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SUMMARY OF EFS CONCEPTS & PROPOSALS FOR EGYPTIAN CADASTRAL SYSTEM

EGYPT FINANCIAL SERVICES PROJECT
TECHNICAL REPORT #40

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DATA PAGE

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Activity:	Activity 2.1.12 Detailed assessment and proposals for legal and regulatory change
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ACRONYMS

ABS	Asset-Backed Securities
AI	Appraisal Institute
AMCHAM	American Chamber of Commerce in Egypt
ALC	Arab Legal Consultants
AOJS II	Administration of Justice Support II
BDA	Bond Dealers Association
BOD	Board of Directors
CBE	Central Bank of Egypt
CIDA	Canadian International Development Agency
CAPMAS	Central Agency for Public Mobilization and Statistics
CASE	Cairo and Alexandria Stock Exchanges
CBE	Central Bank of Egypt
CMA	Capital Market Authority
COTS	Commercial Off-the-Shelf
COP	Chief of Party
CRA	Commercial Registry Authority
CORS	Continually Operating Reference Stations
DCA	Development Credit Authority
DO	Egyptian Survey Authority District Office
DVP	Delivery Versus Payment
DTGS	Direct Transfer Gross Settlement System
EAA	Egyptian Appraisers Association
EALB	Egyptian Arab Land Bank
EAR	Egyptian Association of Realtors
EAREA	Egyptian Association of Real Estate Appraisers
EBA	Egyptian Bankers Association
EBI	Egyptian Banking Institute
EISA	Egyptian Insurance Supervisory Authority
ECIM	Egyptian Cadastral Information Management (Finnish-funded project)
ECMA	Egyptian Capital Market Association
EDO	Egyptian Survey Authority District Office
EFS	Egypt Financial Services
ELF	Egyptian Finance Liquidity Facility
EHFC	Egyptian Housing Finance Company
EIMA	Egyptian Investment Management Association
EISA	Egyptian Insurance Supervisory Authority
EJA	Egyptian Judges Association
ELA	Egyptian Lawyers Association
EMA	Egyptian Mortgage Association
EMBA	Egyptian Mortgage Brokers Association
EPO	Egyptian Survey Authority Provincial Office
ESA	Egyptian Survey Authority
EREA	Egyptian Real Estate Association
ERESA	Egyptian Real Estate Surveyors Association
ESA	Egyptian Survey Authority
ESOP	Employment Stock Ownership Plan
ESRI	Environment Systems Research Institute
EU	European Union
FinBi	Finance and Banking Consultants International
FTC	Federal Trade Commission
FSVC	Financial Services Volunteer Corps

GAFI	General Authority for Free Zones and Investment
GIS	Geographic Information System
GOE	Government of Egypt
GSF	Guarantee and Subsidy for Real Estate Activities Fund
H&A	Hassouna and Abou Ali Law Firm
IFC	International Finance Coorporation
IFS	International Federation of Surveyors (Egypt Chapter)
IHF	International Housing Finance
ILS	International Land Systems, Inc.
IPF	Investor Protection Fund
KRA	Key Results Area
LADIS	Legislation and Development Information Systems
MBA	Mortgage Bankers Association
MCDR	Misr for Clearing, Depository, and Registry
MFA	Mortgage Finance Authority
MFC	Mortgage Finance Company
MLS	Multiple-listing Service
MSAD	Ministry of State for Administrative Development
MOF	Ministry of Finance
MOH	Ministry of Housing
MOJ	Ministry of Justice
MOI	Ministry of Investment
MOU	Memorandum of Understanding
NAR	National Association of Realtors
NASD	National Association of Securities Dealers
NCCIC	New Cairo Community Information Center
NCJS	National Center for Judicial Studies
NIB	National Investment Bank
NFI	New Financial Instrument
NUCA	New Urban Community Authority for Sixth of October
OST	Overseas Study Tour
PEA	Project Execution Agreement
PO	Provincial Office (of the Egyptian Survey Authority)
PIN	Parcel Identification Number
PMU	Project Management Unit
QPR	Quarterly Progress Report
QSIT	Quality Standards Information Technology
REPD	Real Estate Publicity Department
RETD	Real Estate Tax Department
RFP	Request for Proposal
RFQ	Request for Quotation
RO	Registry Office
SEC	Securities and Exchange Commission
SII	Securities and Investment Institute
ST	Short-term
TDL	Training Development Laboratory
UCD	Universal Cadastral Database
UNCITRAL	United Nations Commission on International Trade Law
USAID	United States Agency for International Development
WB	World Bank
YEBA	Young Egyptian Bankers Association
Z&K	Zarrouk, Khaled & Co.

1. EXECUTIVE SUMMARY

The purpose of this document is to provide a framework for ongoing EFS Task 2 discussions with ESA for improvement of the property registration system. It aims to provide a condensed summary of key concepts and proposals put forward by the Task 2 team over the last few months with respect to cadastral system and the role of ESA.

The report does not include all recommendations put by Task but focuses on several key issues that need to be resolved so that the Project can move forward in providing assistance to the Government of Egypt in improving urban property registration systems. This consolidated list of proposals will be distributed amongst EFS counterparts at ESA to ensure there is no confusion as to what is being recommended.

The document has been broken into two distinct sections, first registration under Sigueal El-Ainee and secondary transactions under Sigueal El-Ainee. Although separated in terms of timing, EFS needs to look at both systems in parallel as concepts and requirements are common to both and ultimately affect the direction of both. The next step after distribution of this document is continued dialogue with ESA but in a more focused manner, using this as a framework for moving these discussions forward.

