Why Use IMIS?

Overview

The Integrated Municipal Information System (IMIS): Effectively integrates GIS, Process Automation & Workflow, Document Management, Web technologies (intranet system), and Financial Systems linking into one easy to use interface. IMIS manages all functional areas and technical arena’s of a municipality or public entity running off a land administration base.

Benefits of Use

- Manage all aspects of a municipality in one system
- Easy access to the right information
- Full audit trail
- Full access control
- Caters for specialist users, not a generic ERP
- Fully integrated already, therefore low cost in out approach. No new developments to occur
- Customisable deployment/phased approach
- Can shift capital costs into operational costs
- Easy access to management reports
- Easy to use
- Actively manage data
- Process automation allows low skilled user to be guided through process to ensure accuracy
- Communication barriers broken down
- After revenue enhancement projects, amortisation may occur, IMIS is self funding!

Technology

Land Management: All data that is spatially representable is done so in IMIS, done on a GIS platform which graphically represents geographic data. Documents can be linked to land entities. Full application processes for all land management fields, ie town planning, building plans, fixed assets and links and displays other data types such as financial information.

Process Automation (Workflow): IMIS has fully customisable workflow management capabilities allowing each and every client to utilise the system in their currently employed processes. Our expert management consultants will aid to analyse business processes and help to re-engineer them to deliver maximum performance.

Document Management: IMIS Doc, is a fully National Archives compliant document and records management system. Every organisation needs to manage and control the flow of communications and documents which form the evidence base for all decisions and actions taken.

Web (Intranet & Internet): IMIS is a management information system which will form the intranet for the municipality. One easy to use platform can be used to navigate through a plethora of functions and specialist areas.

Communications Hub: IMIS integrator, will form the backbone for communications, it has a an electronic diary, tasks, email, internal messages, document portal access. All communication go via IMIS to ensure records are kept of all communications, this means organisational knowledge is retained as records are available.

Integration: IMIS is the most comprehensively integrated management system available for municipalities. It was built with integration in mind and is the main driving factor for future developments. Comprehensive integration eliminates silo effects and ensures transparency & linkages in data between specialist area, allow accurate decision making while reducing redundancy and duplication.

Management reporting: Wide range of management report available. Allows managers to accurately assess, the performance of employees based on usage rates, time booking, response times, successfully completion of tasks and full audit trail on all actions performed.

Architecture: GIS: Planet GIS and ESRI Products.
Databases: Oracle, My SQL, SQL lite, Access

T: +27 12 991 3624
F: +27 12 991 6998
info@tgis.co.za
www.imis.co.za
Unique Applications

- **IMIS Integrator** – Workflow platform, Tasks, Messages, Faxing and Email
- **IMIS Land** – GIS, Land Management, Town Planning, Estates Management and Valuation
- **IMIS Doc** – Document and Records Management
- **IMIS Fin** – Financial System Linking
- **IMIS Build** – Building Control
- **IMIS Infra** – Infrastructure Management (Water, Sewer, Electricity, Roads and Stormwater)
- **IMIS Customer** – Customer Care
- **IMIS Projects** – IDP and Project Management
- **IMIS Business** – Agenda + Meeting Management and Contracts Management
- **IMIS HR** – Personnel + User Detail and Leave Management, Access Control, Organogram
- **IMIS Social** – Cemetery Management, Heritage Sites and Housing
- **IMIS Enviro** – Waste Management
- **IMIS Stats** – Statistical Information

Ease of Use

There is no other system that covers this spectrum of speciality areas. Integrating stand alone systems, will be far more costly as they were developed to manage only their specific area. Although there is immense depth and breadth catered for in the system (every specialist area in a municipality is serviced) users need only learn their specific modules that apply directly to their day to day activities. IMIS has one interface which is user friendly and easy to learn as it is entirely intuitive. Once the user is familiar with this, it eliminates the need for multiple training sessions on various software suites and simplifies use. Allows for Easy view users, General day to day users, Specialist users, Management users and Administration users.

Data Management

Having correct cadastral data is achieved via a combination of souring information from the Department of Rural Development & Land Reform (Surveyor General, National Geo-spatial Information and Registrar of Deeds) and data capture exercises. A once of project to compile and correct the discrepancies is completed this data is now maintained though working on IMIS as all data is automatically updated in the system. Cadastral data is extremely dynamic, land changes ownership and is divided up constantly.

