




**Egyptian Survey Authority  
Geographic Information  
Management System  
(ESA GIM)**

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Egypt





## Agenda

- About Egyptian Survey Authority
- ESA GIM Business Requirements
- System Concept
- System Data Flows
- System Architecture
- System Modules



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## About Egyptian Survey Authority


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## About Egyptian Survey Authority


- The **Backbone** for supplying data to the Egyptian society.
- The **Only** governmental organization responsible for the coverage of Egypt with topographic maps
- Responsible for supporting national cadastre and land registration (In cooperation with Real Estate Office in Ministry of Justice)

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## ESA GIM Business Requirements

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## Challenges that can be overcome with the aid of ESA GIM

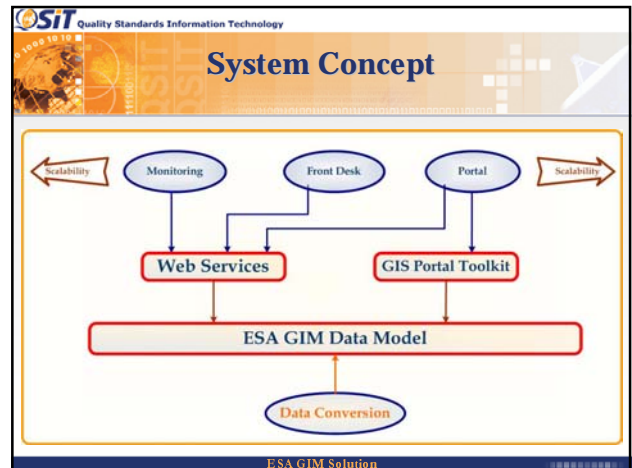
- Efficient Information Management
- Improve Competitive Power of ESA
- Establish unified access to Nation-wide Geo-Information
- Business Process Re-engineering
- System Scalability

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# System Concept

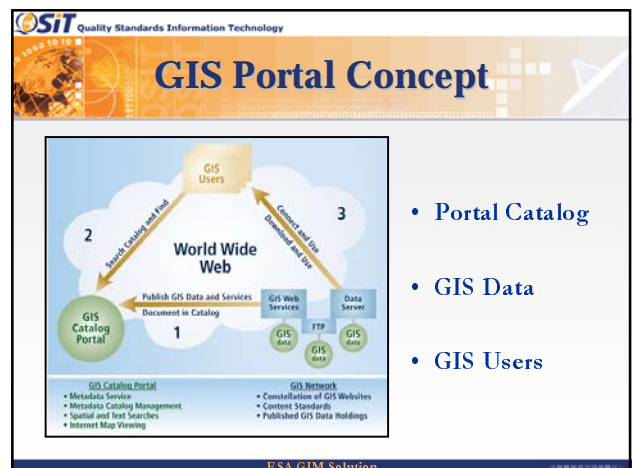
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- ## Data Model
- Building a data model is the foundation of the system
  - Merges cadastral and topographic data models into a rather simplified data model
  - Designed to support fast data access and inquiries
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- ## Web Services
- Provide access to GIS content and capabilities – on demand , when needed , via any web-enabled application
  - Adhere to standards , such as SOAP / XML and WSDL
  - Allow integration with various entities , whether public or private
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- ## GIS Portal Toolkit
- A toolkit developed by **ESRI** to support implementation of one-s top web sites for the discovery, transmission, and use of geographic data and mapping services
  - A technology and services solution for implementing spatial data infrastructure (SDI) portals.
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## Metadata fuels the GIS Portal

- The GIS portal is based on a Metadata catalog that describes and references the geographic information at ESA
- Metadata is a summary document providing content, quality, type, creation, and spatial information about a data set
- Can be stored in any format such as a text file, Extensible Markup Language (XML), or database record.

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## What does Metadata Do?