2. FIRST REGISTRATION UNDER SIGUEAL EL-AINEE

2.1 Introduction

EFS recognizes that ESA has, and will continue to have, a major role in the introduction of title registration (Sigueal El Ainee). ESA's role has traditionally covered preparation of initial index maps and ownership lists (Survey Book – Form 1). Generally speaking these maps and lists have been compiled from maps and deeds registers that do not accurately reflect the on-the-ground situation, which has resulted in extremely low levels of property units and their real/current owners being identified. Results of studies carried out by the Egyptian Cadastral Information Management (ECIM) Project have shown this to be the case in sample villages.

EFS Task 2 has reviewed existing procedures, legislation, regulations and instructions of ESA and REPD in an effort to identify where the process of first registration could be streamlined and strengthened. While recognizing various deficiencies in the existing approach, the Project has endeavored to identify pragmatic approaches to improving the system in the short term, with a view also to longer term improvement through reform of legislation, etc. This requires some initiative from our Egyptian counterparts in terms of how the existing legislation, regulations and instructions could be interpreted and applied in the EFS supported 'model' office locations.

Task 2 registration and cadastral advisors, both legal and technical, have developed a proposed model for first registration that closely resembles the existing approach, which has several nuances to the existing system underpinning the proposed approach. These have been discussed counterparts from REPD and ESA on a number of previous occasions. A summary of the differences, as compiled by Rick Gaynor[1], are outlined below.

1. Expanded public awareness campaign to encourage increased public participation and understanding of Sigueal El Ainee.

2. Different level of detail on cadastral index maps for property registry layer in urban areas than was appropriate in rural areas.

3. More aggressive effort to identify current owner through field investigation. The determination of ownership would be based on an analysis of the facts of possession as well as all available supporting documents, including a broader range of documents than was accepted in rural areas. Supporting documents might include utility receipts, tax receipts, leases, rent receipts, ourfi contracts and powers of attorney. There would no necessarily be the need to publicize unregistered documents or submit settlement forms if ownership could be reliably determined from unregistered documents.

4. Increased reliance on public review of ownership information. Preliminary determinations of ownership based on field data would be subjected to longer and more rigorous public scrutiny to ensure accurate determinations of ownership.

5. Issuance of title certificates (Sahayfa Akariya) to all owners in the project area.

[1] Prepared as a briefing summary for REPD and ESA counterparts on differences between proposed Sigueal El-Ainee methodology in urban areas and methodology previously used in agricultural areas.

A diagram showing the overall flow of the proposed first registration, which has also been discussed with counterparts and undergone numerous revisions, is attached as Annex 1. The overall methodology and its underlying principles (e.g. flexibility in documentation supporting ownership claims) are still not finally agreed on, but EFS would ultimately like to also start identifying with our counterparts the key players in the process and the role that each plays. The outcome of these discussions would hopefully see a crucial role, or roles, being played by the private sector. Task 2 has tried to do this to a certain extent for activities associated with cadastral surveying and mapping, which are discussed in the next section.

2.2 Cadastral Surveying & Mapping for First Registration

As a mega-city of 15-16 million people Cairo presents a challenging environment for cadastral surveying and mapping, especially in the context of carrying out large scale systematic field programs to support the process of first registration. EFS Task 2 recently completed a housing typology assessment that highlighted the vast range of housing typologies spread across Cairo's urban fabric. This renders nonsensical the concept of a 'one size fits all' cadastral survey and mapping methodology. Prototype surveying activities to test various field methodologies performed by Task 2 again highlighted the need for flexibility in the approaches adopted in different areas of the city.

What is clear when it comes to systematic fieldworks is the fact that EFS and its Egyptian counterparts must be pragmatic and flexible in terms of methodologies adopted and the roles of key stakeholders. Priority should be given to getting as many properties into the registration system as possible through the minimum of acceptable survey and ownership data.

What is also clear is that vast amounts of relevant spatial data that could be used for cadastral purposes already exists in various government authorities and private sector companies. To date, there has not been a concerted effort to bring all of this data together and use it as the base for moving forward in compiling up-to-date cadastral index maps.

To assist the Government of Egypt in achieving its goals for first registration, EFS proposes several key concepts that could significantly speed up the process of first registration. These are outlined below:

2.2.1 Collect & Make Use of Existing Data

Although ESA is the agency designated for management of the cadastre to support property registration, it is far from being the only entity with data that is relevant to that task. EFS supports the role of ESA as the custodian of cadastral data, but it needs to be more open to new thinking or else risk becoming increasingly irrelevant.

Other GOE agencies such as the New Urban Communities Authority (NUCA) in the 6th of October have maps and other information that could be used for the property registration layer of the urban cadastre. It is agencies such as this that also need to work more closely with ESA in bringing together the various data sets so that a consolidated and complete cadastral index map can be produced.

2.2.2 More Flexibility with Regards to Cadastral Data

Linked to the aspect of using existing information is the concept of being less restrictive about minimum standards for cadastral data content and accuracy. For example, it is known that a private company possesses a map generated via digitizing IKONOS imagery to produce a 1:5000 scale map of all buildings in 6th October. It also possesses a list of all buildings, around 30,000, including numbers and street addresses.

Efforts should be made to procure, or obtain access to, as much spatial data as possible, even if not at the currently required scale/accuracy, and get as many properties into the property registration layer as possible. This is another area where EFS can also offer support to the GOE.

EFS recognizes that there will be many cases where 1:5000 data may not be appropriate for the urban environment but in areas such as 6th October it would provide an extremely valuable layer of data for the cadastral index map. If overlaid onto parcel index maps of 1:500 and 1:1000 scale, areas that need field verification or revision could be easily identified. As the registration and/or cadastre system continues operations more accurate data will be generated that could easily be used to update the cadastral fabric over time, but for the purposes of first registration flexibility in requirements is paramount.

