (before introducing the digital system) and adapt it to correspond to the digital databases and modern techniques used in data collection, instead of introducing new work techniques.

3.2 The USAID-funded Project

The project had an impact on all aspects of operation in the Authority starting with the establishment of the new geodetic network to producing topographic maps produced in various scales, all in digital format, then establishing digital cadastral database that includes text databases, as well as the information system for lands in Abu Hommos in Behira, but the project did not create a system for updating the cadastral data for both maps and text database. What concerns us here is how the project managed the production of cadastral maps, and in doing that it used the project management system apart from the administrative system of the Authority.

Annex A shows the structure of the cadastral maps production unit and the work flow chart for that unit. This organizational structure may be of benefit the time of implementing large projects to replicate the results of the current project.

Annex B shows the organizational structure of all administrative levels from the levels from the level of the central department for surveying in the regions to the level of Engineering Offices which are located at the districts. The annex also includes job description for most of the mentioned positions. These organizational structures were the results of the studies conducted by the group prepared the strategic plan of ESA during the surveying and Mapping Project implemented at ESA and financed by USAID.

3.3 The Finnish Project in Behira

The project had several objectives, that included the digital transformation of 1/1000 maps that were produced in conventional form based on the geodetic reference Helmert 1907 into the new reference NED – 95, and to the new coordinates system Modified UTM, and connecting them to digitally produced maps that were originally produced using control points using WGS -84 then transformed into Helmert.

These currently need to be transformed to WGS- 84 and Modified UTM, connected together, then the problems resulting from connecting them and from digital conversion of paper maps need to be resolved, in addition to addressing the resulting change in parcel sizes, but apparently a successful solution was not reached.

The second topic: building a system for digital database update, and automation of update work at the EDO and in the EPO.

We visited the EPO in Damanhour, and saw a demonstration of the proposed system which included a lengthy demonstration of how to estimate the costs of survey work, assuming that the EPO will be in charge of updating ownership data, but this is the REPD role.

It was notable that the project followed the same manual steps that are manually performed and developed an automated solution, which is similar to the manual one, but uses the computer and different programs to help in data update.

We also noticed that what has been done is an attempt to automate the update process resulting from publicity applications only, but the project did not address the delineation and demarcation of government projects and the process of appropriation or did it address creation of a unit to transform large documents available at the Province office storerooms to electronic format.

What is important here is that the organizational structures of the EPO and the engineering office have not changed a lot, and a good reception area was added.

The Finish project which is still running could be useful in terms of benefiting from all the system analysis and design of the update system, especially that the Title Registration System does not distinguish between agricultural lands and Urban areas (amendments to the system can be performed, if so required). We can also benefit from the adjustments of the EPO and EDO organizational structures, if transformation so requires.

I wanted from the above presentation to identify the impact of each of the projects on the organizational structure of the survey province office and ESA district offices.

3.4 The Organizational Structure of the EPO

Since we are dealing with a project that addresses the Title Registration System in cities, the proposed organizational structure will be a basis for EPO in Cairo, which will be engaged in establishing the Cairo city cadastre for years to come. The proposed organizational structure will be based on the following assumptions:

- A database of cadastral maps will be established by ESA, and ESA is capable of assuming this role, with its cumulative experience that exceeds 100 years in addition to the efforts that have been exerted, and still continue, to modernize the Authority to cope with this age, and the enormous progress achieved in technology and modern

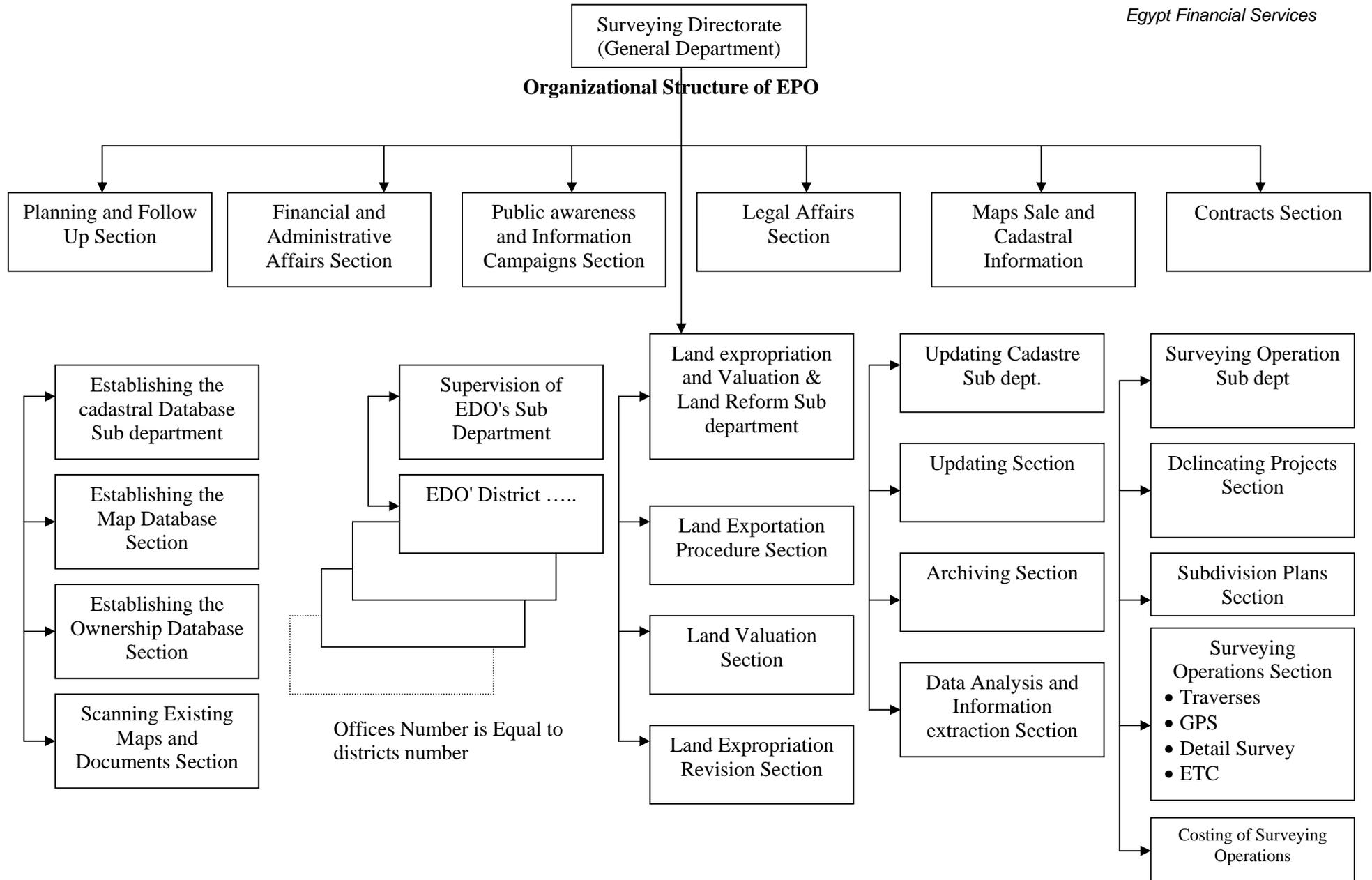
techniques such as the GPS system, condensed use of computers, and training in multiple technical and administrative fields, as well as obtaining all new technologies used in various areas, and using the most current applications in all aspects of work.

- The Authority will continue to perform the role it is accustomed to in ownership data collection, and applying provisions provided in the Title Registration law on all cadastral maps in order to establish ownership survey record books which we call today an ownership database, while maintaining the important role performed by the REPD in review and performing the steps following establishing the survey book to applying the Title Registration System in a specific suburb.
It is geographically assumed that EPO is the entity in charge of implementing the Authority work in areas that are geographically attached to it.
- Upon updating the current divisions of the EPO, some divisions will be abolished, such as the Area Section whose tasks are currently performed by the Computer Department, and Agricultural Reform Department which is supposed to implement tasks, the last of which was implemented in the early sixties, and has not been performing any tasks for more than 20 years.

The engineers and surveyors who are trained to use modern equipment have the technical expertise to implement survey work whether to be used in identifying expropriation plans, or implementing division of land parcels, or recording traverse points.

- Upon establishing databases, using computers, and updating databases as a result of the registered transactions, the role of the 'mutation form' in its current format will become historical files that could be used as a reference to extract the required info, and therefore the Mutation Department will no longer be needed in its current structure.
- It is proposed that the ESA implements certain tasks that are beneficial to expedite the establishment of the cadastral databases through contractors, and the EPO's may have a role in contracting and supervising implementation.

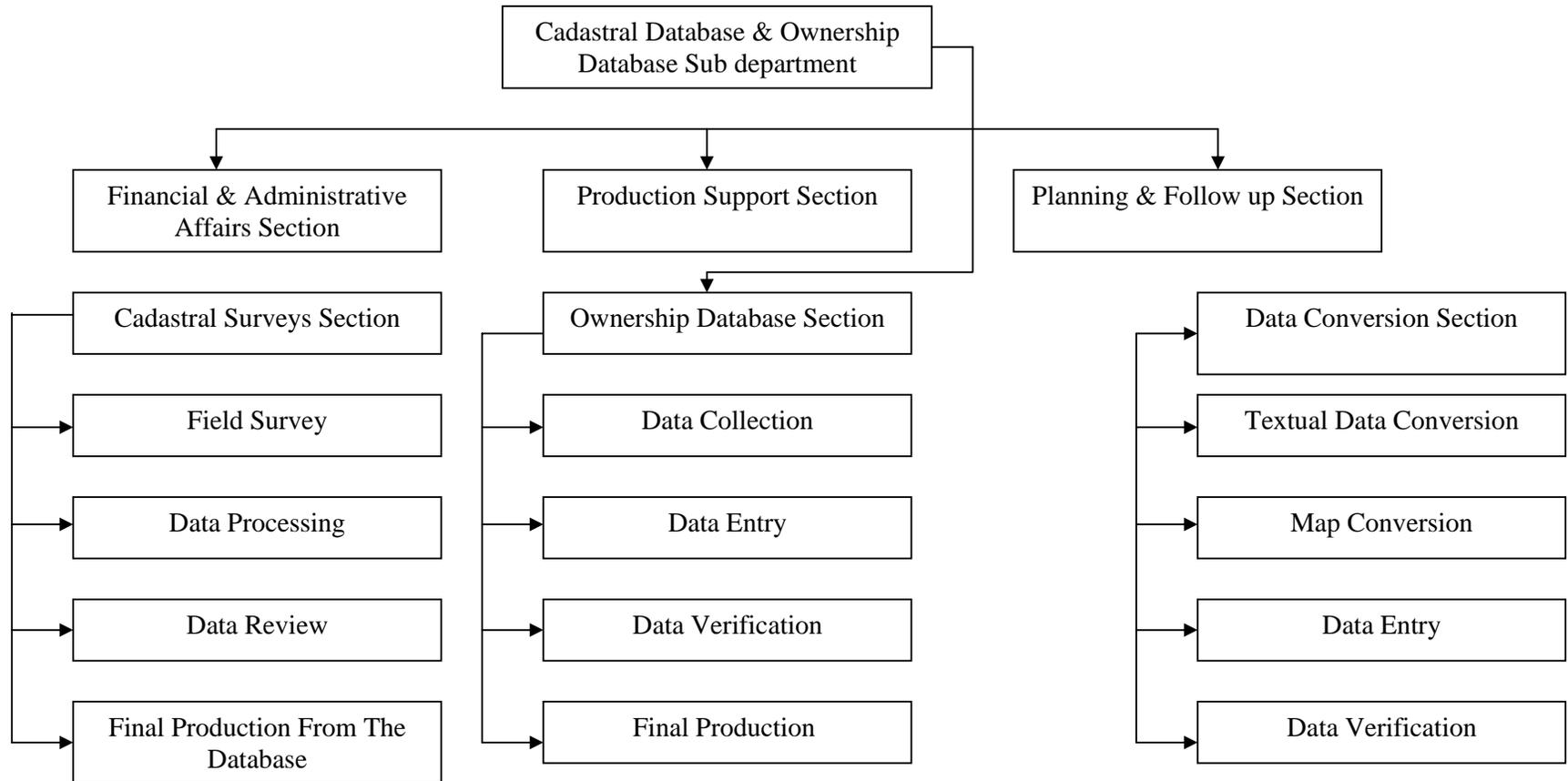
Based on the above assumptions, the proposed organizational structure of the EPO is as follows:



3.4.1 Cadastral Database & Ownership database sub department

This sub department is responsible for establishing a database of digital cadastral maps, and ownership database. The structure of this sub department is as follows:

Organizational Structure of cadastral database & Ownership database Sub department



This sub department performs the tasks related to production of digital cadastral maps in various multiple phases, in coordination with other ESA departments. It also collaborates with the Geodetic and Computation Department, and the General Department of Topographic Maps which reports to the Central Department of Map Affairs, in relation to control points, basic maps produced using large scales. The Sub department should also have a digital database that includes coordinates and description cards for control points that cover the whole governorate, or part of it.

The Sub department also collects data related to ownership (Ownership Database Section) and required ownership contracts and supporting documents and matches those contracts and documents with the land parcels included in the cadastral maps database. In general, this Sub department undertakes the following tasks:

- Establishing field control points
- Identifying land parcels and buildings
- Identifying building boundaries
- Drawing maps, and issuing land parcels unique numbers, and calculating surface area
- Performing necessary introductory steps for law enforcement including advertising, contract enforcement, and participating in committees with the REPD. Setting deadlines for appeals and settlement of appeals, until the digital database is delivered that includes ownership data which corresponds to the phase of handover of ownership survey book to the REPD in the current manual system.

The Sub department, represented in the Conversion to Digital System Section, transforms the available data such as maps and textual data to a digital format, and integrates it with the digital cadastral maps database.

3.4.2 Engineering Offices Supervision Sub Department

The Sub department performs technical supervision and reviews engineering offices work at the district and suburb levels, and sets application deadlines, and hands over identification statements to the REPD.

