

## Urban Management Land Information System

**FIG Presentation**



**Sylvester Gabianu**  
Accra Metropolitan Assembly – Ghana

**Magdalena Andersson**  
**Herbert Djaba**

Lantmäteriet - National Land Survey of Sweden/ Swedesurvey  
GeoTech Systems - Ghana






LANTMÄTERIET


2006-03-09




## Feasibility Study



- ▶ **Project proposal**
  - ▶ For the development, design and implementation of an urban management land information system in a selected area
  - ▶ May 2004
- ▶ **Pilot area**
  - ▶ Ayawaso
  - ▶ Area 36.6 km<sup>2</sup>
  - ▶ No of properties 30 000
  - ▶ Population 335 000
  - ▶ Tenure various






LANTMÄTERIET

2006-03-09







## UMLIS



Urban management land information system

**Scalable  
Replicable  
Potential for added functionality**



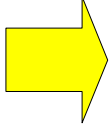
LANTMÄTERIET

2006-03-09





## Possible Processes and Beneficiaries

- Planning
- Collection of revenue
  - property rates
  - permits ....
- Location of property and people
- Development control
- Co-ordination of utility services provision
- Land administration
- Valuation
- Insurance
- Credit
- Real Estate Broking
- etc.





- The general public
- Assemblies
- Lands Commission
- Research Institutions
- Adm. of Stool Lands
- Utility providers
- Security services
- Post and Telecom
- Land Owners
- Land Valuation Board
- Land Title Registry
- Survey Dept.
- Town & Country Pl
- Banks, Insurance comp
- Real estate agents
- Conveyancers
- etc.




LANTMÄTERIET

2006-03-09





## Problem Areas

- Information
- Processes
- Organisation
- Legislation
- Public relations





Resource constraints



LANTMÄTERIET


2006-03-09

## Stakeholders



- Land Commission
- Land Title Registry
- Town & Country Planning Department
- Accra Metropolitan Assembly
- TMA, KMA
- others ...


- Adm. of Stool Lands
- Survey Department
- Land Valuation Board



LANTMÄTERIET

2006-03-09



## Accra

With a population of 1,695,136 million people and a floating population of approximately 1,000,000 (2000 National Population Census), Accra, Ghana's capital since 1877, is today one of the most populated and fast growing Metropolis in Africa with an annual growth rate of 4.3%.


**Revenue and Rating**

Estimated Revenue from ratable properties \$150,500.00  
 Less than 60 % of rateable properties covered  
 Less than 60 % of business covered  
 Absence of GIS and up to date records  
 Poor revenue accounting and financial management  
 Inefficient general revenue mobilization and collection

LANTMÄTERIET GEO-TECH SWEDESURVEY

2006-03-09

## Urban Management Land Information System



**Objective**


- ▶ Land information database for urban management at Accra Metropolitan Assembly
- ▶ A tool which should contribute to a more efficient collection of property rates, business license fees and other municipal fees

**Scope**

- ▶ Primarily serve urban management
- ▶ Step-by-step implementation
- ▶ Scalable, replicable and allow added functionality
- ▶ Consistent with Land Administration Project
- ▶ Geographical Information System – combining geographical and alphanumeric data
- ▶ Pilot area - Ayawaso

LANTMÄTERIET GEO-TECH SWEDESURVEY

2006-03-09



## Project Components

- ▶ **Activities**
  - ▶ Setting-up of project
  - ▶ System development
  - ▶ Data capture
  - ▶ Pilot test
  - ▶ Capacity building

LANTMÄTERIET GEO-TECH SWEDESURVEY

2006-03-09




## Setting up of project

- ▶ **Project organisation**
  - ▶ Steering Committee
  - ▶ Reference group(s), Stakeholders; land sector agencies etc.
  - ▶ AMA
  - ▶ Project management
  - ▶ Development & design team
  - ▶ Data capture
  - ▶ Quality assurance

LANTMÄTERIET GEO-TECH SWEDESURVEY

2006-03-09



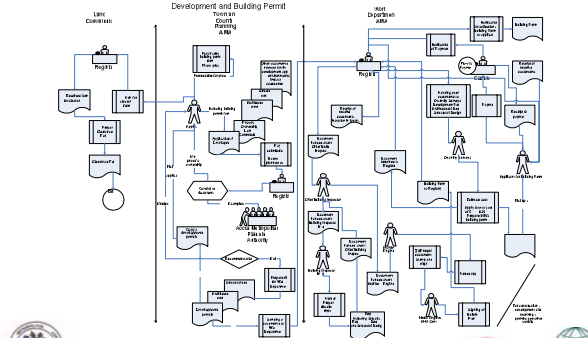
## System Development

- ▶ **Mapping of workflow for the Land Revenue Management Process within the Metropolitan Assembly**
  - ▶ Workflow processes for existing system
    - ▶ Development and Building Permits
    - ▶ Certificate of Habitation
    - ▶ Finance and MIS
    - ▶ Business Operating Permit
    - ▶ Payment
    - ▶ Etc.
- ▶ **Introduction to the system development methodology**
  - ▶ Next step; requirements for future system
- ▶ **Delimitations for a step-by-step development of UMLIS**

LANTMÄTERIET GEO-TECH SWEDESURVEY

2006-03-09

## System Development Existing System



The diagram illustrates the workflow for the existing system, divided into 'Development and Building Permit' and 'NOT DEVELOPED YET'. It shows various stages such as 'Application', 'Review', 'Approval', and 'Payment', with associated documents and roles. Key components include 'Lands Office', 'Municipal Council', and 'Municipal Engineer'. The flowchart details the process from initial application to final payment and issuance of permits.

LANTMÄTERIET GEO-TECH SWEDESURVEY

2006-03-09



## Data Capture

- ▶ Defining of Graphic and Alphanumeric Data needed to be captured
  - ▶ Up-dated base map of Ayawaso system
  - ▶ Planning for the alpha-numeric data needed
- ▶ Gathering Information on existing data
  - ▶ AMA
  - ▶ Survey Department
  - ▶ Etc.
- ▶ Modules needed for data capture and verification
  - ▶ Mapping of workflows



LANTMÄTERIET

2006-03-09



## Pilot Test

- ▶ Ayawaso
  - ▶ Pilot project office site
  - ▶ ASI ZipCode Project

## Capacity Building

- ▶ Training activities



LANTMÄTERIET

2006-03-09



## Financing UMLIS

### Ghanaian Input

- o Project Management from Ghana Steering Committee
- o Local Transport for SwS in Ghana
- o System Development Work - participant from MLGRD & AMA
- o Staff from AMA, dept for management of information systems
- o Office Premises for the project
- o Study Visit Senior Staff and Project Personnel
- o Equipment for Pilot (Hardware, Software, Photocopier etc)
- o Vehicle for the project

### Swedish Input

- o Grant from SIDA Sek 8,700,000 (\$1.2m)
- o Capacity Building on UMLIS
- o Institutional Strengthening for AMA
- o Study Visit VIP
- o Study Visit Senior Staff and Project Personnel



LANTMÄTERIET

2006-03-09