2.2.3 Reduced Need for Apartment Plans

From a strict legal point of view apartment plans are not absolutely necessary for registration of a property, however such plans to contribute to the body of evidence that is used to unambiguously define a real property unit. EFS is proposing that in those cases where apartment plans do exist they be collected and referenced in the cadastral database. Such plans may take the form of diagrams contained in existing apartment unit mutation forms or engineering/architectural plans created by the developer, or obtained by the owners.

In those cases where apartment plans do not exist there would be no requirement for field teams to measure the extremities of individual apartments. This is not to say that this could not be done at a later date at the request of an owner or buyer, or possibly set down by a bank as a requirement for mortgage transactions. Again however, the aim should be to get as many properties into the property registry system as possible and build on the system over time.

It must be noted that removing the need for apartment plans will affect the format of the Sahayfa Akariya, which needs further discussion with REPD. EFS is proposing a Sahayfa Akariya that does not include a property unit diagram. The property unit diagram could become an optional document provided to applicants at additional cost within the registration transaction.

2.3 Proposed Cadastral Work Flow

EFS Task 2 has discussed recommendations for the cadastral data work flow with representatives from ESA on several occasions. It is presented in the diagram below. The process itself is not overly complex and it is built around the ideas of using as much existing information as possible and relying on field verification to identify areas where field work revisions or geo-referencing are required.

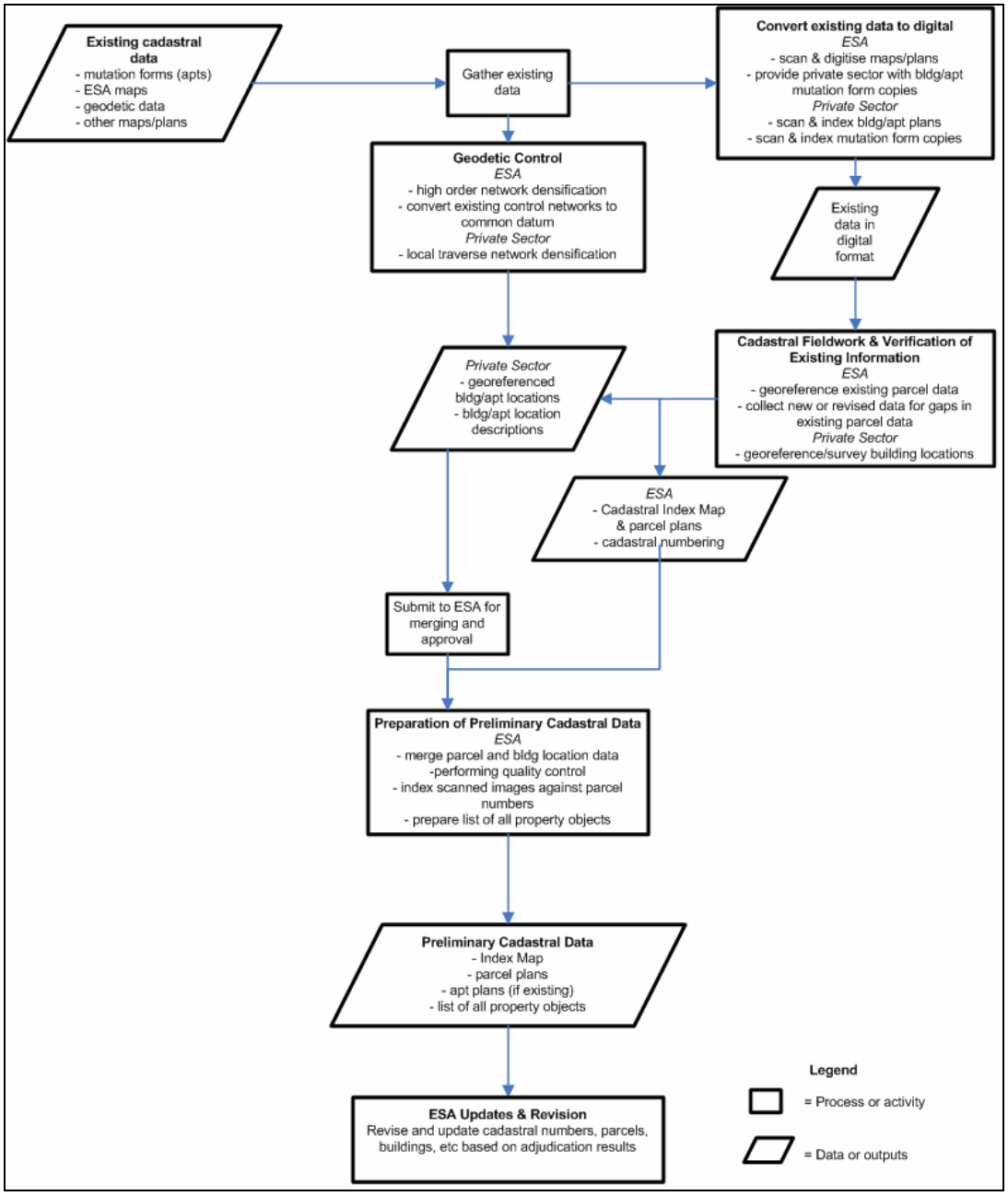

Figure 1: Proposed generic cadastral operation flow for first registration

2.4 Technical Specifications

If the cadastral work flow proposed by EFS is adopted a new set of technical instructions should be prepared by ESA. This is also an area where EFS is willing and able to provide technical assistance. The instructions should take the form of a manual that defines procedures, specifications and standards to be adopted for field and office operations connected with first registration activities. To reflect the concepts being proposed, the manual should be simple to understand and not overly restrictive on how these operations are performed.

2.5 Private Sector Involvement

Something significantly different to previous cadastral operations performed by ESA is the proposed introduction of private sector companies into the sphere of cadastral surveying and mapping.