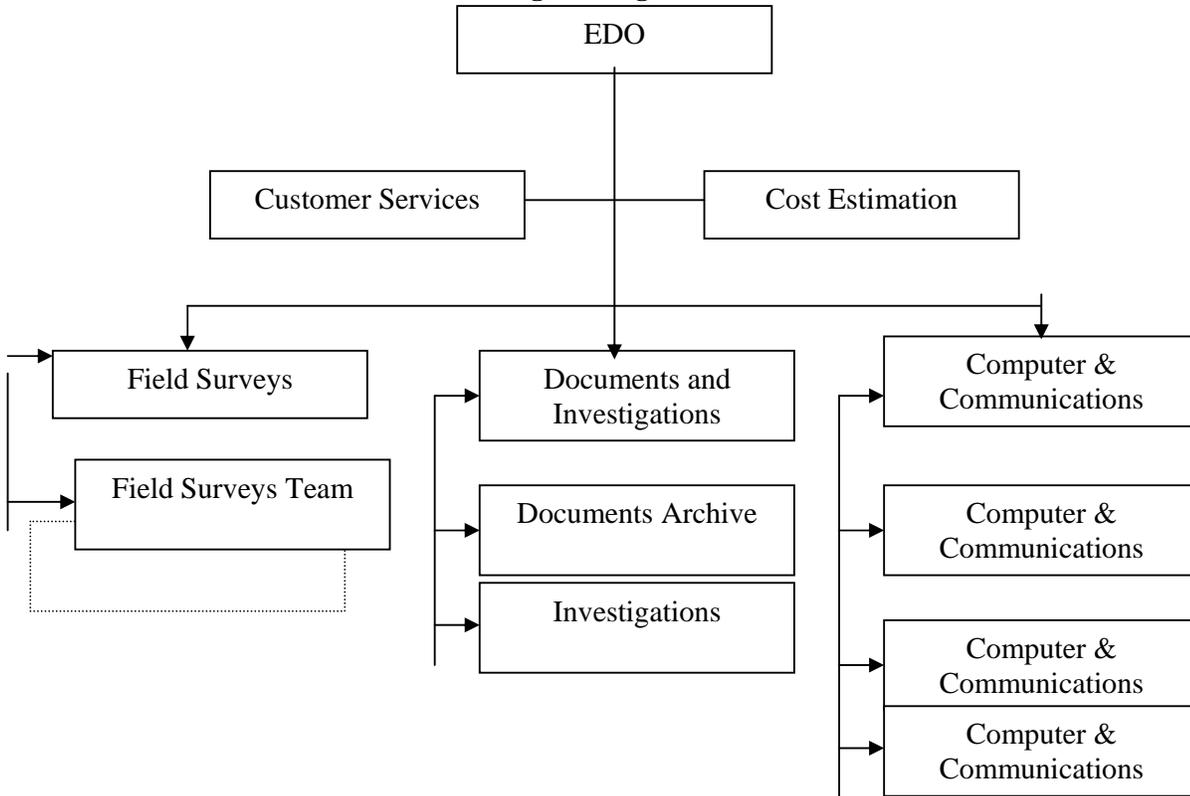
3.4.2.1 The EDO

The EDO is the technical aspect in performing notarized transactions, to assist the RO in implementing required legal changes to finalize the transaction. It also represents the required technical aspect to update the cadastral maps digital database, which is performed based on notarized transactions.

It is important to start gradually updating the engineering offices as of now, by supporting the office with a computer to be used in follow up of applications, and to record the administrative and financial tasks of the office, as well as the mutation forms. The office should also have a phone and fax line to be used in correspondence between the office and the EPO. The office also needs a photo copying machine, and once the office is computerized, the computer should include a copy of the database covering the administrative boundaries of the office. All employees will have the right to view the database without performing any modification (read only access), as this functionality is restricted to the EPO.

The EDO should phone/fax a statement to the EPO indicating changes made on a daily basis, and to provide required data to build temporary files for completed transactions until they are registered, and entered on the database.

Organizational Structure of the Engineering Office



The Customer Service Section coordinates with the RO regarding verification of the application data before the transaction is completed, and educates the public on workflow process, and notifies them of review timing, and answers their questions relating to completing their transactions. The Cost Estimation Section informs them of the application expenses for typical work, and the client pays the duties at the bank or EPO accordingly.

3.4.3 Valuation, Expropriation and Agricultural Reform Sub Department

The sub department undertakes preparation for expropriation work in accordance with law # 10 for 1990. Under the current traditional management, the Drawings Office, and the Projects Section's help is used to identify project boundaries in nature, then the Traverse Section is used to locate marks and send mark locations to the General Department for Geodetic Survey and Computation, then plotting those marks on the maps, and identifying parts of land parcels within the project. Meanwhile, the lands are surveyed in the field, and a list of owners is prepared of apparent owners, then collects data that will help in evaluation such as the value of land based on RETD, and based on the last notarized contract, and its location in relation to public services such as main road, and water. In the proposed automated system, the Survey Works sub department will perform the work necessary to identify project boundaries, and there will be no role for the Drawings Section, as this will be performed by the computer, and there will not be any need for the Area Section, and the calculations will be done within the EPO without the need to send land marks to the General Department of Geodetic Survey.

The supporting studies that will help in land valuation will be done using the computer, because the latest contracts data is supposed to be saved on the database, as well as estimating the real estate tax.

The sub department undergoes Agricultural reform to enable it to perform the remaining tasks, and the Agricultural Reform Section should be abolished.

3.4.4 Survey Works Sub Department

It constitutes of a number of engineers and technicians who have experience in performing survey work using GPS system, and total station, and tape measurement. Also performs the following tasks:

- Establishing control points
- Detail Surveys.
- Land subdivision.
- Set land marks and identify project boundaries

All computations and adjustments are done using the computers and software applications available at the sub department.

3.4.5 Cadastral Data Update Sub department

This Department is in charge of updating the cadastral maps database based on the registered transactions that are completed on public and private land parcels based on the statement of notarized transactions that is received from the REPD Office. Expropriations and agricultural reform transactions are also included in notarized contracts.

Since the Authority will perform tasks necessary to establish the ownership database, it could be arranged with the REPD to either maintain a copy of the ownership database, and update it based on registered transactions, or the Authority would have the read only access to the ownership database in REPD in order to help in enforcement of the Expropriation Law for Public Benefit # 10 for 1990.

The Cadastral Data Update Department will implement updating the cadastral data according to the agreements reached with the REPD.

3.5 The Organization of the RO Office

Currently the citizens efforts are dispersed between three entities at the REPD. These are the Real Estate Publicity District Office, and the Notarization Office, and the Main Office, in addition to the engineering office that is affiliated with the ESA and the EPO.

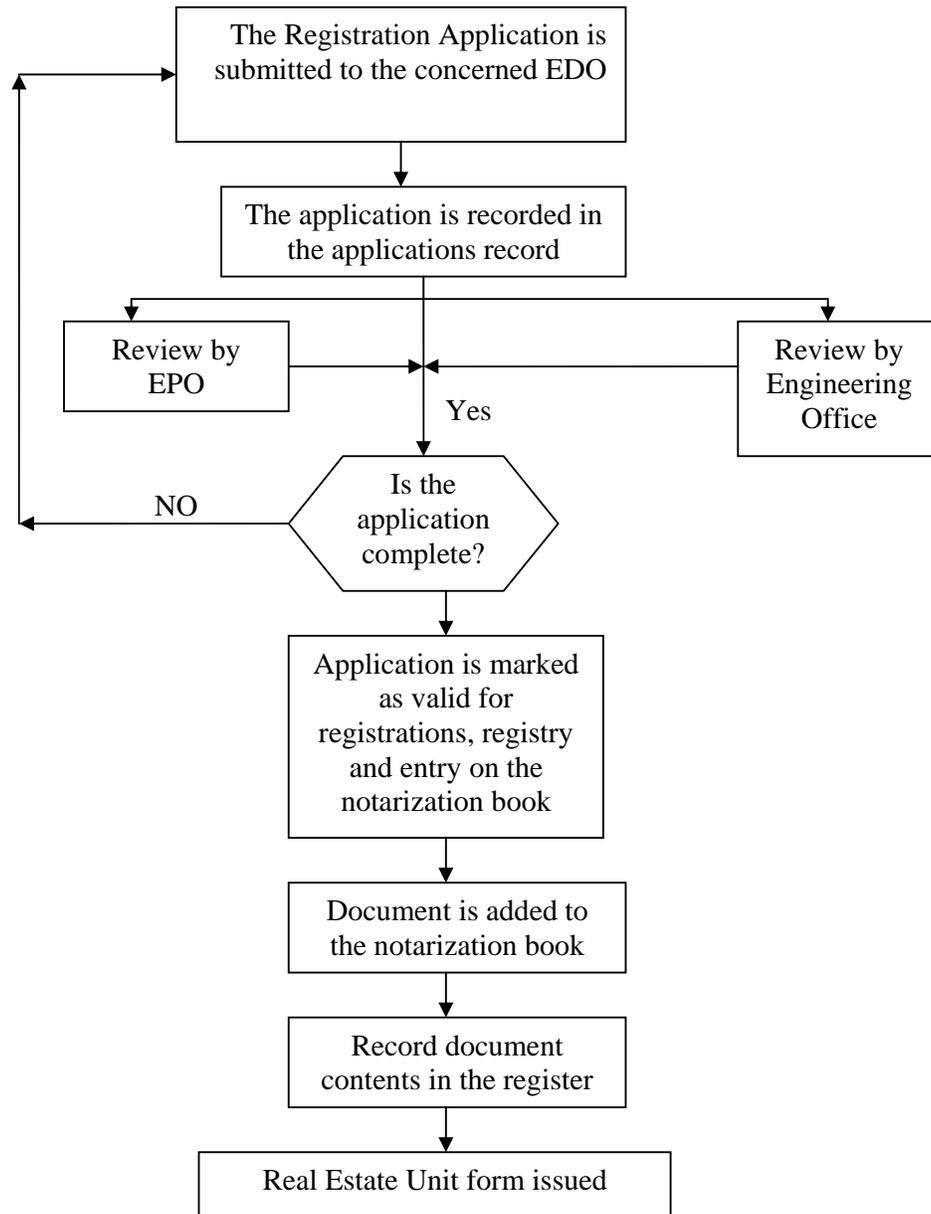
Whereas with automation, all steps are proposed to be completed at the RO Office, until the contract is issued. Using the computers, the citizen may also generate a personal catalog and issue a statement of real estate unit, as well as certificates and various information from the database as per the provisions of the Title Registration Law No. 142 for 1964.

The Main Office will retain a copy of the databases in the district offices and update them on a timely manner, based on notarized transactions in district offices.

The main office performs technical supervision and research and issues instructions to district offices.

The following is the flow chart which combines the operations of the three REPD offices. These operations can be conducted in the RO office in the same building

Real Estate Publicity District Office Workflow Chart



- Recording in the applications record is done based on first come first serve (by date and time) to maintain priority.
- The duties and fees are estimated and a summary is written about the contract in the notarization book, and both the seller and the buyer sign on the document in front of the Notarization Officer. The transaction owner is given an original stamped with 'eligible for registration', and is given a notarization number, and a copy is kept for filing at the Notarization Office and a copy goes to the Archives Department.

To implement this work flow, it needs an organizational structure which has the functions of:

- Customer Services.
- Financial and Administrative Affairs.
- Communications "Computers, Telephones & Faxes"
- Archiving.
- Databases.
- Mechanism to keep priorities.
- Inspections and checking.
- Notarization.
- Registering.

The whole organization structure will be dealt with in other reports of the project.

The main office on the level of the Governorate will retain a copy of the databases in the district offices and updates them on a timely manner, based on registered transactions in district offices.

The main office performs technical supervision and research and issues instructions to district offices.

Annex A: The Organization of the Cadastral Production Unit Within the Governorate (American Project)

Figure (1) demonstrates the Organizational Chart of the Cadastral Production Unit within governorate.

For any project to succeed, it has to have a strong manager continuously working to manage the project. The nature of cadastral survey work, demonstrated in the flow chart, Figure (2) requires a manager that has good knowledge in managing this process.

The work also requires a project coordinator to coordinate tasks between the Cadastral Maps Production Unit, the EPO, and the higher levels within ESA. For example, coordination is needed with the EPO in the Governorate as related to cadastral maps and ownership survey record, as well as coordinating with the General Department of Topographic Maps, regarding basic maps produced on a large scale, as well as coordination with the General Department of Geodetic Survey regarding triangulation points coordinates, and project boundaries points. He also needs to coordinate with vendors selling survey equipment in relation to maintenance of equipment and cars.

The coordinator, together with the Project Manager, should develop a work plan to identify needed human resources, equipment, stationery such as ink and paper, etc. The coordinator needs to contact various ESA departments and identify the roles of each of them. He also needs to plan for communicating with the public regarding survey work performed for their land parcels, and real estate units.

The coordinator, in coordination with the Project Manager, needs to work on developing procedures for the team in charge of implementation, and these procedures need to be documented and accessible to the team members.