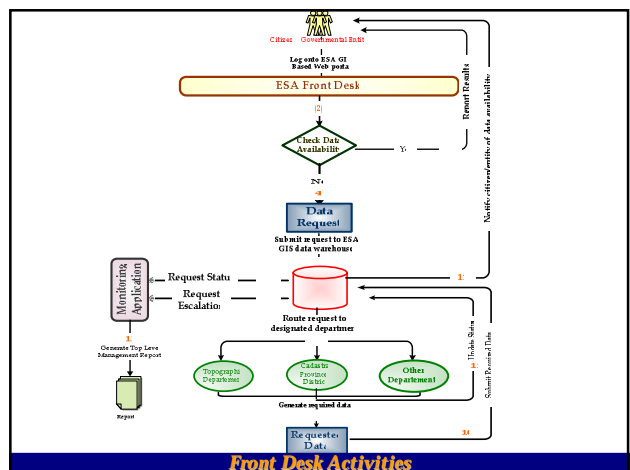
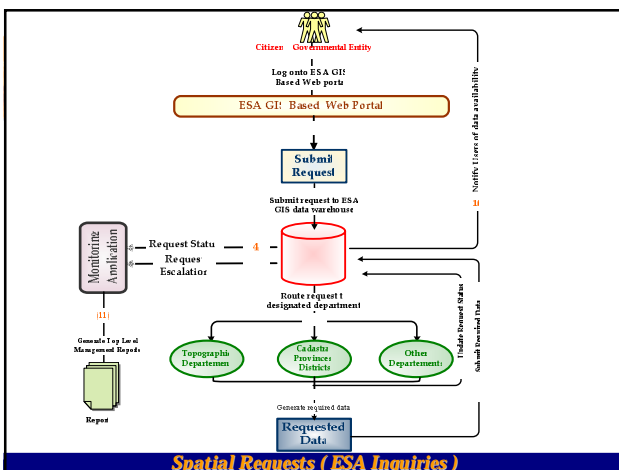
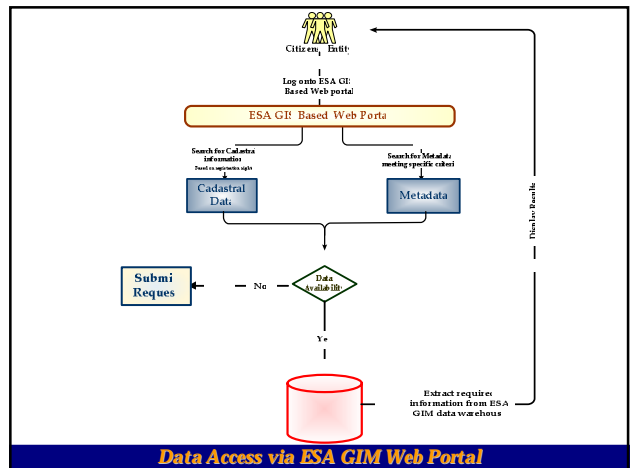
- Helps with finding information
  - Think of metadata as the information content that populates a Card Catalog
- Allows informed decisions about accessing and using the data
  - Legal statements regarding resources liability protect investment
- Data organization and provides management decisions of the resource

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## System Data Flows

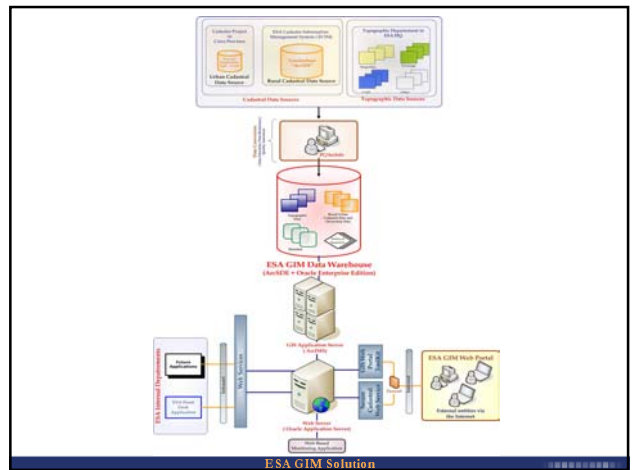
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# System Architecture