At this point is pertinent to highlight that the concept of private sector involvement in areas traditionally carried out by ESA has been around for some time. In fact, ESA's own strategic plan from 1995[2] contains a guiding principle that clearly states, *"The development of a financially sound and technically competent commercial surveying and mapping industry is in the Authority's best interest"*.

Furthermore, one of the key strategies identified is to *"initially concentrate the Authority's efforts on the development of a contractor community capable of supporting the Authority's need to complete the urban cadastre"*.

Also outlined in ESA's strategic plane in relation to the Urban Land Registration Program a key strategy was to be *"Examine the feasibility of using local and international commercial surveying and mapping companies to complete parcel surveys, produce cadastral maps and conduct the research of existing ownership records required to carry out the Sigueal El-Ainee process"*.

The model operations proposed by EFS, present ESA with the chance to undertake an important first step in increasing the role of private sector in cadastral operations. The model put forward by EFS for consideration by ESA has private sector playing a only minor role through the collection of building location data, which includes scanning and indexing apartment plans, and building and apartment mutation forms (copies proposed at this stage subject to further discussions with ESA).

In terms of allowing private sector to scan and work with ESA material, a precedent has already been set through the program for map scanning and digitizing being coordinated through the Ministry of Communications and Information Technology.

It should be pointed out that ESA will be the end recipient of data generated by the private sector, and ESA would play a key role in monitoring and approving the quality of being performed. EFS would propose inviting tender submissions only from companies that have certification from ESA.

As the scope of updating the urban cadastre increases it is also possible that the role of the private sector could be increased to include preparation of parcel index maps and complete lists of real property units. This will depend largely on ESA's own level of comfort with such an idea, as well as demands on resources and reliability of private sector companies.

[2] ESA, 1995, The General Authority's Strategic Plan – A long-term framework for providing surveying, mapping and cadastral services in support of national development, p. 49 English version.

On several occasions, ESA has drawn on experience from countries in Europe to argue that the government survey agencies are responsible for creating cadastres linked with first registration. International trends actually show that the delivery of cadastral surveying and mapping services is increasingly occurring via the private sector. This is occurring through different models, but all are premised on increasing the role of private sector. Some alternatives are discussed later in this document under secondary transactions issues.

There are many current examples of countries in transition in Central and Eastern Europe and Asia where creation or updating of national cadastres is being underpinned by data collection performed by private sector.

EFS recognizes the large cadre of surveyors and other mapping resources that already exists within ESA, and the Project is not proposing to ignore those in this process. The Project is proposing that ESA take the first real steps towards supporting the role of private sector companies in cadastral works. EFS is able to support ESA with such endeavors by providing technical assistance covering qualifications and training, accreditation and licensing, development of standards and specifications, QA/QC capabilities, etc.

2.6 Equipment

During the early stages of Task 2 assessments of the existing situation a lack of adequate surveying equipment was recognized as a possible area that EFS assist in addressing. During these stages the level of existing cadastral data was not clear and it was anticipated that large scale field campaigns would need to be implemented with the assistance of EFS financing.

The Task 2 Cadastral Surveying and Mapping Specialist initially envisaged the ability to extensively use RTK GPS surveying techniques in certain urban setting to rapidly survey property units. Testing of this methodology was included into the prototype field work activities undertaken by Task 2.

During the period that this testing was ongoing a preliminary list of equipment recommended for procurement by the Project was prepared. It was initially based on the assumption that the RTK methodology would be possible to adopt on a wide scale. The initial list of equipment included provision for the establishment of four permanent GPS points, GPS rover receiver units, several total stations and hand held laser distance devices.

The prototype activity was taking longer than expected to complete but preliminary results from the field indicated that RTK was more time consuming and expensive than traditional total station and tape surveys. Quality of results also varied greatly so the number of proposed CORS points was reduced to three.

The final results of the prototype activity were submitted in October 2005. During this period it was also announced that EFS would work in 6th October, and a clearer picture of the coverage of existing information began to emerge.

The prototype results highlighted a limited role for RTK GPS but a need for GPS to support geodetic network densification. The extent of existing data also gave hope to a reduced need for extensive large scale field campaigns, with more of a focus on verification, updating and geo-referencing of such information. Finally, the addition of 6th October meant EFS would be working with an additional EPO, Giza, instead of just Cairo EPO. Unlike Cairo, the Giza EPO needs significant refurbishment and new equipment, which places further strain on the EFS budget.

In light of the issues above, the Task 2 Cadastral Surveying and Mapping Advisor revised the equipment list to remove the expensive CORS option. Recognizing the need for GPS remains, two GPS bundles consisting of a base and two rovers have been included on the list. This will allow static and kinematic surveys for geodetic control densification, data collection and geo-referencing. Additional total stations were included to take the total to six (6), and eight (8) handheld laser distance devices.

The equipment purchased would be used to support field data collection activities undertaken through EFS assistance by ESA and, where relevant, private sector contractors. It is proposed that the GPS and handheld laser distance devices would be assigned to the two ESA provincial offices in the areas where EFS will assist in the implementation of first registration activities. Primary use of the GPS will be for densification of the geodetic network and geo-referencing of existing cadastral data.

Total stations should be managed by Task 2 out of the EFS office. Total stations could be assigned to field teams carrying out field works in the model registration office districts. Task 2 should nominate a single point of contact for management of this equipment and ensuring its safe keeping within the EFS office.

It should be noted that all equipment procured would remain the property of the U.S. Government through USAID. At the end of the project the distribution will be subject to USAID approval. USAID may seek EFS recommendations on distribution of the equipment.

The Cadastral Surveying and Mapping Advisor still believes that ESA and the wider surveying and mapping community would benefits from CORS active points, but the budget and scale of EFS operations do not currently warrant the procurement of such equipment. EFS is willing to provide ESA with indicative pricing and specifications for the CORS infrastructure if it wishes to pursue alternative financing, perhaps from the World Bank.