Figure (1) Organizational Chart

Figure (2) Work Flow Chart

Without going into too much details

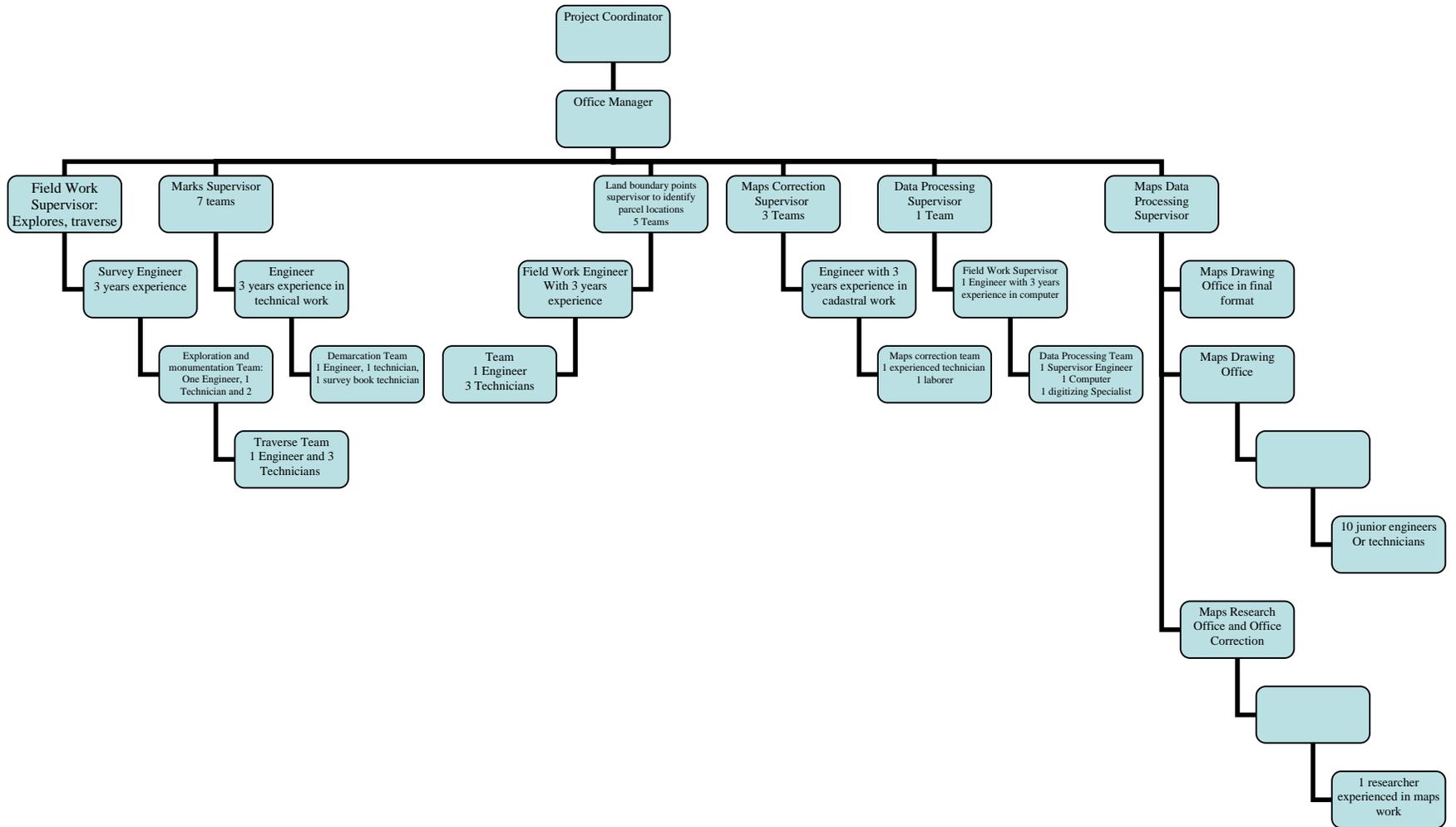
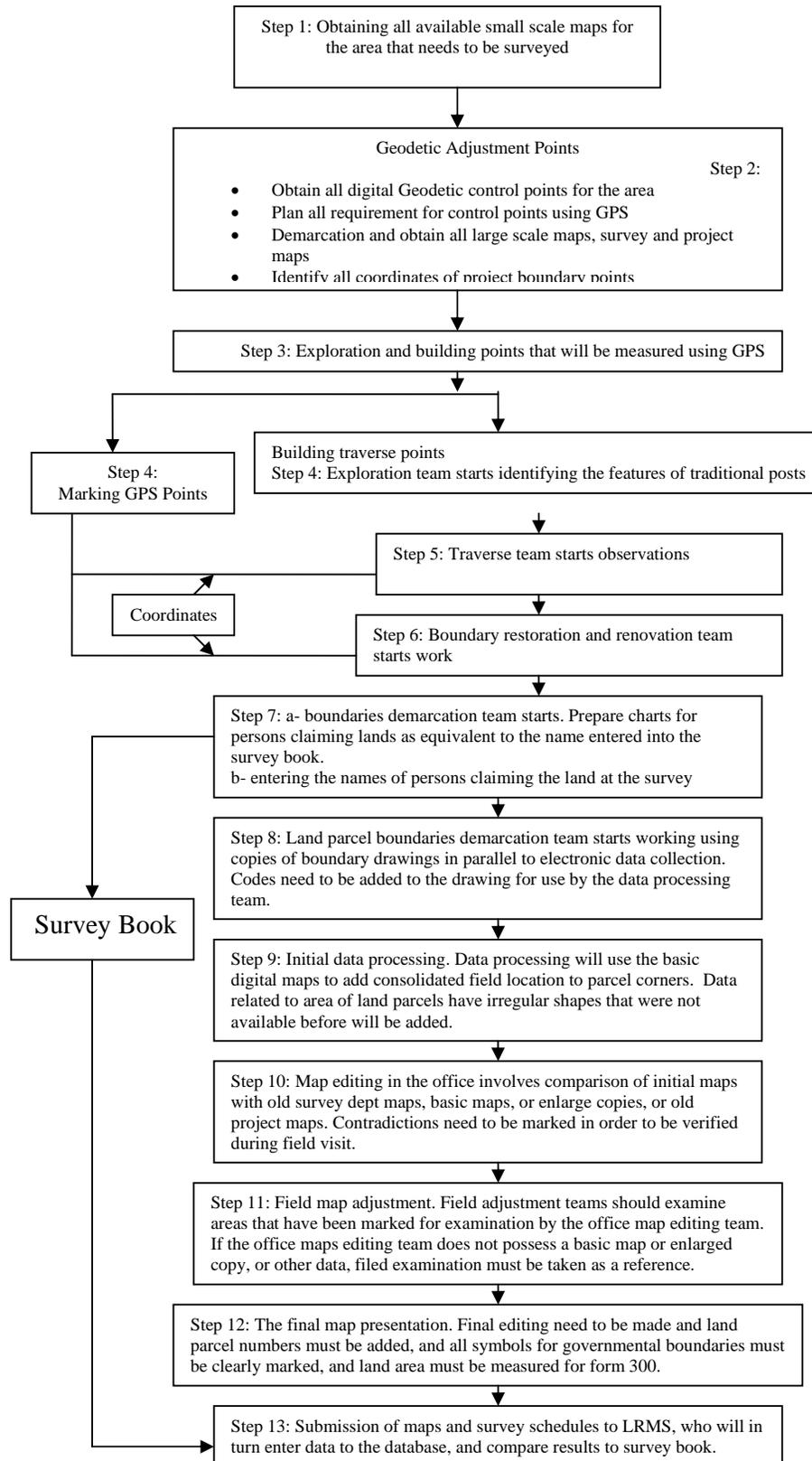


Figure (1) Cadastral Maps Team at the EPO Level

Work Flow Chart in Cadastral Database Office



Annex B: The Organizational Chart for the Central Department for Survey Affairs in Regions and Affiliated Entities

Purpose: This section deals with the responsibilities of the Central Department for Survey Affairs in Regions that constitute that sector. The New Organizational Chart, Figure (App. 2-1) describes the new organizational chart recommended by the strategic planning for this sector.

Duties: The Director of the Central Department for Survey Affairs in Regions directly reports to the Chairman, and undertakes the following responsibilities:

- Establishing and operating the land survey information country wide.
- Managing the production of cadastral survey maps and relevant land records that describe agricultural and urban lands within Egypt.
- Maintaining national survey, maps and relevant registers to support the Real Estate Department, of the Ministry of Justice, and Real Estate Tax Department of the Ministry of Finance.
- Managing and implementing land handover services, valuation services, and expropriation on behalf of other public entities.
- Sale of the sector services to other governmental agencies.

These tasks are performed through an organization composing of:

- Five regional offices responsible for the following geographic areas:
 - East Delta (Sharkeya, Dakahleya, Ismailia, North and South Sinai, Suez and Port Said).
 - Central Delta (Gharbeya, Damietta, Menoufeya, Kalyoubeya).
 - West Delta (Behira, Alexandria, Kafr El Sheikh, Marsa Matrouh).
 - Central Egypt (Menya, Beni Suef, Cairo, Giza, Fayyoun).
 - Upper Egypt (Asyout, Sohag, Kena, Aswan, Al Wady Al Gadid, Red Sea)
- 26 offices in Governorates.
- Offices at administrative division level, as needed.
- Three work groups:
 - Planning and Program Review Department.
 - Legal Services Branch.
 - Financial and Administrative Branch.

Accountability: The Director of the Central Department for Survey Affairs in Regions manages the performance of the Central Department reporting to him, with a minimum amount of supervision and direction by the Chairman.

He becomes responsible for developing an annual plan for his Central Department, and achieving the goals stated in the referred to plan.

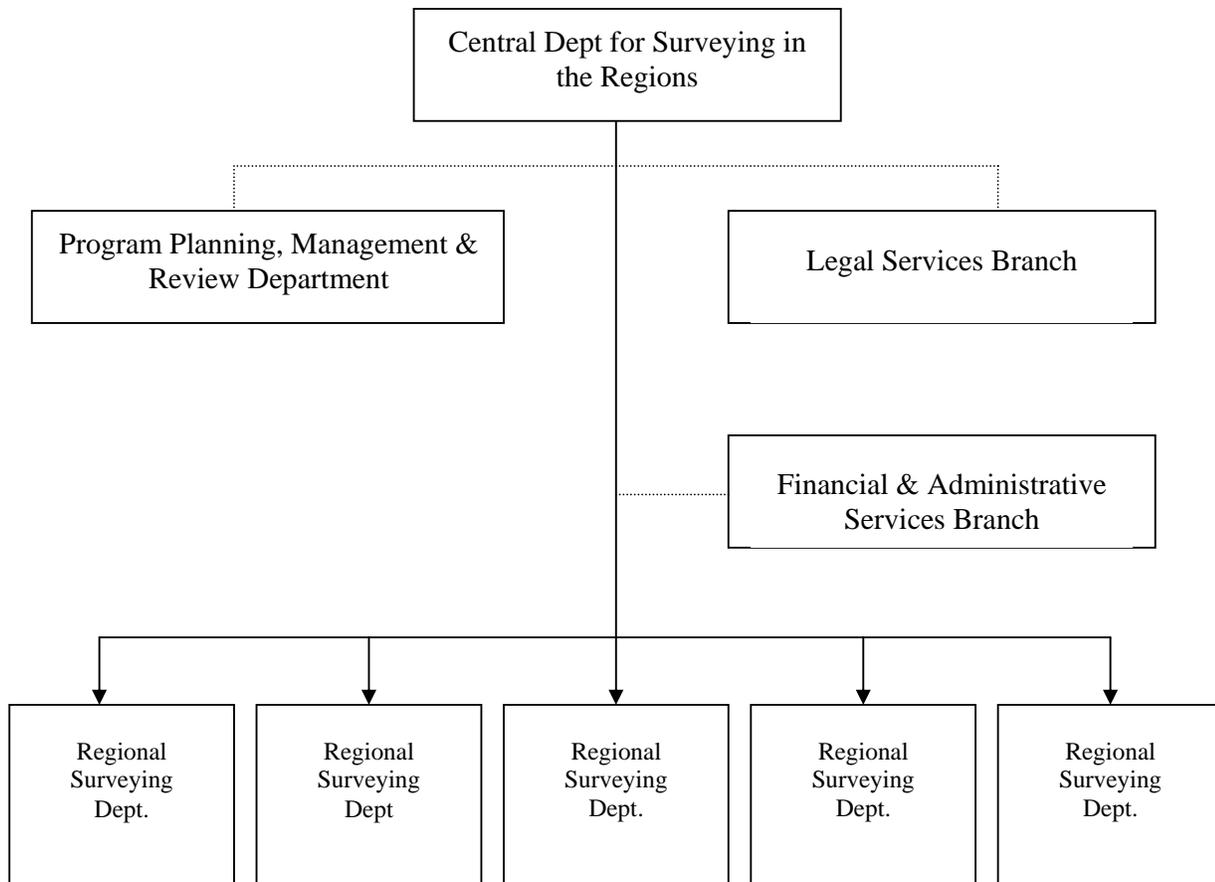
He prepares and submits annual budgets (capital, program and current) for his sector in accordance with the guidelines received from the head of the Financial and Administrative Services Division and manages the funds allocated to his sector upon approval of the various budgets.

He is responsible for the cost effective operation of regional, governorate and district surveying offices and achievement of the sales objectives established in the annual Business Plan.

He is responsible for the training of the employees assigned to his sector and the maintenance of the facilities and equipment allocated to him.

He directs the development of and submits for approval service delivery standards and product specifications for his sector.

Fig (App. 2-1) Organizational Structure of the Central Department for Surveying in the Regions



Accountability: As an Undersecretary, the head of the region directs the performance of the region with minimum guidance and supervision from the sector head.

He is responsible for preparing an annual Business Plan for his region and meeting the objectives established in that plan.

He prepares and submits annual budgets (capital, program and current) in accordance with the guidelines received from the head of the Financial and Administrative Services Division and manages the funds allocated to his region upon approval of the various budgets.

He is responsible for the cost effective operation of the regional, governorate and district cadastral surveying offices within his region and achievement of the sales objectives established in the annual Business Plan.

He is responsible for the training of the employees assigned to his region and the maintenance of the facilities and equipment allocated to him.

He directs the development of and submits for approval service delivery standards and product specifications for cadastral surveying and mapping, land and building appraisal, and land expropriation.

He directs the implementation of the Authority's Total Quality Management Program within his region.

He serves a member of all regional committees related to cadastral surveying and mapping, land and building appraisal, and land expropriation.