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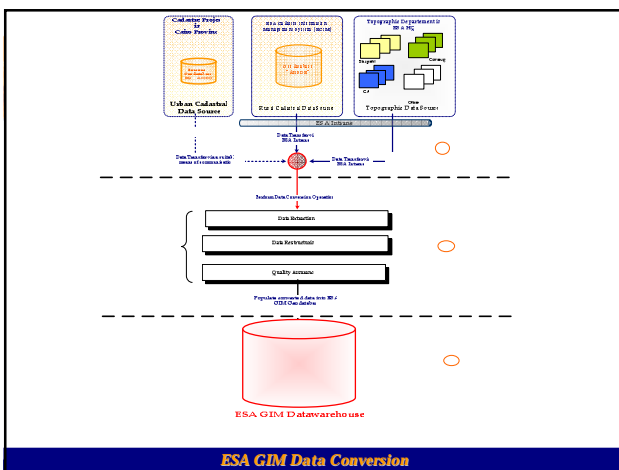
# System Modules

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# I. Desktop Module - Data Conversion

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# II. Web Based Modules

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# 1. ESA GIM Web Portal

ESA GIM web portal allows both the public and governmental entities of navigating metadata and sample maps published via the portal, in addition to using a number of functionalities as stated below.

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# Metadata Search

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Egyptian General Survey Authority

Your one stop for geographic data

**Make a Map**  
Launch: The National Map

To find geospatial data that meets your specific criteria, click "Search all data in this site" on left column, or for quick access to featured geospatial resources by subject, click on one of the Categories or Sub-Categories below. Click "x" sign to see sub-categories.

**Data Categories**

- Administrative and Political Boundaries
- Cadastral
- Imagery and Base Maps
- Transportation Networks
- Utilities and Communication
- Human Health and Disease
- Environment and Conservation
- Business and Economic

**Search for Data**  
Search of the data in this site

**ESA Imagery**  
Data may for acquiring and building maps

**ESA Cadastral Data**  
Full access to Egyptian cadastral data

**ESA professional services**  
Special functions and applications created by ESA

**About this site**  
How to find the maps & data you need and how to publish your data here.  
GDG Framework

**Help**  
Quick Start Guide  
Contact Us

ESA GIM Web Portal home page, displaying available categories of metadata

Home | Search | About This Site | Map Viewer

**Search**

Where?  **Anywhere** Or **FIND A PLACE...**

Or locate your area here

Data must fall completely inside area

What? **Keywords:**

Match:  
 Exact phrase  
 Any word  
 All words

Data Category:

Scale/Coverage:

Type/Format:

When?  Anytime  
 Data for time period (yyyy-mm-dd)  
 From:   
 To:   
 Data updated recently  
 After:

Sort results by:

Home | Search | About This Site | Information Center | Map Viewer

This is a Government Computer System. Before continuing, please read this [disclaimer](#) and [privacy](#) statement.  
Please use the [Contact Form](#) for any questions or comments.

Search form for specifying criteria to search for metadata

Egyptian General Survey Authority

Your one stop for geographic data

Pages [Next](#)

**Live data & maps**

**Content Title:** Cairo Ortho image  
**Publisher:** ESA  
**Content Type:** Live data & maps (Map Service)

**Content Title:** Alexandria Ortho image  
**Publisher:** ESA  
**Content Type:** Live data & maps (Map Service)

**Content Title:** Mansoura Ortho image  
**Publisher:** ESA  
**Coverage Area:** Mansoura  
**Content Type:** Live data & maps (Map Service)

Displaying search results for Administrative and Political Boundaries category

Egyptian General Survey Authority

Your one stop for geographic data

**Egypt**

Where?  **Anywhere** Or **FIND A PLACE...**

Or locate your area here

Data must fall completely inside area

**Content Citations:**

Title of Content:

Type of Content:

Latest Status:

Content Publisher:

Publication Date:

**Content Descriptions:**

**Content Summary:** This shows protected areas, forest lands, mangroves as well as the location of links to remote sensed and other data. This map service is being updated on a daily basis in response to new information and data received on VRS/RSIS, including information from various agencies. It provides the user with data on infrastructure, administrative and resource related data.

**Content Purpose:** To provide quick and easy access to key biodiversity data to assist decision makers in policy-related decisions.