2.7 First Registration IT Applications

EFS, where deemed appropriate and possible value added, is examining the possibility of introducing IT into the first registration process. The final form and role of IT applications in the first registration process has not yet been finalized. The Task 2 local team in coordination with ESA will identify initial concepts for automated first registration over December-January, and then work with an expat advisor toward the end of January 2006 to identify functional requirements, which will include feedback from counterparts. Some preliminary thoughts on IT within first registration are presented below.

2.7.1 Surveying & Mapping

It is expected that initial processing of field work results will be performed in AutoCAD, while revised cadastral index maps would be migrated to some form of GIS, which will include building parcel topology and linking with limited textual data generated through the field work process.

ESA has numerous packages of AutoCAD and ESRI based GIS software that could be used for the spatial data aspects of this component of the first registration process, so there would be no need for EFS to procure additional software for this purpose.

What will be important is the GIS platform chosen in this first step. The spatial data generated from the first registration process must ultimately be able to be migrated to the cadastral data management application adopted for integration within the secondary registration framework. It is therefore imperative that ESA and EFS understand the functional requirements of the system that will be used for secondary transactions, which is discussed further in the next section.

The textual data generated by the field teams will be the initial list of all real property units identified during the surveying and mapping process. The key information that will be required in database tables is the cadastral numbers assigned by ESA and the address and any other text describing the location of the property unit.

2.7.2 Adjudication Processes

The initial list of real property units generated by the field teams would serve as the basis on which list of owners could be generated and lists of units updated. An application that supports the filling and editing of data tables, as well as potentially the field scanning of documents supporting ownership claims is a starting point for the adjudication process.

Such an application should also have a reporting engine that enables the mass printing of ownerships lists for public notification, generating letters, Sahayfa Akariya, and other required reports. System security would restrict different users to only those functions assigned to them for the first registration process. Again, the system chosen would need to be able to have it's textual data and scanned images migrated to the databases of the system used for secondary registration transactions in the model registration offices.

The spatial and textual data would be linked through the cadastral number assigned and updated by ESA during the process. This requires that a robust cadastral numbering scheme is in place. EFS has already held discussions with ESA and provided recommendations on improvement of the numbering scheme used for property registration. ESA should make every effort to resolve the cadastral numbering issue before field operations commence.

3. SECONDARY TRANSACTIONS UNDER SIGUEAL EL-AINEE

3.1 General

In parallel with recommending improvements in the first registration process EFS has also been examining ways of streamlining and improving the system for secondary transactions under Sigueal El-Ainee.

With regards to the system of secondary transactions EFS has the benefit of having access to work carried out under the Egyptian Cadastral Information Management (ECIM) Project funded by the Finnish Government. The ECIM Project, during its efforts to automate existing procedures for some of the transactions carried out under Sigueal El-Ainee in pilot agricultural locations, identified a list of bottlenecks within the process and provided recommendations for improving the system.

EFS agrees with, and would like to build on, some of these recommendations which have been formally agreed to by ESA. The recommendations being put by EFS however are made in the context of an integrated registry and cadastre IT environment, not just ESA's domain being automated as is currently the case. That is to say, EFS will be providing assistance to the REPD for the automation of their business processes and procedures associated with secondary transactions. This is discussed in more detail below along with key concepts that EFS is keen to work closely with ESA on.

3.2 Up-Front Cadastral Services

EFS is proposing to move the performance of cadastral field work activities to be external to the legal registration transaction process itself. This is seen by EFS Task 2 as a key step in helping streamline registration transactions. This concept needs to be examined in concert with the notion of integrating the EDO function into the Model Registration Office, increasing the role of the EPO and private sector, and relevant IT applications.

As an example, under this proposed scheme cadastral data such as subdivision plans could be submitted by applicants at the very beginning of registration transactions. There would still be a requirement to go through some form of cadastral office based activity for those transactions where property unit geometry is affected. The material submitted at the beginning of the transaction could be considered a form of preliminary cadastral data that is not final until it goes through the registration transaction with REPD and ESA.

Any data that is submitted would go through a checking process by ESA to ensure that the data matches with the existing cadastral fabric. Updating of index maps and cadastral numbers would also be undertaken by ESA during the registration transaction process.

It should be noted that EFS is not suggesting that cadastral field work be the trigger to commence a 'legal registration transaction'. In effect, that is what is already occurring through the REPD forwarding applications to the EDO almost immediately.

3.3 Integration of EDO Function into Model Registration Office

One of the bottlenecks identified by ECIM and ESA was the organizational structure of the EDO-EPO relationship. The majority of the field surveying workload is conducted mostly from the EDO despite the lack of modern survey and mapping technology and adequately trained staff. There is a duplication of effort between the EDO and EPO and there is considerable complexity involved in tracking the status of registration transactions.

ECIM and EFS both support the concept of centralizing the higher cost activities such as field surveys and updating of cadastral maps in the EPO.

EFS is proposing that the principal traditional *EDO function* of acting more as a conduit for data exchange between the REPD Office and EPO be integrated into the proposed Model Registration Office (MRO). This would help streamline the process significantly by removing the need of applicants to visit the separate EDO office. This does not necessarily mean the EDO as it currently exists would immediately cease operations but it would no longer have a direct role in the registration process.

Within the MRO the EDO function would be called on for any transaction where cadastral data is required. REPD should define those transactions which require some ESA involvement through the EDO function. Generally speaking, it is expected that only those legal registration transactions that involve some change in property unit geometry would be require involvement of the EDO function.

ESA should receive fees for its involvement in, and data for, relevant components of the transactions. This would be separate to the fees payable by EPO customers that have field work requirements, which would be performed externally to the registration transaction. The fees connected with ESA involvement in the legal registration transactions would be set according to a standard fee schedule and collected at the same time as REPD fees are paid by the applicant.