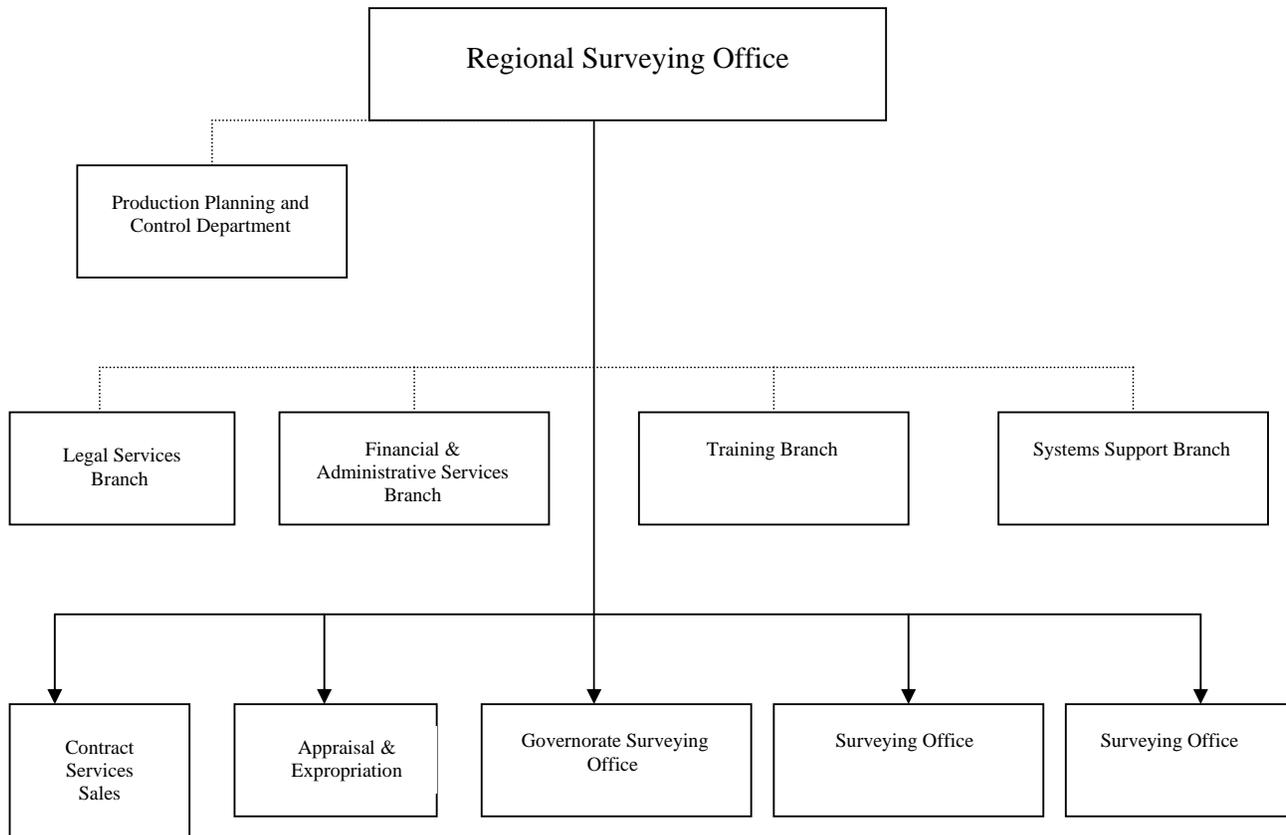


Fig (App 2-2) The Organizational Structure of the Regional Surveying Office

Staff Activities of the Regional Cadastral surveying Office: Each Regional Land Information Office requires the following staff to carry out its mission.

- Production Planning and Control Department
- Legal Services Branch.
- Financial and Administrative Services Branch.
- Training Branch.
- Systems Support Branch.

The relationship of these staff elements to the Regional and Governorate cadastral surveying Offices and to each other is depicted in Figure (App 2-2).

The size and configuration of the regional staff may vary slightly from region to region to accommodate the size of the region, the level of land conveyance and appraisal activity

within the region and the status of completion of the agricultural and urban land registration program.

Management and Functions: The head of each staff element reports directly to the head of the cadastral surveying Region and is responsible to him for completed staff work in support of the region's mission.

The functional responsibilities of each staff element within the region are:

Production Planning and Control: This department directs and coordinates the preparation of the region's annual Production Plan and follows up to insure that the plan is properly and fully implemented.

It tracks and evaluates the performance of each governorate office within the region vis—à—vis the goals established in the annual Production Plan,

It prepares performance and progress reports for the regional director and recommends actions to be taken in cases where his intervention is needed to solve problems causing production or service shortfalls.

It reviews for accuracy and completeness all cost estimates and proposals prepared within the region and requiring the signature of either the regional or sector head or the chairman.

It directs and coordinates the preparation of the region's annual Program Budget and represents the region at budget discussions within the sector related to that budget.

It works closely with the Production Planning and Control Branches within the governorate and district offices in support of their program planning and budgeting activities.

It prepares specifications and standards for the delivery of cadastral surveying and mapping, land and building appraisal and land expropriation services and forwards them to the sector's Program Planning, Management and Review Department for review and possible adoption by the Authority.

It monitors the region's implementation of the Authority's Total Quality Management Program.

Its director reports directly to the head of the sector and receives program planning guidance from the director of the sector's Program Planning, Management and Review Office.

He works closely with the Training Coordinator in each Governorate cadastral surveying Office to insure that training is conducted when new performance standards or product specifications are introduced or when the Authority's Total Quality Management program uncovers systematic performance problems traceable to a misunderstanding or misinterpretation of existing standards or specifications.

Legal Services: This branch provides the region with the legal expertise required to handle routine legal matters without having to consult the Authority's Legal Services Office.

It drafts and reviews proposed contracts and prepares and conducts personnel and management investigations as needed to support the work of the region.

It refers complex contracts and investigations beyond its capability to the sector's Legal Services Branch.

It provides the legal expertise needed to handle all legal matters related to land expropriation and appraisal projects to include the settlement and payment of claims within the region.

It does not get involved in appraisal and land expropriation cases as these cases are the responsibility of the region's Appraisal and Expropriation Department which has the legal expertise to handle them.

Its manager reports directly to the head of the region and receives technical legal guidance from the director of the Legal Services Office.

Financial and Administrative Services: This branch provides the personnel, financial, and administrative expertise and support needed to effectively manage the region.

Its manager reports directly to the head of the region and receives financial and administrative policy guidance from the manager of the sector's Financial and Administrative Services Branch.

This branch consists of three sections.

Administrative Services: This section provides administrative services to the regional head and his staff. Its supervisor reports directly to the branch manager.

Among the services that it provides are:

- Maintenance of calendars and suspense (follow up) files.
 - Preparation and archiving of minutes, correspondence and reports.
 - Maintenance of copies of all policies and regulations needed to conduct business.
- Maintenance of current the personnel records for regional employees to include copies of each employee's annual performance evaluation report.

Financial Services: This section provides financial services to the regional head and his staff. Its supervisor reports directly to the branch manager.

Among the services that it provides are:

- Review and approval of time sheets and payrolls prepared by the governorate and district offices and the regional staff and their submission to the Financial and Administrative Services Division for payment.
- Review and approval of per diem and incentive statements prepared by the governorate and district offices and the regional staff and their submission to the Financial and Administrative Services Division for payment.
- Review of purchase orders and invoices submitted by the governorate and district offices and the regional staff and their submission to the sector's Financial and Administrative Services Branch for approval and submission to the Financial and Administrative Services Division for payment.
- Operation of the Budget Monitoring System.
- Analysis of regional operating costs.

- Preparation and maintenance of financial records and reports for the region.
 - Oversight of governorate storerooms and periodic checks of the records and reports required to account for the receipt, issuance and disposal of equipment and expendable supplies.

Maintenance Services: This section provides maintenance services to the regional head and his staff. Its supervisor reports directly to the branch manager.

Among the services that it provides are:

- Preparation of the region's maintenance management program and oversight of its implementation by the governorate offices.
- Contracting for and supervision of the maintenance of office equipment and vehicles assigned to the regional headquarters.
- Contracting for and supervision of the cleaning and maintenance of regional facilities.

Training: This branch is responsible for planning, organizing and coordinating the training of all regional employees.

Its manager reports directly to the head of the region and serves as the region's Training Coordinator.

In this capacity, he receives technical training guidance from the director of the Training Program Development Office.

He prepares the region's annual Training Plan and Budget and represents the region in budget discussions within the sector related to the Training Budget.

The branch is responsible for staffing, equipping, maintaining and operating the region's training center.

It schedules training for the region's personnel and maintains their individual training records.

It follows up with the governorate Training Coordinators to insure that the region's Training Plan is fully implemented.

It monitors the training of regional employees and evaluates the value of their training to the region and the Authority upon its completion.

Together with the governorate Training Coordinators, the regional Training Coordinator conducts and maintains current the region's training needs assessments.

He conveys the results of the region's training needs assessment to the Training Development Office with recommendations for the development of new training programs.

He works closely with the director of the region's Program Planning, Management and Review Department to insure that all training programs support the region's production programs.

System Support: This branch is responsible for planning, installing, maintaining and supporting all computer systems, networks and software within the region and directly related to the accomplishment of the region's mission.

It is not responsible for equipment, software or networks that are part of the Authority's management information system but used by the region.

It prepares the system support section of the region's annual Production and Training Plans.

It works closely with the region's Training Branch to insure that the region's computer training needs are understood and properly funded.

Its manager reports directly to the head of the region.

Contract Services Sales Branch: This branch is a line activity within the Regional cadastral surveying Office.

It is a new organizational element proposed by the strategic planning team to increase the sale of surveying, mapping, cadastral, appraisal and land expropriation services to government agencies within the region.

The relationship of this department to the regional and governorate offices and the regional staff is depicted in Figure (App. 2-2).

Management and Functions: The manager of the Contract Services Sales Branch reports directly to the head of the region and is responsible for the following tasks.

- Contacting and familiarizing potential government users within the region with the Authority's ability to provide them with surveying, mapping, cadastral, appraisal and land expropriation services.
- Determining the need of government agencies within the region for the Authority's services.
- Coordinating the preparation of proposals to government agencies within the region for the delivery of needed services.
- Assisting with the negotiation of agreements with government agencies located within the region for the delivery of the Authority's services.
- Acting as the point of contact between the regional office and any government agency within the region to which service is being provided.

He accomplishes these tasks through a staff of technical sales representatives based in the regional and governorate cadastral surveying offices and having experience in one or more of the following areas:

- Control Surveys and Topographic Mapping;
- Geographic Information Systems;
- Cadastral Surveying and Mapping; or
- Land and Building Appraisal; and

- An Administrative Services Support Section.

Accountability: As a manager, the head of the Contract Services Sales Branch directs the performance of his branch in accordance with the guidance given him by the head of the region.

He schedules, motivates and supervises the activities of the region's technical sales representatives who are based in the regional and governorate cadastral surveying offices.

He prepares the annual Sales Plan for the region and is responsible for meeting the objectives established in that plan.

He prepares periodic sales reports for the region and represents the region at internal sales and marketing meetings.

He assists the Marketing Department with the development of promotional material for the Authority's cadastral, appraisal and land expropriation service.

He represents the region at technical conferences held within his region and likely to be of interest to potential clients for his sector's services.

He works closely with the directors of the Governorate cadastral surveying Offices within the region and the region's Program Planning, Management and Review Department when preparing proposals to insure that the services proposed can be delivered for the price stated and in the time frame required.

He follows up proposals to insure that they are understood and to encourage an early decision regarding their acceptance.

He prepares and submits annual budgets (capital, program and current) for his branch in accordance with the instructions received from the region head, and he manages the funds allocated to his branch upon approval of the various budgets.

He is responsible for the training of the employees assigned to his branch and the maintenance of the facilities and equipment allocated to his branch.

The Regional Appraisal and Expropriation Department: This department is a line activity within the Regional cadastral surveying Office.

It is a new organizational element proposed by the strategic planning team to encourage the Authority to improve and expand its capabilities in these areas and to insure delivery of these services as close as possible to the users of these services.

The relationship of this department to the regional and governorate offices and the regional staff is depicted in Figure (App. 2-2).

The size and configuration of this department may vary slightly from region to region to accommodate the size of the region and the level of appraisal and land expropriation activity within the region.

Management and Functions: The director of the Appraisal and Expropriation Department reports directly to the head of the region and is responsible for the following tasks.

- Preparing and defending appraisals of government lands and buildings.
- Supervising and executing all phases of the land expropriation process to include the processing of awards and responding to claims against the government.
- Acting as the point of contact between the region and any government agency to which these services are being provided.

He accomplishes these tasks through an organization consisting of the following units:

- Appraisal Services Branch.
- Land Expropriation Services Branch.
- Administrative Support Section.

Accountability: As a General Director, the head of the Regional Appraisal and Land Expropriation Department directs the performance of his department with minimum supervision from the head of the region.

He prepares an annual Production Plan for his department and is responsible meeting the objectives established in that plan.

He prepares and submits annual budgets (capital, program and current) for his department in accordance with the instructions received from the head of the region and manages the funds allocated to his department upon approval of the various budgets.

He is responsible for the cost effective, on time delivery of appraisal and land expropriation services for which the Authority has contracted with other government agencies within the region.

He provides technical oversight and guidance to the Appraisal and Land Expropriation Branches in the governorate offices within the region.

He is responsible for the training of the employees assigned to his department and the maintenance of the facilities and equipment allocated to his department.

He develops service delivery standards for building and appraisal and land expropriation services and submits them to the sector's Program Planning, Management and Review Department for review and possible adoption.

He directs the implementation of the Authority's Total Quality Management Program within his department.

This department consists of three sub units having the responsibilities indicated below:

Appraisal Services: This branch provides the technical and administrative expertise needed to appraise buildings and land for other government agencies.

Its manager reports directly to the head of the department.

Land Expropriation Services: This branch provides the legal, technical and administrative expertise needed to carry out land expropriation projects for the government.

Its manager reports directly to the head of the department and receives legal guidance in complex cases from the Legal Services Office.

Administrative Support Services: This Section provides the office administration skills, to include word processing and spreadsheets, needed to prepare the reports and legal documents that are a part of the building and land appraisal and land expropriation process.

Its supervisor reports directly to the head of the department.

The Governorate Cadastral surveying Office: The Governorate Cadastral surveying Office is a line activity within a Cadastral surveying Region.

Figure 5.3 depicts the new organizational structure recommended by the strategic planning team for the Governorate Cadastral surveying Office.

The size and configuration of each Governorate Cadastral surveying Office may vary slightly from governorate to governorate to accommodate the size of the governorate, the number and frequency of land transfer within the governorate, and the degree of completion of the agricultural and urban land registration program.

Management and Functions: The director of a Governorate Cadastral surveying Office reports directly to the head of a Regional Cadastral surveying Office and is responsible for the following tasks.

