MAGNA SKILLS DEVELOPMENT INSTITUTE

Capacity Building • Professional Training • Organisational Development

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Course Profile Document

AI for NGO, Government and Business

Big Data Analytics for Property Tax Administration

Prepared as a professional course profile for delegate review, sponsorship approval and organisational training planning.

COURSE CODE	DELIVERY	DURATION	PREPARED FOR
MSDI	**Online / Face-to-Face**	**Flexible**	**Organisation Approval**

Register for this Course **View Online Course Page**

Course Overview

This customised Magna Skills programme equips tax administrators, revenue analysts, valuation officers and compliance managers with practical skills to use large and diverse datasets to strengthen property tax administration and revenue mobilisation.

With particular emphasis on Revenue Authorities and their collaboration with local government, land registries and valuation agencies, the programme covers property identification, taxpayer registration, valuation data analysis, billing, collection monitoring and arrears management. Participants will explore how administrative records, geographic information and payment data can help identify gaps in the tax base and prioritise cases for verification.

Through practical exercises using simulated or anonymised datasets, participants will clean and link property records, analyse collection performance and develop management dashboards. The programme combines Excel-based analysis with an introduction to database, GIS and responsible AI applications, adapted to institutional mandates and available resources.

Course Outcomes

- Assess property tax data sources and identify opportunities to improve coverage, accuracy and revenue performance.
- Clean, integrate and validate property, ownership, valuation, billing and payment records.
- Apply spatial and statistical analysis to identify registration gaps, valuation inconsistencies and compliance risks.
- Develop dashboards to monitor assessments, collections, arrears and operational performance.
- Prepare a practical analytics improvement plan supported by appropriate data governance and verification controls.

Course Outline / Curriculum

1. Property Tax Administration and Revenue Authority Responsibilities

- Examining the property tax cycle, from property identification and registration to valuation, billing, collection and dispute resolution.
- Mapping institutional responsibilities and coordination arrangements between Revenue Authorities, municipalities, land registries and valuation bodies.

2. Big Data Sources for Property Tax Administration

- Assessing cadastral records, ownership registers, building permits, valuation rolls, billing systems and payment records.
- Evaluating the relevance, reliability, permitted use and limitations of utility information, property transactions and geospatial datasets.

3. Property Data Quality, Cleansing and Standardisation

- Identifying missing fields, duplicate properties, inconsistent addresses, outdated ownership details and invalid property identifiers.
- Using Excel and Power Query to standardise records, validate key fields and document corrections without losing source information.

4. Data Integration and Property Register Development

- Linking property, taxpayer, valuation, billing and payment records through common identifiers and controlled matching procedures.
- Managing unmatched records, multiple ownership, subdivided parcels and changes in property use through verification and approved updates.

5. GIS and Spatial Analysis for Tax Base Coverage

- Mapping registered properties and comparing available parcel, building and administrative data to identify potential coverage gaps.
- Prioritising locations for field verification while recognising the limitations of imagery, incomplete maps and inferred property characteristics.

6. Valuation Data Analytics and Assessment Quality

- Analysing property characteristics, comparable transactions and assessment patterns to flag unusual or inconsistent valuations.
- Introducing mass appraisal concepts and reviewing model quality, data limitations and the need for professional valuation oversight.

7. Billing, Collection and Revenue Performance Analytics

- Reconciling assessed liabilities, bills, adjustments and payments to distinguish billing gaps from collection shortfalls.
- Analysing collection rates, payment patterns and revenue trends by location, property category and reporting period.

8. Arrears Analysis and Risk-Based Compliance

- Segmenting arrears by age, value, payment history and case status to prioritise follow-up and appropriate interventions.
- Developing transparent risk indicators and verifying flagged cases before recommending inspections, recovery referrals or other authorised actions.

9. Dashboards, AI Applications and Data Governance

- Building dashboards for register coverage, assessment changes, collection performance, arrears and unresolved data exceptions.
- Using approved AI tools to assist analysis and reporting while maintaining confidentiality, access controls, human review and audit trails.

10. Integrated Property Tax Analytics Case Study

- Completing a practical exercise combining data cleansing, record matching, coverage analysis, collection monitoring and arrears prioritisation.
- Developing an institutional improvement plan covering data-sharing arrangements, staff capability, system requirements, responsibilities and measurable results.

Target Audience

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Agriculture officers, food security specialists, rural development teams, NGOs, planners, government officials, climate programme teams, development project staff, extension officers, land officers, donor funded project teams and agricultural policy professionals.

Key Course Benefits

Work-Ready Skills

Delegates leave with practical tools, templates and methods they can apply immediately at work.

Better Institutional Results

The programme supports stronger planning, reporting, compliance, accountability and service delivery.

Sponsor-Friendly

This document is designed to help supervisors, HR units and sponsors approve delegate participation quickly.

Professional Recognition

Delegates receive training documentation and a certificate of completion after successful participation.

Our Training Centres & Delivery Options

Magna Skills offers flexible delivery through face-to-face training centres across Africa and beyond, plus Online / E-Learning for delegates who prefer remote participation.

Southern Africa

Practical training destinations with strong travel access and delegate support.

- Pretoria, South Africa
- Vic Falls, Zimbabwe
- Livingstone, Zambia

East Africa

Popular regional centres for government, NGO and donor-funded project teams.

- Kigali, Rwanda
- Kampala, Uganda
- Nairob
- Zanzibar, Tanzania

West Africa & Islands

Strategic locations for regional networking and executive capacity building.

- Accra, Ghana
- Port Louis, Mauritius

International Executive Venue

Premium destination training for senior teams and international delegates.

- Dubai, United Arab Emirates

Online / E-Learning

Attend from anywhere through live online, blended or self-paced learning options.

- Online, E-Learning
- Remote Teams
- Flexib

Organisation-Based Training

Magna Skills can also arrange dedicated in-house training for ministries, NGOs and companies.

- Onsite
- Custom Dates
- Group Training

Ready to Nominate Delegates?

Use the links below to register, review the live course page or contact Magna Skills for organisation-based training support.

Register / Apply Online | **View Full Course Page**

About Magna Skills

Magna Skills Development Institute provides practical capacity building programmes for government departments, NGOs, public institutions, donor-funded projects and private sector professionals across Africa. Our training approach combines expert facilitation, real workplace case studies, practical tools, post-training support and professional documentation that helps organisations strengthen staff performance and service delivery.

Government Training | NGO Capacity Building | Corporate Workshops | Online Learning | Face-to-Face Training | Certifica

Approval & Authorisation Form

This section may be completed by the organisation, department, HR office, finance office or sponsor approving delegate participation. It can be attached to an internal memo, procurement request or training approval submission.

Organisation / Department	
Delegate Name(s)	
Approved Course	Big Data Analytics for Property Tax Administration
Preferred Delivery Mode	☐ Online ☐ Face-to-Face ☐ Organisation-Based Training
Preferred Training Venue / Date	
Estimated Number of Delegates	
Budget / Vote Number	
Contact Person	
Email / Mobile	

Authorised Name _____ Signature / Stamp _____ Date _____