It should be highlighted that the proposed arrangement outlined above is line with one of the strategies laid down by ESA for the Land Registration Modernization Program within its strategic plan. It identifies the need to collaborate with the REPD for improved the quality, accuracy, and timeliness that could be achieved through the shared maintenance, but single set of land records.

Importantly, the strategic plan also recognizes *"the improvement of the image of each agency in the eyes of the cabinet and parliament as well as the general public that would result from the provision of better service and a reduction in the cost of operations achieved through the establishment of jointly staffed land information, registration and real property tax offices in each district"*. EFS is proposing to assist ESA and REPD in achieving some first steps towards this goal and extension to what ESA has already agreed to undertake through the ECIM Project. A generic diagrammatic depiction of this proposed arrangement in shown in the figure below (Figure 2).

3.3.1 Increased Role of EPO

The EFS-proposed arrangement outlined above results in an increased role for the EPO in terms of its responsibilities within the legal registration transaction process. The restructured EPO would also result in the provision of services in the area of cadastral field works and provision of cadastral data to external customers. This provides ESA with the ability to charge fees directly to customers for field works without the need for a legal registration transaction being undertaken.

For example, a real property owner would like to subdivide their property unit into two or more new property units. The first step may or may not be to obtain the approval of the Municipality for planning purposes. This should not affect the EPO's ability as a provider of surveying services to survey and mark out their customer's subdivision, and perhaps even lending assistance in the design of the subdivision. The EPO is paid directly by the customer for these services. The result of the EPO's services would be data such as subdivision plans that the customer could submit with an application to the MRO to complete a legal registration transaction. The MRO would

require the applicant to also submit Municipality approval for the subdivision before the transaction is accepted for processing.

The transaction would proceed through the legal process until it reaches the EDO function of the MRO, at which point the cadastral data (i.e. subdivision plan) is forwarded to the EPO cadastral data processing unit to check the data matches the fabric of the existing cadastral index map. If it does match the index map would be updated on a temporary basis, pending transaction completion within the MRO, new cadastral numbers assigned to the new property units, cadastral extracts prepared for each property unit, and the required data sent back to the EDO function in the MRO. The legal registration transaction would then continue to completion within the MRO.

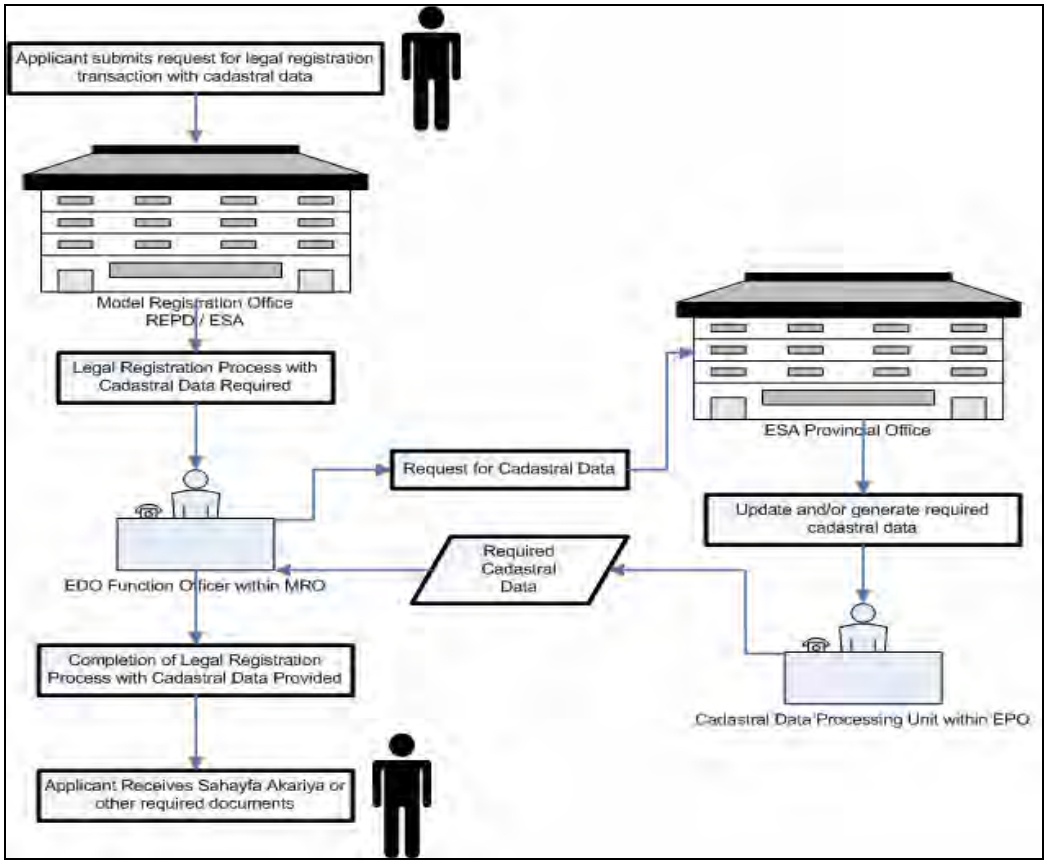

Figure 2: Diagram of proposed MRO-EPO interaction

3.4 Role of Private Sector

Building on the use of private sector companies for first registration, EFS would like to assist ESA in moving towards private sector involvement in cadastral services connected with secondary legal registration transactions. ESA would still retain the role of custodian of the cadastre while also moving to a more regulatory role and service oriented organization.

Opening up this activity to private sector would create tremendous income generating potential for ESA through training and licensing fees for surveyors, improved delivery of survey services through EPOs, and the sale of cadastral data to private surveyors and other external customers. This is line with ESA's designation as an economic authority.