- Operating the governorate cadastral surveying office efficiently and cost effectively.
- Producing cadastral maps and related land records describing the ownership of the agricultural and urban lands within the governorate.
- Maintaining the national cadastre and its related maps and records within the governorate and in support of the Real Estate publicity Department, Ministry of Justice and the Real Estate Tax Department, Ministry of Finance.
- Delivering cadastral, land and building appraisal, and land expropriation services to government agencies within the governorate.
- Selling cadastral and appraisal services and control surveys to government agencies within the governorate.
- Serving on committees and panels as the Authority's expert on all matters pertaining to land registration, appraisal or expropriation within the governorate.

He accomplishes these tasks through an organization consisting of:

- Cadastral Records Maintenance Branch;
- District Office Coordination Branch;
- Appraisal and Expropriation Branch;
- Agricultural Lands Department;
- Urban Lands Department;

and three staff elements:

- Production Planning and Control Branch;
- Financial and Administrative Services Branch; and
- Legal Services Section.

As host, he provides facilities and maintenance services for the following tenant activities:

- Technical sales representatives reporting to the Regional Cadastral surveying Office; and
- A Map Sales Outlet staffed and managed by the Marketing, Sales and Distribution Division.

Accountability: As a General Director, the director of a Governorate Cadastral surveying Office directs the delivery of cadastral surveying services within the governorate with minimum guidance and supervision.

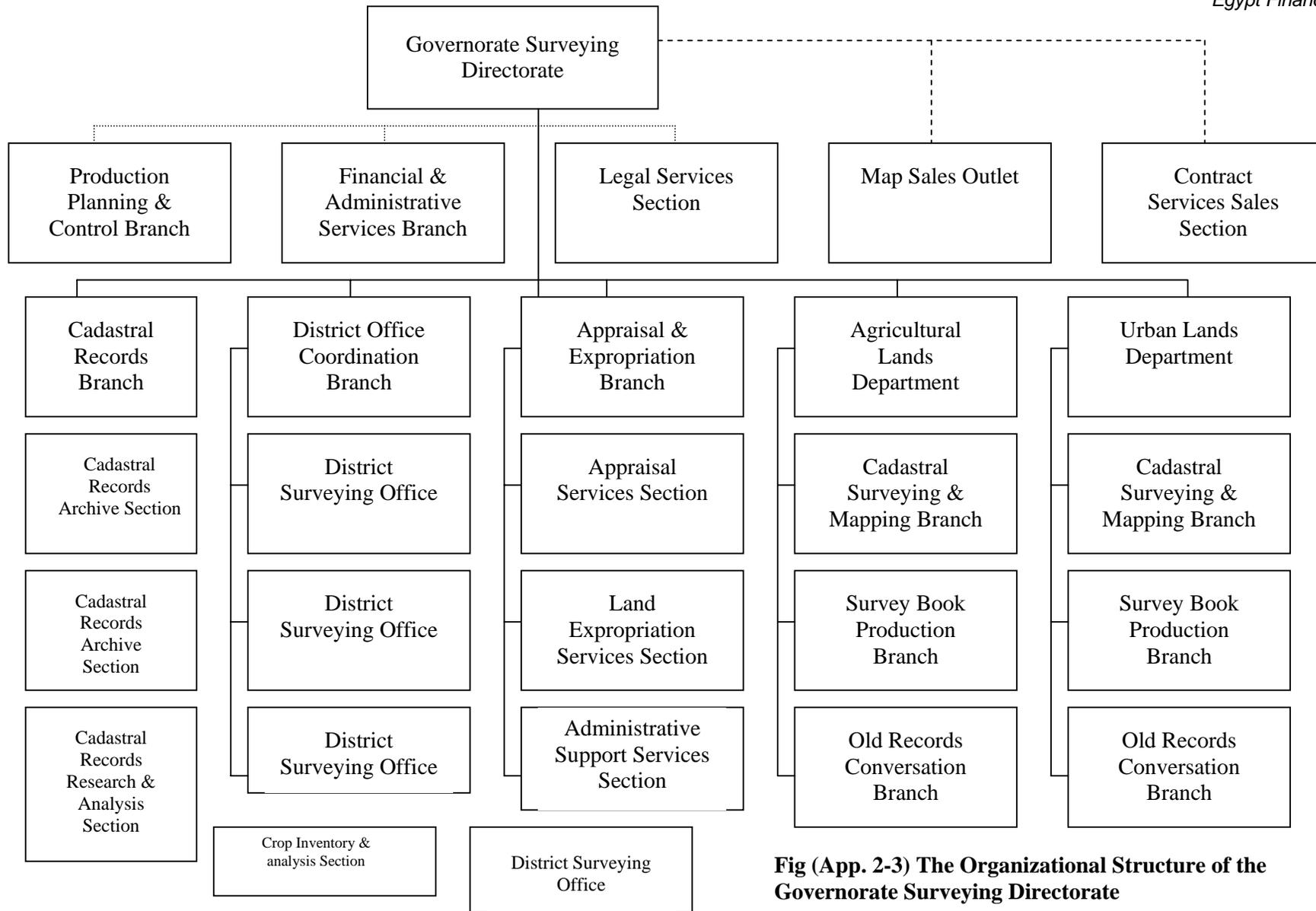
He is responsible for the cost effective operation of all cadastral surveying offices within his governorate and the training of the employees assigned to those offices.

He is responsible for preparing an annual Business Plan for the cadastral surveying offices in his governorate and meeting the objectives established in that plan.

He prepares and submits annual budgets (capital, program and Current) for his governorate in accordance with the guidelines received from the region's Financial and Administrative Services Branch, and he manages the funds allocated to the governorate upon approval of the various budgets.

He directs the implementation of the Authority's Total Quality Management Program within his governorate.

He is responsible for the maintenance of the facilities and equipment allocated to him.



The Map Sales Outlet and The Contract Services Sales Section are tenant activities housed at the Governorate Office

The number of District Cadastral surveying Offices varies per Governorate

Fig (App. 2-3) The Organizational Structure of the Governorate Surveying Directorate

The Cadastral Records Branch: This branch is a line activity within the Governorate Cadastral surveying Office.

It is a new organizational element proposed by the strategic planning team to improve the maintenance and storage of cadastral records through the use of modern technology and to provide an activity capable of using geographic information systems (GIS) technology for the analysis and exploitation of digital cadastral records and the maintenance of a digital crop and soil inventory system.

The formation of this branch should be part of an overall governorate office modernization program.

The relationship of this branch to the other units within the Governorate Cadastral surveying Office is depicted in Figure (App. 2-3).

The size and configuration of this branch may vary slightly from governorate to governorate to accommodate the size of the governorate, the number and frequency of land transfers, and the degree of completion of the agricultural and urban land registration programs within the governorate.

Management and Functions: The manager of the Cadastral Records Branch reports directly to the director of the Governorate Cadastral surveying Office and is responsible for the following tasks.

- Archiving and preserving the cadastral records of the governorate.
- Checking the work of the district offices prior to posting changes to archived cadastral records.
- Distributing update information for the cadastral records held by the local offices of the Real Estate publicity Department, Ministry of Justice and the Real Estate Tax Department, Ministry of Finance.
- Researching archived cadastral records in response to inquires from government agencies, other activities within the Authority and the general public.
- Duplicating and authenticating copies of cadastral records.
- Operating and maintaining the governorates cadastral surveying system.
- Operating and maintaining the governorates automated crop and soil inventory.

He accomplishes these tasks through an organization consisting of the following units:

- Cadastral Records Archive Section;
- Cadastral Records Maintenance Section;
- Cadastral Records Research and Analysis Section; and

- Crop Inventory and Analysis Section.

Accountability: As a manager, the head of the Cadastral Records Branch directs the performance of his branch in accordance with guidance given him by the director of the governorate office.

He prepares an annual Production Plan for his branch and is responsible meeting the objectives established in that plan.

He prepares and submits annual budgets (capital, program and current) for his branch in accordance with the instructions received from the head of the region and manages the funds allocated to his branch upon approval of the various budgets.

He is responsible for the cost effective, on time retrieval of records and other cadastral information in support of contracts that the Authority has signed with other government agencies in the governorate.

He is responsible for the training of the employees assigned to his branch and the maintenance of the facilities and equipment allocated to his branch.

He develops service delivery standards for his branch and submits them to the governorates Production Planning and Control Branch for review and forwarding to the region's Production Planning and Control Department for review and possible adoption by the Authority.

He directs the implementation of the Authority's Total Quality Management Program within his branch.

This branch consists of four sections having the following functional responsibilities:

Cadastral Records Archive: This section archives, safeguards and preserves the permanent and official copy of the cadastral records for the governorate as well as the original survey data used to prepare the parcel descriptions appearing into records.

It maintains a log or database indicating the location, condition and last update of each cadastral map and parcel record.

It retrieves records upon request, duplicates them, and provides certified copies of those records to authorized persons or organizations.

It repairs cadastral maps and records that may be damaged from age or from extensive or careless use.

Its supervisor reports directly to the manager of the branch.

Cadastral Records Maintenance: This section maintains the governorates cadastral database by posting changes to that database using the periodic digital updates provided by the District Cadastral surveying Offices.

It maintains the existing paper maps and records until such time as they are automated as part of the Old Cadastral Records Conversion Program by posting changes to those records using traditional drafting techniques and data provided by the District Cadastral surveying Offices.

Its supervisor reports directly to the manager of the branch.

Cadastral Records Research & Analysis: This section conducts research in support of projects requiring information describing land ownership or land registration, such as land expropriation, reclamation or development projects.

It reports the results of its research on maps, charts and graphs, and in written documents.

It duplicates data in the governorates cadastral database and provides copies of those data to government agencies and authorized private parties having a requirement for those data.

It will operate the governorates cadastral surveying system, when it becomes available, and use that system to prepare standard and customized reports for government agencies and authorized private parties.

Its supervisor reports directly to the manager of the branch.

Crop Inventory & Analysis: This section conducts an annual inventory of agricultural land use throughout the governorate for the purpose of maintaining the Authority's digital Crop and Soil Inventory System. This system contains detail led information on cropping patterns, and soil salinity and water logging as well as canal and drain centerlines and covers the entire governorate.

It uses that system to prepare maps and standard and customized reports for government agencies and authorized private parties from the crop and soil database using the techniques of spatial analysis.

It duplicates data in the governorates crop and soil inventory database and provides copies of those data to government agencies and authorized private parties requesting said data.

Its supervisor reports directly to the manager of the branch.

The District Office Coordination Branch: This branch is a line activity within the Governorate Cadastral surveying Office.

The relationship of this branch to the other units within the Governorate Cadastral surveying Office is depicted in Figure (App. 2-3). The formation of this branch should be part of an overall governorate office modernization program.

The size and configuration of this branch may vary slightly from governorate to governorate to accommodate the size of the governorate, the number and frequency of land transfers within the governorate, and the degree of completion of the agricultural and urban land registration programs.

Management and Functions: The manager of the District Office Coordination Branch reports directly to the director of the Governorate Land surveying Office and is responsible for the following tasks.

- Supervising and coordinating the work of the District Cadastral surveying Offices.
- Recommending work priorities and resource allocations for the district offices to the director of the Governorate Cadastral surveying Office.

- Coordinating the program planning, budgeting and training activities in the district offices.

He accomplishes these tasks using the personnel of the District Offices. (Generally, one per district.)

Accountability: As a manager, the head of the District Office Coordination Branch directs the performance of his branch in accordance with guidance given him by the director of the governorate office.

It makes recommendations to the director of the governorate office on such topics as work priorities and resource allocation.

He coordinates the preparation of the annual Production Plan for the district offices and is responsible meeting the objectives established in that plan.

He prepares and submits annual budgets (capital, program and Current) for the district offices in accordance with the instructions received from the head of the region and manages the funds allocated to the district offices upon approval of the various budgets.

He coordinates the activities of the district office training coordinators with the Training Section of the Governorate Cadastral surveying Office.

He oversees the training of the employees assigned to the district offices and ensures that the governorate's annual Training Plan provides for the training of the personnel in those offices.

He develops service delivery standards for the district offices and submits them to the governorate's Production Planning and Control Branch for review and forwarding to the region's Production Planning and Control Department for review and possible adoption by the Authority.

He uses the Budget Monitoring System to analyze the operating cost of each district office.

He oversees the implementation of the Authority's Total Quality Management Program within the district offices.

The District Cadastral surveying Office: The District Cadastral surveying Office is a line activity within the Governorate Cadastral surveying Office.

The relationship of the District Cadastral surveying Office to the other units within the Governorate Cadastral surveying Office is shown in Figure (App. 2-3).

Figure 5.4 depicts the new organizational structure recommended by the strategic planning team for the District Cadastral surveying Office.

Each district office should be reorganized as part of an overall governorate office modernization program. The implementation of this program should parallel the implementation of the National Agricultural Cadastre Plan.

The size and configuration of the district office will vary from district to district to accommodate the size of the district, the number and frequency of land transfers within the district and the degree of completion of the agricultural and urban land registration programs.

Management and Functions: The manager of a District Cadastral surveying Office reports directly to the manager of the District Office Coordination Branch in the Governorate Cadastral surveying Office. He is responsible for the following tasks.

- Operating the district cadastral surveying office efficiently and cost effectively.
- Maintaining the cadastral maps and records of the district in support of the Real Estate publicity Department, Ministry of Justice and the Real Estate Tax Department, Ministry of Finance.
- Providing periodic updates of the cadastral maps and records of the district to the governorates Cadastral Records Branch for archiving and inclusion in the cadastral records database.
- Delivering general purpose surveying services to government agencies within the district.

He accomplishes these tasks through an organization consisting of:

- Agricultural Lands Branch;
- Urban Lands Branch;
- Field Surveys Branch;
- Data Reduction Branch;
- Customer Services Section;

and two staff elements:

- Production Planning and Control Section; and
- Administrative Services Section.

Accountability: As a manager, the head of the District Cadastral surveying Office directs the performance of his office in accordance with guidance given him by the director of the Governorates District Office Coordination Branch.

He is responsible for the cost effective operation of the district office, and the on-time delivery of services to the government agencies and private individuals and organization that require the services of his office.

He is responsible for the training of the employees assigned to his office and the maintenance of the facilities and equipment allocated to him.

He directs the implementation of the Authority's Total Quality Management Program within his office.

He maintains close contact with the local land registration and real estate tax offices to ensure that their copies of the cadastral records are being kept up to date.