**Content Themes:**

Time Period of Content:  
 Acquisition Date:

**Content Statistics:**

Progress:

Update Frequency:

**Spatial Coordinates:**

World Coordinate:

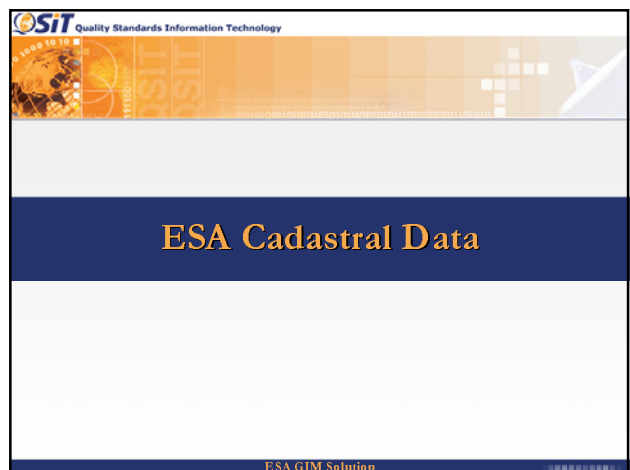
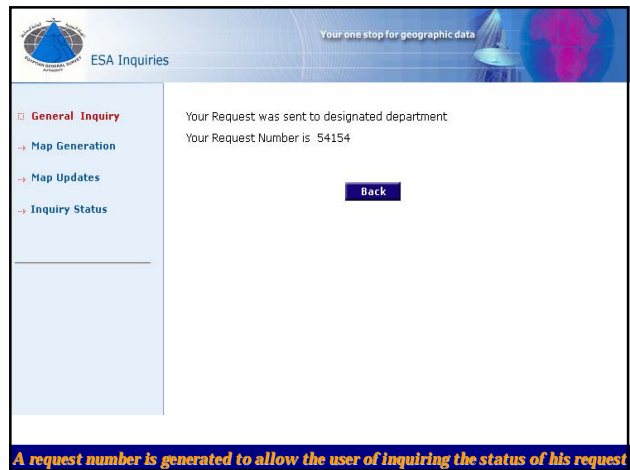
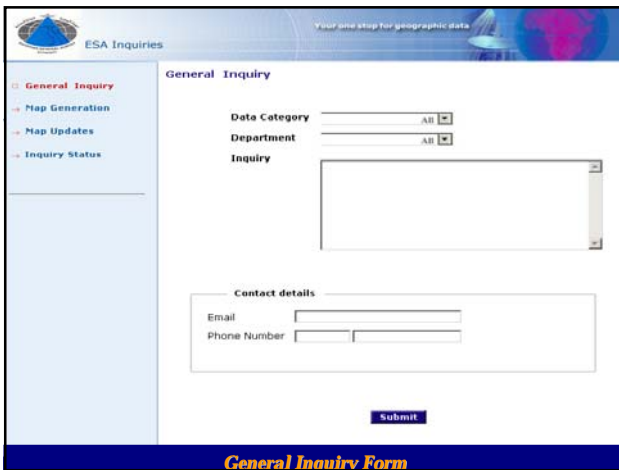
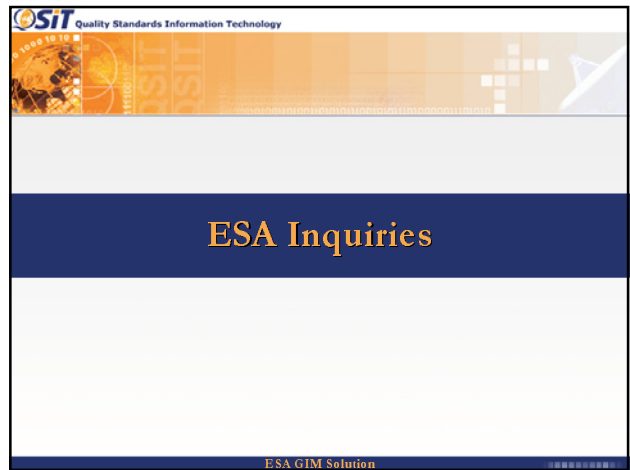
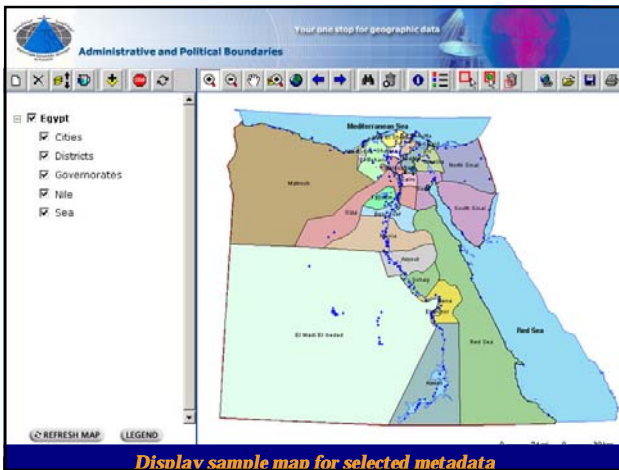
East Coordinate:

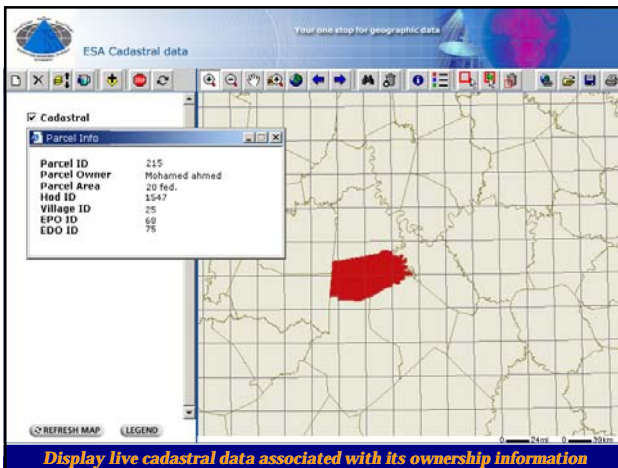
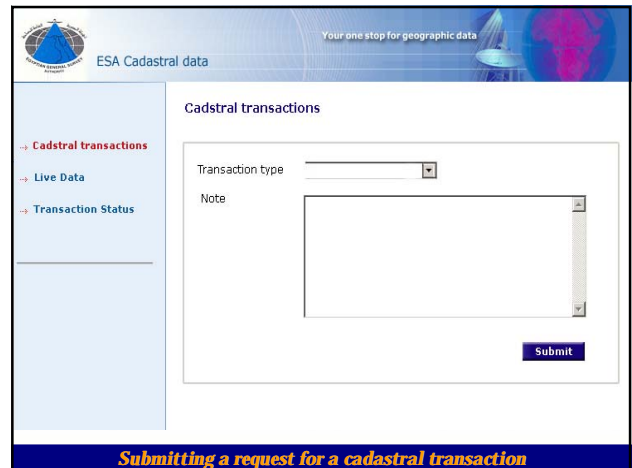
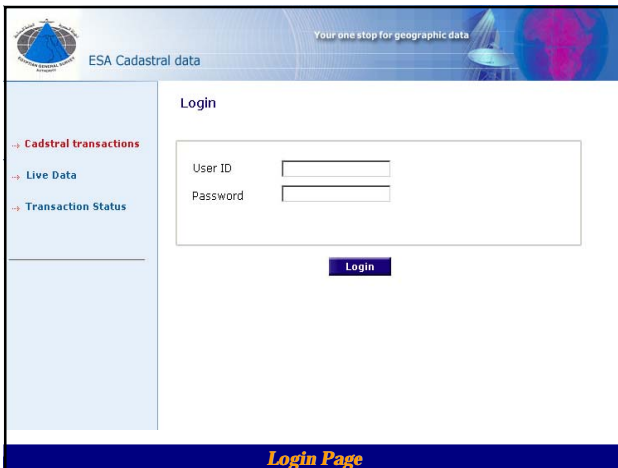
North Coordinate:

South Coordinate:

Coverage Area:

Display selected metadata details





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## 2. ESA Front Desk Web Based Application

- A spatially enabled application that serves ESA users
- Handles requests coming for the public or other governmental entities
- It avails the following spatial capabilities:
  - Map Display
  - Map Navigation

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## 3. ESA Monitoring Web Based Application

- The monitoring application provides top-level management with tools for:
  - Following up the progress and status of requests
  - Provides an alert in the event of a problem
  - Perform basic analysis Generate various performance related reports

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**Thank You**

**For more information please visit the ESRI booth in the exhibition**