For example, a private surveyor, who paid ESA for training and continues to pay annual licensing fees, has been contracted by a customer to survey and set out a subdivision. The private surveyor requires existing spatial data (i.e. plans) for the property unit and geodetic network control data so the survey can be linked to the geodetic network. The customer, through the surveyor, pays the EPO for this information. On completion of the cadastre activities by the surveyor the customer lodges a legal registration transaction request with the MRO, which includes submission of the relevant cadastral data. The customer is charged a fee by ESA for updating the cadastral index map and producing a cadastral extract as part of the transaction process.

For EFS to be able to provide assistance to ESA (unless ESA does not want assistance), the Project should be provided with some direction from ESA. Technical assistance could be provided to establish the standards, strategies, mechanisms, etc within ESA to support private surveyor involvement.

3.4.1 Alternatives

EFS recently presented three alternative models of private sector involvement in secondary transactions to ESA but ESA's thoughts with regards to this concept were not conclusively put forward. EFS would like to outline the three alternatives again while presenting a fourth for consideration and discussion with ESA.

3.4.2 Alternative 1 – Hybrid Public-Private Cadastral Survey Services

Under this model ESA provides cadastral survey services and acts as the regulator and QA/QC body for services provided by private surveyors. The citizen is free to choose between two scenarios for surveying services.

Scenario 1: Under this model is having the private surveyor perform the field work as described in the example above. ESA checks the quality and accuracy of the private surveyor's data when it reaches the EPO as part of the legal registration transaction process. This does not mean sending EPO surveyors to the field to check the work, although ESA would retain the right to conduct spot check examinations of field work submitted by private surveyors. ESA should NOT charge for carried out in the process of checking private surveyors. See Figure 3.

Scenario 2: The second option for the citizen is to have EPO surveyors perform the field works. This is effectively what happens now, but EFS is proposing that the field work be performed before the legal registration transaction commences.

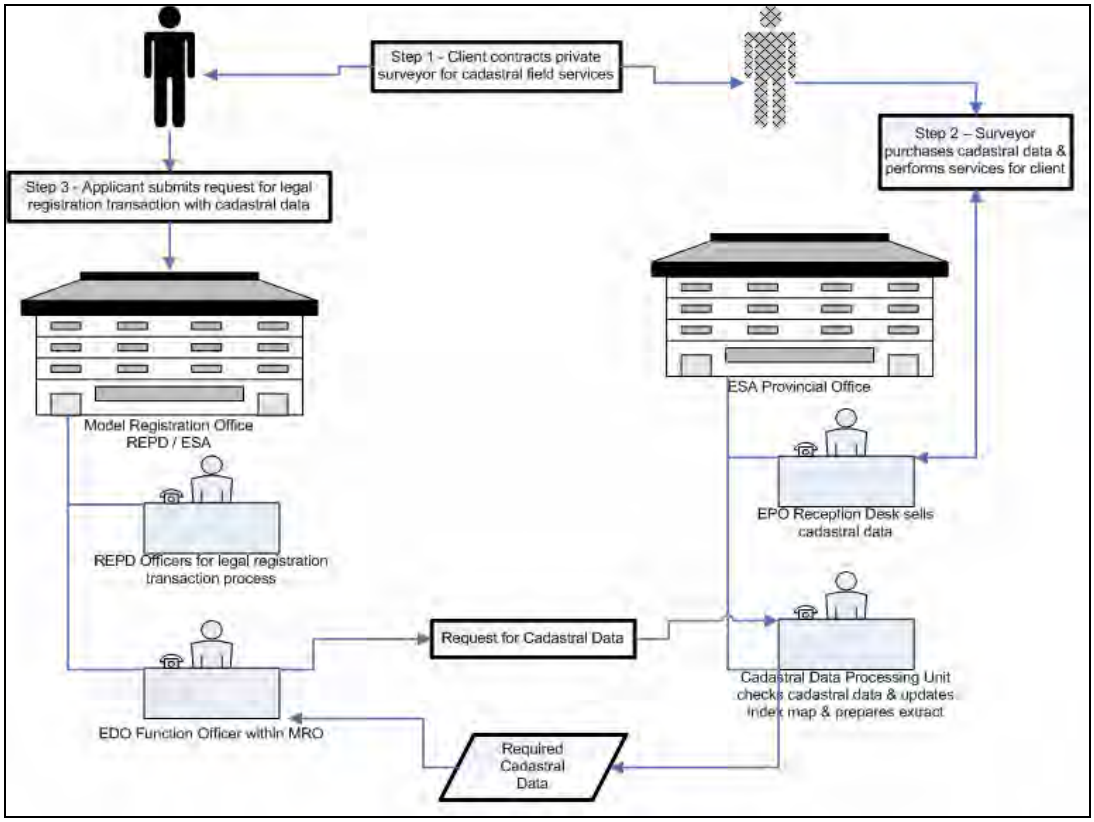

Figure 3: Alternative 1 - Scenario 1: Private surveyor provision of services

3.4.3 Alternative 2 – Private Cadastral Survey Services

EFS realizes that this model is unlikely to gain any support from within ESA for quite some time, if ever at all. However, EFS is merely putting forward the possible models for open discussion. Under this model ESA plays a regulatory and QA/QC monitoring role, as well as custodian and seller of cadastral data, geodetic data, map products, etc. This model is extremely common around the world, for surveying related to both first and subsequent registration activities.

3.4.4 Alternative 3 – Public Contracting of Private Surveyors

This model is similar to Alternative 1, except that private surveyors would be contracted by ESA to perform the services on behalf of ESA for the customer. There are no direct contractual obligations between the private surveyor and the customer. A diagram of this possible model is provided below. (*Figure 4*)

3.4.5 Alternative 4 – Combination of Alternatives 1 & 3

EFS proposes this as the preferred model for private sector involvement as it provides the greatest flexibility. The customer would have three choices when it comes to field work, contract private surveyors, contract EPO for ESA surveyors, or contract EPO for private surveyors. It also provides ESA with the ability to analyze private sector involvement through different models, which could help assist in refining or refining its strategy for private sector involvement.