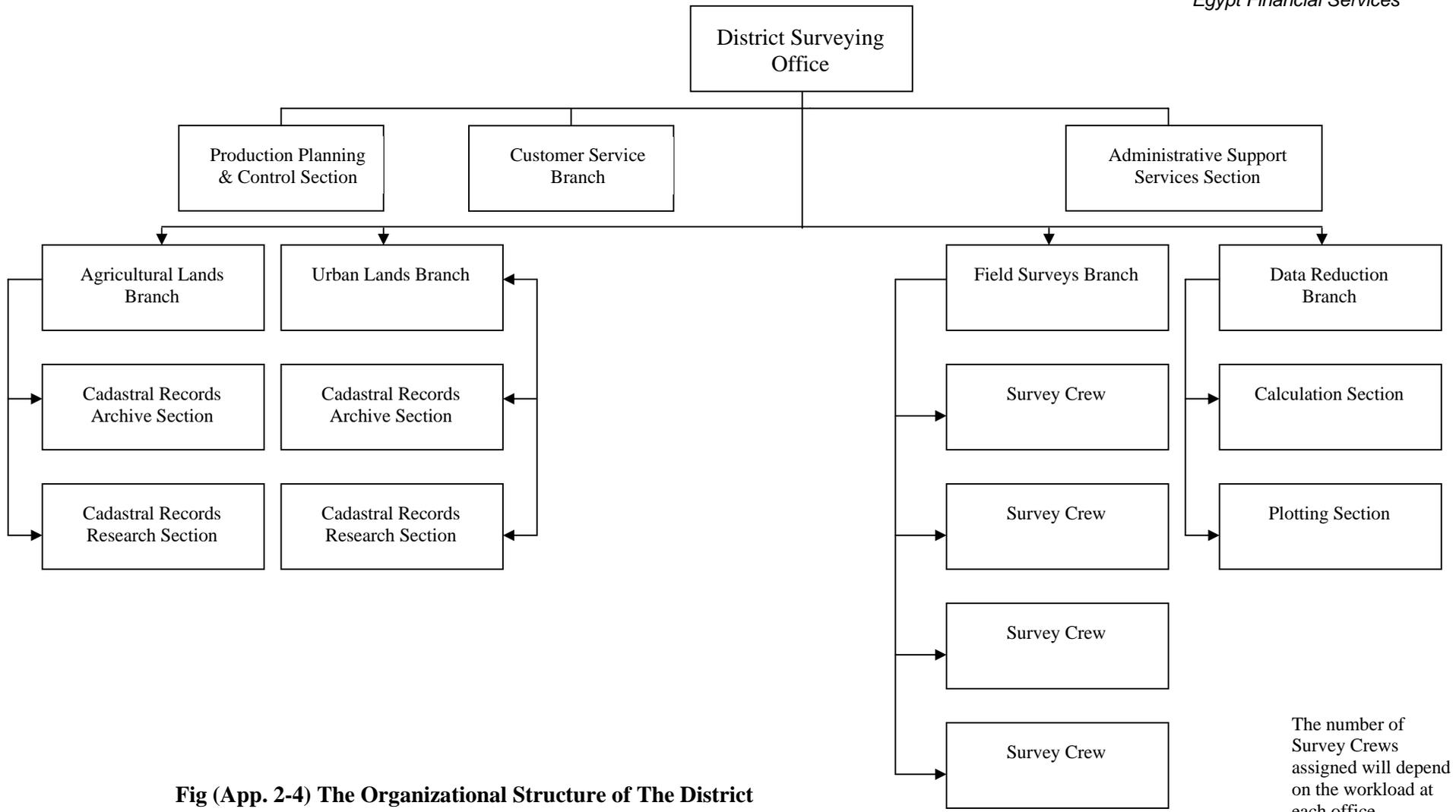


Fig (App. 2-4) The Organizational Structure of The District Surveying Office

The number of Survey Crews assigned will depend on the workload at each office

These branches have the following functional responsibilities:

Agricultural Lands: This branch maintains the current working copy of the district's agricultural cadastre and responds to inquiries concerning those records. It has two sections.

Cadastral Records Archive Section: This section maintains the current working copy of the district's agricultural cadastre.

It maintains a log or database indicating the location, condition, and last update of each cadastral map and parcel record covering the agricultural lands within the district.

It retrieves records upon request, duplicates them, and provides certified copies of those records to authorized persons or organizations.

It repairs cadastral maps and records that may have been damaged by age or from extensive or careless use.

Its supervisor reports directly to the manager of the branch.

Cadastral Records Research Section: This section responds to inquiries concerning land ownership and registration within the district's agricultural lands.

It conducts research in support of projects requiring information describing land ownership or land registration such as land expropriation, reclamation or development projects.

It reports the results of its research in the form of maps, charts, graphs and written documents to those external agencies or internal activities requesting that information.

Its supervisor reports directly to the manager of the branch.

Urban Lands: This branch maintains the current working copy of the urban cadastre within the district and responds to inquiries concerning those records. It has two sections.

Cadastral Records Archive Section: This section maintains the current working copy of the district's urban cadastre.

It maintains a log or database indicating the location, condition, and last update of each cadastral map and parcel record covering the urban lands within the district.

It retrieves records upon request, duplicates them, and provides certified copies of those records to authorized persons or organizations.

It repairs cadastral maps and records that may have been damaged by age or from extensive or careless use.

Its supervisor reports directly to the manager of the branch.

Cadastral Records Research Section: This section responds to inquiries concerning land ownership and registration within the district's urban lands.

It conducts research in support of projects requiring information describing land ownership or land registration such as land expropriation, reclamation or development projects.

It reports the results of its research in the form of maps, charts, graphs and written documents to those external agencies or internal activities requesting that information.

Its supervisor reports directly to the manager of the branch.

Field Surveys: This branch provides field surveys for cadastral and other purposes to authorized users of those services.

It organizes teams and manages the land survey crews assigned to the district office.

It plans and supervises the work of the field crews and assigns individual crews to specific projects in response to work orders received from the Customer Service Branch.

It conducts cadastral surveys in support of the land registration system (Siguel El—Aince) to include surveys for land subdivision, expropriation, reclamation or development.

It conducts individual property surveys to support governments claims of encroachment on government land and in support of routine land conveyance.

It conducts boundary surveys to support the establishment of new administrative or political boundaries.

It conducts right-of-way surveys to support the setting of right-of-way in anticipation of new government construction projects or to restore lost or destroyed boundary monuments for old government projects.

Its supervisor reports directly to the manager of the branch.

Data Reduction: This branch processes the field notes and survey data of the Field Surveys Branch and uses those data to update the cadastral maps and records of the district. It uses the results of these calculations to update existing cadastral maps and to prepare survey plats of subdivided land or individual lots.

It performs survey calculations of all types.

It provides copies of cadastral map and land record updates to the Cadastral Records Branch in the Governorate Cadastral surveying Office for use in updating the governorates cadastral database.

Its supervisor reports directly to the manager of the branch.

Customer Service: This branch deals directly with the general public and those government agencies requiring information about land ownership and land registration within the district.

It operates the customer service counter or window in the district office and staffs the customer service telephone lines.

It logs requests for land surveys and land ownership information, prepares work orders to implement those requests, and routes work orders to the appropriate sections of the office for action.

It follows up on the accomplishment of work orders and forwards completed work to the organization or individual requesting the work.

Its supervisor reports directly to the manager of the branch.

Staff Activities of the District Cadastral surveying Office: Each District Land Information Office requires the following staff to carry out its mission.

- Production Planning and Control Section.
- Administrative Services Section.

The relationship of the staff elements of the District Cadastral surveying Office to the other units within the Office is shown in Figure (App. 2-4).

The size and configuration of the district office staff will vary from district to district to accommodate the size of the district, the number and frequency of land transfers within the district and the degree of completion of the agricultural and urban land registration programs.

Management and Functions: The Head of each staff element reports directly to the manager of the district office and is responsible to him for completed staff work in support of the region's mission.

The functional responsibilities of each staff element within the district office as follows:

Production Planning and Control: This section directs and coordinates the preparation of the district office's annual Production Plan and follows up to insure that the plan is properly and fully implemented.

It tracks and evaluates the performance of each branch and section within the district office vis-a-vis the goals established in the annual Production Plan.

It makes recommendations on such topics as work priorities and resource allocation.

It prepares performance and progress reports for the office manager and recommends actions to be taken in cases where his intervention is needed to solve problems causing production or service shortfalls.

It reviews for accuracy and completeness all cost estimates and proposals prepared within the office prior to sending them to the director of the governorate office for review and approval.

It oversees implementation of the Authority's Total Quality Management Program.

Its manager reports directly to the head of the District Cadastral surveying Office and receives program planning guidance from the director of the governorates Production Planning and Control Branch.

He works closely with the manager of the District Office Coordination Branch to insure that training is conducted when new performance standards or product specifications are introduced or when the Authority's Total Quality Management program uncovers systematic

performance problems traceable to a misunderstanding or misinterpretation of existing standards or specifications.

Administrative Support Services: This section provides the administrative support needed to effectively manage the district office.

Among the services that it provides are:

- Maintenance of calendars and suspense (follow Lip) files.
- Preparation and archiving of minutes, correspondence and reports.
- Maintenance of copies of all policies and regulations needed to conduct business.
- Preparation and submission of time sheets and payrolls for the district offices as directed by the governorates Financial and Administrative Branch.
- Preparation of financial records for the district office to include per diem and incentive statements. In this capacity, it works closely with the governorates Financial and Administrative Branch.
- Operation of the district storeroom.
- Preparation of the district's maintenance management program and oversight of its implementation.
- Supervision of the maintenance of office equipment and vehicles assigned to the district offices and tenant activities.
- Supervision of the cleaning and maintenance of district offices.

The Governorate Appraisal and Expropriation Branch: This branch is a line activity within the Governorate Cadastral surveying Office.

It is a new organizational element proposed by the strategic planning team to encourage the Authority to improve and expand its capabilities in these areas and to insure delivery of these services as close as possible to the users of these services.

The relationship of this branch to the other units within the Governorate Cadastral surveying Office is depicted in Figure (App. 2-3).

The size and configuration of this branch may vary slightly from governorate to governorate to accommodate the size of the governorate and the level of appraisal and land expropriation activity within the governorate.

Management and Functions: The manager of the Appraisal and Expropriation Branch reports directly to the director of the Governorate Cadastral surveying Office and is responsible for the following tasks.

- Preparing and defending appraisals of government lands and buildings.
- Supervising and executing all phases of the land expropriation process to include the processing of awards and responding to claims against the government.

- Acting as the point of contact between the governorate and any government agency to which these services are being provided.

He accomplishes these tasks through an organization consisting of the following units:

- Appraisal Services Section.
- Land Expropriation Services Section.
- Administrative Support Section.

Accountability: As a manager, the head of the Governorate Appraisal and Expropriation Branch directs the performance of his branch in accordance with guidance given to him by the director of the governorate office.

He prepares an annual Production Plan for his branch and is responsible meeting the objectives established in that plan.

He prepares and submits annual budgets (capital, program and current) for his branch in accordance with the instructions received from the head of the region and manages the funds allocated to his branch upon approval of the various budgets.

He is responsible for the cost effective, on time delivery of appraisal and land expropriation services for which the Authority has signed service contracts with other government agencies within the governorate.

He is responsible for the training of the employees assigned to his branch and the maintenance of the facilities and equipment allocated to his branch.

He develops service delivery standards for building and submits them to the governorate's Production Planning and Control Branch for review and forwarding to the region's Production Planning and Control Department for review and possible adoption by the Authority.

He directs the implementation of the Authority's Total Quality Management Program within his branch.

This branch consists of three sections having the functional indicated below:

Appraisal Services Section: This Section provides the technical and administrative expertise needed to appraise (value) buildings and land within the governorate.

Its supervisor reports directly to the manager of the branch.

Land Expropriation Services Section: This Section provides the legal, technical and administrative expertise needed to carry out land expropriation projects within the governorate.

Its supervisor reports directly to the manager of the branch and receives guidance from the region's Appraisal and Expropriation Department.

Administrative Support Services Section: This section provides the office administration skills to include word processing and spreadsheets needed to prepare the reports and legal documents that are a part of the building and land appraisal and land expropriation process.

Its supervisor reports directly to the manager of the branch.

Agricultural Lands Department: The Agricultural Lands Department is a line activity within the Governorate Cadastral surveying Office.

It is a new organizational unit proposed by the strategic planning team to speed the completion of the agricultural cadastre.

This proposed organizational change transfers the responsibility for the production of cadastral maps and the related ownership records needed to complete land registration from a highly centralized department in Cairo to the Governorate Cadastral surveying Office.

In the process it makes the director of the Governorate Cadastral surveying Office responsible for the production and maintenance of all cadastral maps and related ownership records in the governorate.

Figure (App. 2-3) depicts the relationship of this department to the other units within the Governorate Cadastral surveying Office.

Figure (App. 2-5) depicts the organizational structure recommended by the strategic planning team for this department.

The size and configuration of this department will vary from governorate to governorate depending on the proportion of unregistered agricultural lands to register agricultural lands.

Management and Functions: The director of the Agricultural Lands Department reports directly to the director of the Governorate Cadastral surveying Office. He is responsible for the following tasks.

- Planning and supervising the completion of the agricultural cadastre within the governorate as quickly as possible.
- Conducting all field surveys needed to complete the agricultural cadastre.
- Producing all cadastral maps needed to complete the agricultural cadastre.
- Producing all survey books (drafters) and ownership records needed to complete the registration of all agricultural lands in the governorate.
- Converting all previously existing cadastral maps and ownership records to digital format.
- Expediting review and approval of both new and converted cadastral maps and records by the local land registration office.
- Delivering hard and digital copies of approved maps and ownership records to the appropriate departments within the Authority and within the Ministries of Justice and Finance.

He accomplishes these tasks through an organization consisting of three line units:

- Cadastral Surveying and Mapping Branch;
- Ownership Records Production Branch;

- Land Records Conversion Branch;

and three staff elements:

- Production Planning and Control Section.
- Production Support Section.
- Financial and Administrative Services Section.

Accountability: As a director, the head of the Agricultural Lands Department directs the performance of his department in accordance with guidance given him by the director of the Governorate Cadastral surveying Office.