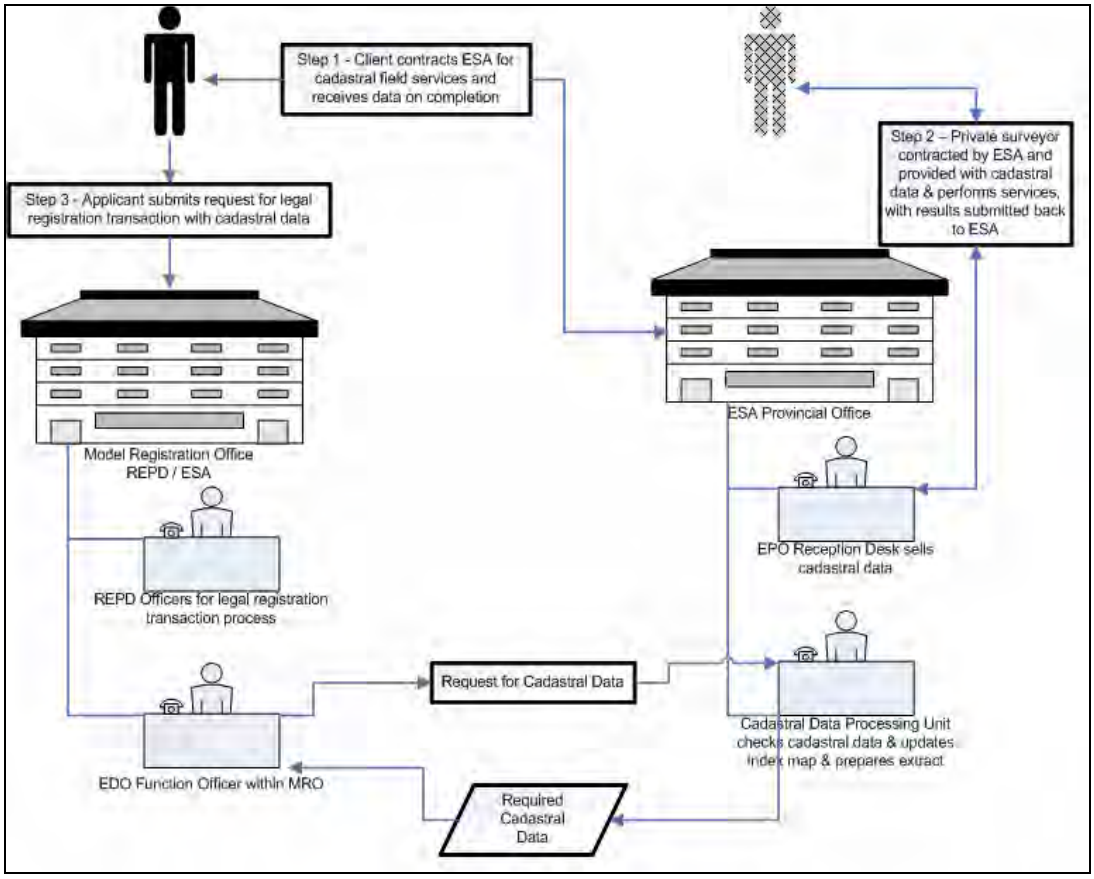

Figure 4: Alternative 3 - ESA contracting private surveyor to perform field work

3.5 Transactions

One area where EFS would like to assist ESA in reducing the time and cost for registration transactions for applicants is by identifying a set of transactions that require ESA involvement in the legal registration process. Under the existing situation ESA is involved in virtually all transactions through the requirement that a technical inspection must be undertaken.

The first recommendation is to remove the need for a technical inspection as a component of all transactions. EFS proposes that ESA only be involved in transactions that involve changes to property unit geometry, establishing property unit boundaries (this only really applies to inclusion of apartment plans in the system of secondary transactions, re-establishing property units, or providing cadastral data. EFS would like to discuss this proposal with ESA over the coming weeks and come to an agreement so that functional requirements for an automated cadastral data management application can be developed.

3.6 IT Applications for Secondary Transactions

Information Technology is now recognized as a mechanism that can assist in reengineering of business processes and improved data management within land administration systems. Furthermore, IT is a tool that enables the integration of cadastral and property registration systems. EFS has been examining the applicability of IT to assist improve the property registration process within urban Egypt.

Task 2 feels that reengineering and automation of business processes, rules and procedures for legal registration transactions will go some way to improving property registration in Cairo. This needs to be carried out in concert with legislative and regulatory reform, training and capacity building, etc. There also needs to be a concerted effort to ensure complementarity and compatibility between REPD and ESA IT applications.

EFS understands the ECIM Project has already supported the development of a cadastral application for use in secondary transactions. This application however was developed to automate existing ESA business processes without any changes such as those outlined in this document and it did not consider integration with an IT application for automation of REPD registration operations.

EFS is proposing to assist in the configuration of an automated registration application and has already developed an initial set of functional requirements for such an application. These system specifications have been developed with the idea of also integrating with an IT application for cadastral operations for those legal registration transactions that require cadastral data to be generated.

EFS would also like to collaborate with ESA to develop a set of functional requirements for the cadastral application to be integrated with this system, and ultimately assist in configuration of an appropriate solution. Before this can happen though EFS needs some direction on issues such as involvement of private sector, transaction identification, and integration of the EDO function into the MRO. Without these any system requirements developed are likely to not reflect the on-the-ground situation. EFS encourages ESA to continue dialogue with the Task 2 team to come to some form of resolution on these issues.