He is responsible for preparing an annual Production Plan for his department and meeting the objectives established in that plan.

He prepares and submits annual budgets (capital, program and current) for his department in accordance with the instructions received from the director of the governorate office and manages the funds allocated to his branch upon approval of the various budgets.

He is responsible for the cost effective, on time delivery of the all work scheduled for accomplishment in the annual Production Plan.

He is responsible for the training of the employees assigned to his department and the maintenance of the facilities and equipment allocated to his department.

The functional responsibilities of the line units within the Agricultural Lands Department are as follows:

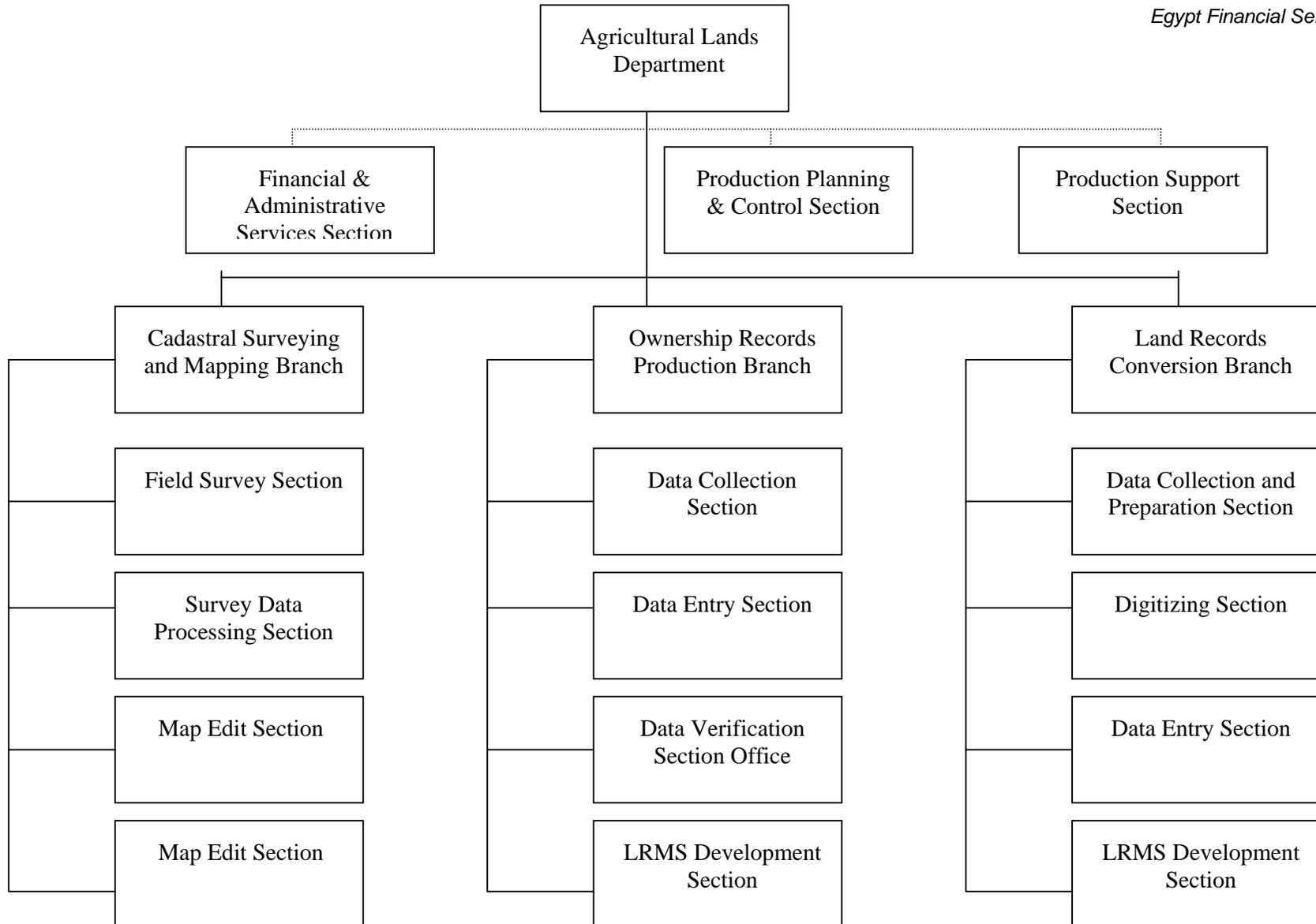


Fig (App. 2-5) The Organizational Structure of The Agricultural Land Department

Cadastral Surveying and Mapping: This branch is responsible for planning and carrying out all cadastral surveying and mapping work required to meet the cadastral map production schedule in the annual Production Plan.

It coordinates its work with the Geodetic Survey Department, Mapping Sector to insure the timely availability of the control points and project coordinates needed to support field survey operations.

It coordinates its work with the Base Map Production Department, Mapping Sector to insure the timely availability of the digital base maps and photo enlargements needed to support field survey operations.

It coordinates its work with the Ownership Records Production Branch to insure that the new cadastral surveys and maps are available when needed by the Ownership Records Production Branch.

It supports the work of the Land Records Conversion Branch by providing field surveys and field edits when needed.

Its manager reports directly to the directors of the Agricultural Lands Department.

The branch is organized into four sections. Each section is headed by a supervisor who reports directly to the director of the Cadastral Surveying and Mapping Branch.

The sections of the Cadastral Surveying and Mapping Branch are:

- The *Field Survey Section* which is responsible for all field survey work, to include reconnaissance, monumentation, control traverses, parcel demarcation and parcel surveys, required to produce a cadastral map.
- The *Field Data Processing Section* which is responsible extracting data from the total stations of the field crews and checking its validity.
- The *Map Edit Section* which is responsible field checking both preliminary and final cadastral maps in the field for accuracy and completeness and in the office for conformance to cadastral map specifications.
- The *Map Processing Section* which is responsible for producing preliminary and final cadastral maps from digital base maps, geodetic and project coordinates demarcation sketches and the lot location surveys accomplished by the Field Surveys Section.

Ownership Records Production: This branch is responsible for planning and carrying out all research, data collection, data coding, data entry and data verification required to meet the ownership records production schedule in the annual Production Plan.

It coordinates its work with the Cadastral Surveying and Mapping Branch to insure the timely availability of the cadastral maps and parcel areas needed for land registration.

It coordinates its work with the local land registration office to expedite review and approval of both new and converted cadastral maps and records.

Its manager reports directly to the director of the Agricultural Lands Department.

The branch is organized into four sections. Each section is headed by a supervisor who reports directly to the manager of the Ownership Records Production Branch.

The sections of the Ownership Records Production Branch are:

- The *Data Collection Section* which is responsible for all research, data collection and data coding activities required to produce the land ownership records required for the land registration process.
- The *data Entry Section* which is responsible for entering into the Land Records Management System all land ownership data required to produce the land ownership records required for the land registration process.
- The *Data Verification Section* which is responsible for verifying that all land ownership data in the Land Records Management System has been correctly entered and that the ownership records are properly matched to the cadastral maps, the parcel identification numbers and parcel areas calculated by the Map Processing Section.

The *Database Development Section* which is responsible for the design, development and modification of the Land Records Management System.

Land Records Conversion: This branch is responsible for planning and carrying out all research, data collection, data conversion and data verification required to meet the land records conversion schedule in the annual Production Plan.

It coordinates its work with the Geodetic Survey Department, Surveying and Mapping Sector to insure the timely availability of the control points and project coordinates needed for data conversion.

It coordinates its work with the Base Map Production Department, Surveying and Mapping Sector to insure the timely availability of the digital base maps and photo enlargements needed for data conversion.

It coordinates its work with the local land registration office to expedite review and approval of converted cadastral maps and ownership records.

Its manager reports directly to the director of the Agricultural Lands Department.

The branch is organized into four sections. Each section is headed by a supervisor who reports directly to the manager of the Land Records Conversion Branch.

The sections of the Land Records Conversion Branch are:

- The *Data Collection and Preparation Section* which is responsible for all research, data collection and data preparation activities required for the conversion of existing cadastral maps and ownership records into a digital format.
- The *Digitizing Section* which is responsible for all digitizing work required for the conversion of existing cadastral maps into a digital format.

- The *Data Entry Section* which is responsible for all data entry work required for the conversion of existing ownership records into a digital format.
- The *Data Verification Section* which is responsible for verifying that all converted land ownership data has been correctly entered and that the ownership records are properly matched to the converted cadastral maps, the parcel identification numbers and parcel areas.

The functional responsibilities of the staff elements within the Agricultural Lands Department are as follows:

Production Planning and Control: This section is responsible for planning and overseeing the work of the department.

It directs and coordinates the preparation of the department's annual Production Plan and Budget.

It tracks and evaluates the performance of each operating unit within the department vis—à—vis the goals established in the annual Production Plan.

It makes recommendations to the departmental director on such topics as work priorities and resource allocation.

It enforces approved production standards and technical specifications within the department.

It implements the Authority's Total Quality Management Program within the department.

It works closely with the Governorate Cadastral surveying Office's Training Section to insure that training is scheduled when new performance standards or product specifications are introduced or when the Authority's Total Quality Management program uncovers systematic performance problems traceable to a misunderstanding or misinterpretation of existing standards or specifications.

It prepares performance and progress reports for the department's director and recommends actions to be taken in cases where his involvement is needed to solve problems causing to production shortfalls.

Its manager reports directly to the director of the Agricultural Lands Department.

Production Support: This section is responsible for providing logistical and maintenance support to the department.

It plans, organizes and operates field survey camps.

It plans and oversees the department's maintenance management program.

It supervises the performance of vendors having contracts for the maintenance of the department's production equipment and vehicles.

Its supervisor reports directly to the director of the Agricultural Lands Department.

Financial and Administrative Services: This section provides the personnel, financial, and administrative support needed by the department to accomplish its mission.

It maintains the department director's calendar and suspense (follow up) file.

It prepares and archives departmental minutes, correspondence and reports.

It maintains copies of all policies and regulations needed by the department manager to conduct business.

It prepares and submits department's time sheets and payroll as directed by the governorate office's Financial and Administrative Branch.

It prepares and maintains financial records for the department to include per diem and incentive statements. In this capacity, it works closely with the governorate office's Financial and Administrative Branch.

It operates the departmental storeroom and maintains all records and reports required to account for the receipt, issuance and disposal of equipment and expendable supplies.

It maintains an archive containing the record copy of all source material used for each conversion projects completed by the department.

Its supervisor reports directly to the director of the Agricultural Lands Department.

Urban Lands Department: The Urban Lands Department is a line activity within the Governorate Cadastral surveying Office.

It is a new organizational unit proposed by the strategic planning team to speed the completion of the urban cadastre.

This proposed organizational change transfers the responsibility for the production of cadastral maps and the related ownership records needed to complete land registration from a highly centralized department in Cairo to the Governorate Cadastral surveying Office.

In the process it makes the director of the Governorate Cadastral surveying Office responsible for the production and maintenance of all cadastral maps and related ownership records in the governorate.

Figure (App. 2-3) depicts the relationship of this department to the other units within the Governorate Cadastral surveying Office.

Figure (App. 2-6) depicts the organizational structure recommended by the strategic planning team for this department.

The size and configuration of this department will vary from governorate to governorate depending on the proportion of unregistered urban lands to register urban lands.

Management and Functions: The director of the Urban Lands Department reports directly to the director of the Governorate Cadastral surveying Office. He is responsible for the following tasks.

- Planning and supervising the completion of the urban cadastre within the governorate as quickly as possible.

- Conducting all field surveys needed to complete the urban cadastre.
- Producing all cadastral maps needed to complete the urban cadastre.
- Producing all survey books (drafters) and ownership records needed to complete the registration of all urban lands in the governorate.
- Converting all previously existing cadastral maps and ownership records to digital format.
- Expediting review and approval of both new and converted cadastral maps and records by the local land registration office.
- Delivering hard and digital copies of approved maps and ownership records to the appropriate departments within the Authority and within the Ministries of Justice and Finance.

He accomplishes these tasks through an organization consisting of three line units:

- Cadastral Surveying and Mapping Branch;
- Ownership Records Production Branch;
- Land Records Conversion Branch;

and three staff elements:

- Production Planning and Control Section.
- Production Support Section.
- Financial and Administrative Services Section.

Accountability: As a director, the head of the Urban Lands Department directs the performance of his department in accordance with guidance given him by the director of the Governorate Cadastral surveying Office.

He is responsible for preparing an annual Production Plan for his department and meeting the objectives established in that plan.

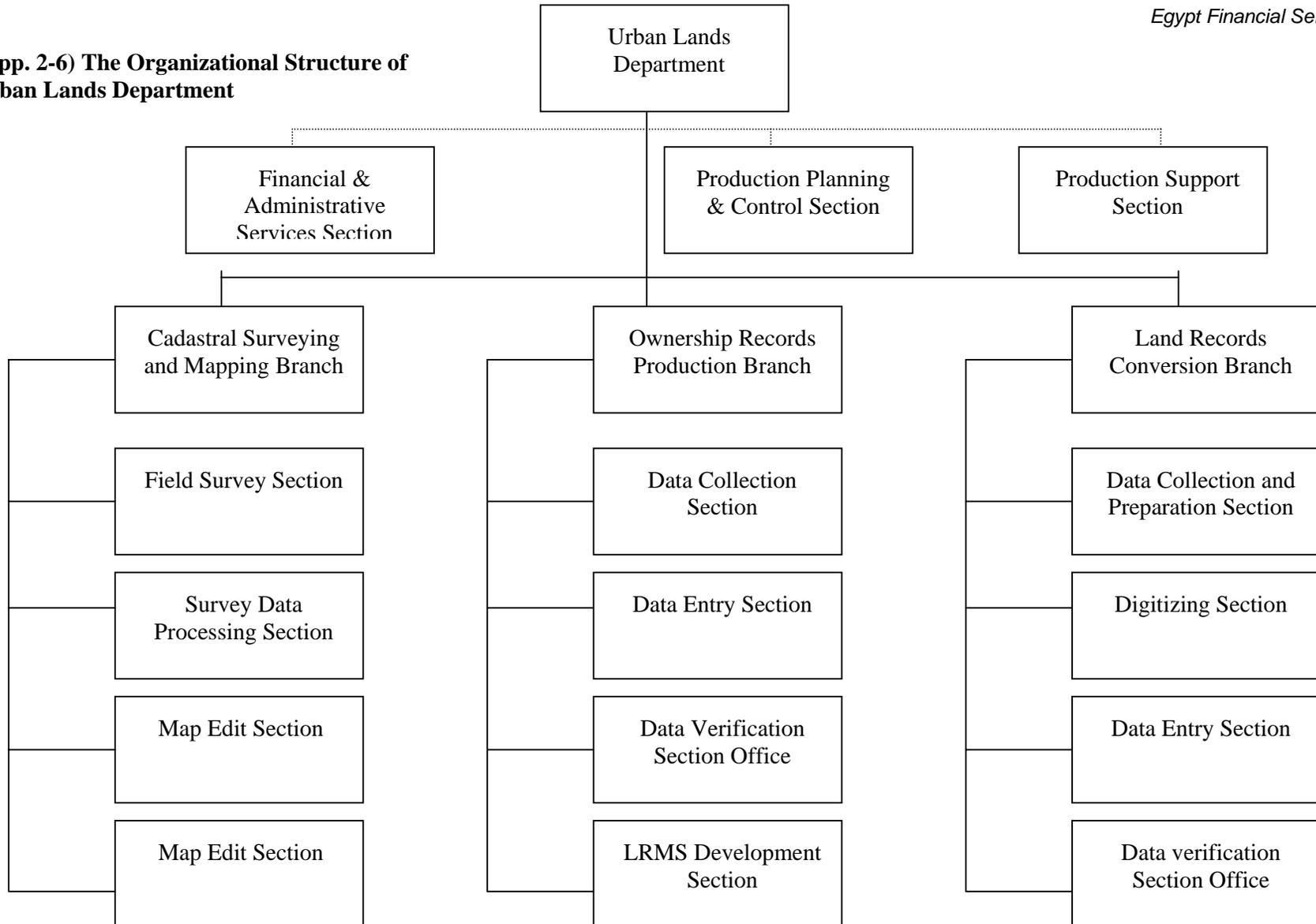
He prepares and submits annual budgets (capital, program and current) for his department in accordance with the instructions received from the director of the governorate office and manages the funds allocated to his branch upon approval of the various budgets.

He is responsible for the cost effective, on time delivery of the all work scheduled for accomplishment in the annual Production Plan.

He is responsible for the training of the employees assigned to his department and the maintenance of the facilities and equipment allocated to his department.

The functional responsibilities of the line units within the Urban Lands Department are as follows:

Fig (App. 2-6) The Organizational Structure of the Urban Lands Department



Cadastral Surveying and Mapping: This branch is responsible for planning and carrying out all cadastral surveying and mapping work required to meet the cadastral map production schedule in the annual Production Plan.

It coordinates its work with the Geodetic Survey Department, Surveying and Mapping Sector to insure the timely availability of the control points and project coordinates needed to support field survey operations.

It coordinates its work with the Base Map Production Department, Surveying and Mapping Sector to insure the timely availability of the digital base maps and photo enlargements needed to support field survey operations.

It coordinates its work with the Ownership Records Production Branch to insure that the new cadastral surveys and maps are available when needed by the Ownership Records Production Branch.

It supports the work of the Land Records Conversion Branch by providing field surveys and field edits when needed.

Its manager reports directly to the director of the Urban Lands Department.

The branch is organized into four sections. Each section is headed by a supervisor who reports directly to the director of the Cadastral Surveying and Mapping Branch.

The sections of the Cadastral Surveying and Mapping Branch are:

The *Field Survey Section* which is responsible for all field survey work, to include reconnaissance, monumentation, control traverses, parcel demarcation and parcel surveys, required to produce a cadastral map.

- The *Field Data Processing Section* which is responsible extracting data from the total stations of the field crews and checking its validity.
- The *Map Edit Section* which is responsible field checking both preliminary and final cadastral maps in the field for accuracy and completeness and in the office for conformance to cadastral map specifications.
- The *Map Processing Section* which is responsible for producing preliminary and final cadastral maps from digital base maps, geodetic and project coordinates demarcation sketches and the parcel location surveys accomplished by the Field Surveys Section.

Ownership Records Production: This branch is responsible for planning and carrying out all research, data collection, data coding, data entry and data verification required to meet the ownership records production schedule in the annual Production Plan.

It coordinates its work with the Cadastral Surveying and Mapping Branch to insure the timely availability of the cadastral maps and parcel areas needed for land registration.

It coordinates its work with the local land registration office to expedite review and approval of both new and converted cadastral maps and records.

Its manager reports directly to the director of the Urban Lands Department.

The branch is organized into four sections. Each section is headed by a supervisor who reports directly to the manager of the Ownership Records Production Branch.

The sections of the Ownership Records Production Branch are:

- The *Data Collection Section* which is responsible for all research, data collection and data coding activities required to produce the land ownership records required for the land registration process.
- The *Data Entry Section* which is responsible for entering into the Land Records Management System all land ownership data required to produce the land ownership records required for the land registration process.
- The *Data Verification Section* which is responsible for verifying that all land ownership data in the Land Records Management System has been correctly entered and that the ownership records are properly matched to the cadastral maps, the parcel identification numbers and parcel areas calculated by the Map Processing Section.
- The *Database Development Section* which is responsible for the design, development and modification of the Land Records Management System.

Land Records Conversion: This branch is responsible for planning and carrying out all research, data collection, data conversion and data verification required to meet the land records conversion schedule in the annual Production Plan.

It coordinates its work with the Geodetic Survey Department, Mapping Sector to insure the timely availability of the control points and project coordinates needed for data conversion.

It coordinates its work with the Base Map Production Department, Mapping Sector to insure the timely availability of the digital base maps and photo enlargements needed for data conversion.

It coordinates its work with the local land registration office to expedite review and approval of converted cadastral maps and ownership records.

Its manager reports directly to the director of the Urban Lands Department.

The branch is organized into four sections. Each section is headed by a supervisor who reports directly to the manager of the Land Records Conversion Branch.

The sections of the Land Records Conversion Branch are:

- The *Data Collection and Preparation Section* which is responsible for all research, data collection and data preparation activities required for the conversion of existing cadastral maps and ownership records into a digital format.
- The *Digitizing Section* which is responsible for all digitizing work required for the conversion of existing cadastral maps into a digital format.
- The *Data Entry Section* which is responsible for all data entry work required for the conversion of existing ownership records into a digital format.

- The *Data Verification Section* which is responsible for verifying that all converted land ownership data has been correctly entered and that the ownership records are properly matched to the converted cadastral maps, the parcel identification numbers and parcel areas.

The functional responsibilities of the staff elements within the Urban Lands Department are as follows:

Production Planning and Control: This section is responsible for planning and overseeing the work of the department.

It directs and coordinates the preparation of the department's annual Production Plan and Budget.

It tracks and evaluates the performance of each operating unit within the department vis—
à—vis the goals established in the annual Production Plan.

It makes recommendations to the departmental director on such topics as work priorities and resource allocation.

It enforces approved production standards and technical specifications within the department.

It implements the Authority's Total Quality Management Program within the department.

It works closely with the Governorate Cadastral surveying Office's Training Section to insure that training is scheduled when new performance standards or product specifications are introduced or when the Authority's Total Quality Management program uncovers systematic performance problems traceable to a misunderstanding or misinterpretation of existing standards or specifications.

It prepares performance and progress reports for the department's director and recommendations actions to be taken in cases where his involvement is needed to solve problems causing to production shortfalls.

Its manager reports directly to the director of the Urban Lands Department.

Production Support: This section is responsible for providing logistical and maintenance support to the department.

It plans, organizes and operates field survey camps.

It plans and oversees the department's maintenance management program.

It supervises the performance of vendors having contracts for the maintenance of the department's production equipment and vehicles.

Its supervisor reports directly to the director of the Urban Lands Department.

Financial and Administrative Services: This section provides the personnel, financial, and administrative support needed by the department to accomplish its mission.

It maintains the department director's calendar and suspense (follow up) file.

It prepares and archives department minutes, correspondence and reports.

It maintains copies of all policies and regulations needed by the department manager to conduct business.

It prepares and submits department's time sheets and payroll as directed by the governorate office's Financial and Administrative Branch.

It prepares and maintains financial records for the department to include per diem and incentive statements. In this capacity, it works closely with the governorate office's Financial and Administrative Branch.

It operates the departmental storeroom and maintains all records and reports required to account for the receipt, issuance and disposal of equipment and expendable supplies.

It maintains an archive containing the record copy of all source material used for each conversion projects completed by the department.

Its supervisor reports directly to the director of the Urban Lands Department.

Staff Activities of the Governorate Cadastral surveying Office: Each Governorate Cadastral surveying Office requires the following staff to carry out its mission.

- Production Planning and Control Branch.
- Financial and Administrative Services Branch.
- Legal Services Section.

The relationship of these staff elements to the governorate and district offices and to each other is depicted in Figure (App. 2-3).

The size and configuration of the staff activities may vary slightly from governorate to governorate to accommodate the size of the governorate, the frequency of land conveyance within the governorate, and the status of completion of the agricultural and urban land registration programs.

Management and Functions: The head of each staff element reports directly to the director of the governorate Cadastral surveying Office and is responsible to him for completed staff work in support of the governorates mission.

The functional responsibilities of each staff element within the governorate office are:

Production Planning and Control This branch directs and coordinates the preparation of the governorate 's annual Production Plan and follows up to insure that the plan is properly and fully implemented.

It tracks and evaluates the performance of each district office and governorate department, branch, and section vis—à—vis the goals established in the annual Production Plan.

It prepares performance and progress reports for the governorate director and recommends actions to be taken in cases where his intervention is needed to solve problems causing production or service shortfalls.

It operates and uses the Budget Monitoring System to analyze governorate operating costs.

It reviews for accuracy and completeness all cost estimates and proposals prepared within the governorate and requiring the signature of the regional or sector head or the chairman.

It directs and coordinates the preparation of the governorate's annual Program Budget and represents the governorate at budget discussions within the region related to that budget.

It works closely with the region's Production Planning and Control Department in support of its program planning and budgeting activities.

It prepares specifications and standards for the delivery of cadastral surveying and mapping, land and building appraisal and land expropriation services and forwards them to the region's Production Planning and Control Department for review and possible adoption by the Authority.

It monitors governorate's implementation of the Authority's Total Quality Management Program.

Its manager reports directly to the head of the Governorate Cadastral surveying Office and receives program planning guidance from the director of the region's Production Planning and Control Department.

He works closely with the governorate training coordinator to insure that training is conducted when new performance standards or product specifications are introduced or when the Authority's Total Quality Management program uncovers systematic performance problems traceable to a misunderstanding or misinterpretation of existing standards or specifications.

Financial and Administrative Services: This branch provides the training, personnel, financial, and administrative expertise and support needed to effectively manage the governorate and district offices.

Its manager reports directly to the director of the Governorate Cadastral surveying Office and receives financial and administrative policy guidance from the manager of the region's Financial and Administrative Services Branch.

This branch consists of four sections.

Administrative Services Section: This section provides administrative services to the Governorate Cadastral surveying Office. Its supervisor reports directly to the branch manager.

Among the services that it provides are:

- Maintenance of calendars and suspense (follow up) files.

- Preparation and archiving of minutes, correspondence and reports.
- Maintenance of copies of all policies and regulations needed to conduct business.
- Maintenance of current the personnel records for all governorate employees to include copies of each employee's annual performance evaluation report.

Financial Services Section: This section provides financial services to the Governorate and District Cadastral surveying Offices. Its supervisor reports directly to the branch manager.

Among the services that it provides are:

- Review of time sheets and payrolls prepared by the governorate and district offices and their submission to the region's Financial and Administrative Services Branch for approval and payment.
- Preparation of per diem and incentive statements for the governorate and district offices and their submission to the region's Financial and Administrative Services Branch for approval and payment.
- Preparation of purchase orders and invoices for the governorate and district offices and their submission to the region's Financial and Administrative Services Branch for approval and forwarding to the Financial and Administrative Services Division for payment.
- Preparation and maintenance of financial records and reports for the governorate.
- Operation of governorate and district storerooms.

Maintenance Services Section: This section provides maintenance services to the Governorate Cadastral surveying Office and tenant activities in the governorate office. Its Supervisor reports directly to the branch manager.

Among the services that it provides are:

- Preparation of the governorate's maintenance management program and oversight of its implementation.
- Contracting for and supervision of the maintenance of office equipment and vehicles' assigned to the governorate and district office and tenant activities.
- Contracting for and supervision of the cleaning and maintenance of governorate, office and tenant facilities.

Training Section: This section provides training planning and administration services to the Governorate and District Cadastral surveying Offices.

Its supervisor reports directly to the branch manager and serves as the governorate's Training Coordinator.

He works closely with the director of the Governorate Cadastral surveying Office to insure that training programs support the governorate's production and service delivery programs

He conducts periodic training needs assessments within the governorate and conveys the results of those assessments to the Training Development Office with recommendations for the development of new training programs.

He prepares of the governorate's annual Training Plan and follows up to insure that the plan is fully implemented.

He prepares of the governorate's annual Training Budget and represents the governorates in budget discussions within the region related to that budget.

He schedules training for the governorate and district office personnel and follows through to insure their attendance.

He arranges for training at governorate and district offices when there are sufficient trainees to make such programs economical.

Legal Services Section: This section provides the region with the legal expertise required to handle routine contracts and investigations without having to consult the Authority's Legal Services Office.

Tenant Activities: The Governorate Cadastral surveying Offices may serve as hosts for the following activities.

- Technical sales representatives reporting to the Regional Cadastral surveying Office; and
- A Map Sales Outlet staffed and managed by the Marketing, Sales and Distribution Division.

The relationship of these tenant to the governorate office is depicted in Figure (App. 2-3).

Determination of the need for such tenant activities will be made by the chairman in consultation with the Executive Management Committee and the head of the Land Information Region in which such activities are to be located.

The qualification and responsibilities of the technical sales representatives are described under the *Regional Cadastral surveying Office* the section of this Reorganization Plan.

The functions of the Map Sales Outlet are described in Section VI, *The Marketing, Sales and Distribution Division*, of this Reorganization Plan.

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