This base data is the key to an effective municipality as all processes run off the land base, revenue is generated off land parcels and services are delivered to land parcels. IMIS eliminates the need for large scale cadastral data projects on a regular basis as it manages and maintains the data as it is worked with. Links financial data to land data, providing visual representation of financial data (e.g. age analysis of payments on each identified erven), this allows for additional insights into data.

Customised Deployment

System & Management Consulting: User requirement analysis, Resource analysis, Business process mapping, deployment of necessary resources, change management process and training

Modular Deployment: IMIS is modular and deployed in phases, addressing the most urgent issues first. When implemented, it is able to amortise its self via revenue enhancement options. Correct linking of cadastre to billing system. Allows correct application of rates and taxes and identifies additional consumers.

Once off Developments: TGIS is able to deliver once off customisation and alterations as requested by clients to ensure full satisfaction with the product.

Developed by

IMIS is developed by TGIS whom house land surveyors, survey technicians, town planners, database engineers, management consultants, cartographers and professional GIS practitioners. This gives TGIS insights into spatial data which are unrivalled in our market place. The land management experts are only half the story, they combine seamlessly with TGIS’s systems development and integration team to create. IMIS is leading land and municipal management system in the SADC region.
IMIS AND OPERATION CLEAN AUDIT 2014

OVERVIEW

IMIS, an Integrated Municipal Information System, proudly developed in South Africa, to support the OPERATION CLEAN AUDIT 2014, launched 16th July 2009, by the Minister for Corporate Governance and Traditional Affairs, honourable Sicelo Shiceka.

In the Minister’s statement to Parliament on 22 September 2009, it was indicated that Clean Audit 2014 is part of a four legged Operation Clean Up which include 3 other legs, namely Clean Cities/Towns, Debt Collection, Public Mobilisation and Revenue Enhancement as well as Infrastructure Backlogs and Economic Development.

The Minister mentioned that reports from Auditor General continue to report about:

- Poor Asset Management;
- Double Payments by Officials; and
- Stolen Goods and Assets

And that some leaders choose to do nothing about it or are unable due to lack of skills, resources or technological managerial aides.

VISION

All municipalities and provincial government departments to:

- achieve clean audits on their Annual Financial Statements; and
- maintain systems for sustainable quality financial statements and management information.

GOAL

- Between 2010 and 2011, no municipality and provincial department will receive Adverse and Disclaimer Audit opinions;
- At least 60% of provincial departments and the 283 local municipalities must achieve unqualified audit opinion by 2012;
- By 2013, there must be an increase to 75% both in municipalities and provincial departments that achieve unqualified audits; and
- By 2014 100% clean audits
BURNING ISSUES

The Auditor General report indicates that for 2006/2007 financial year, only 253 of the 283 municipalities’ audits had been finalised. Further, only 56 of the 253 municipalities received unqualified audit opinions.

The Minister warned officials of municipalities and provincial departments that have no sense of accountability and responsibility, not to lose documents, especially when auditors are on site. The minister indicated that document tracking will be one of the priorities. Lost documents create a culture of disclaimers because the Auditor General cannot express an opinion. IMIS document management is crucial to achieving this priority.

It was also indicated by the Minister that the ability of officials to have technical and conceptual skills was critical. Training and re-skilling will also be one of the priorities. IMIS is built upon a Land Information (GIS) base. This allows information to be graphically represented which aides users to conceptualize impacts and meaning of data. TGIS also provides training which develop these skills.

It was also indicated in the Clean Audit Presentation that poor interface between financial and non-financial information is a challenge which GIS integration with financial debtor information and document tracking allows to be broken down.

TURN AROUND STRATEGY

In order to assist the municipalities to achieve clean audits as well as add value to the other three legs of the 4 legged Operation Clean Up, a fresh approach to municipal management must be taken. Being part of the 21th Century, Information Communication Technology (ICT) is at the core of all operations within a municipality, thus information drives the outcome.

In order to manage effectively and efficiently, the municipality must know the following attributes of any asset, liability, income or expenditure, namely:

- Where is it;
- What is it;
- Who is/was involved;
- Why it occurred; and
- When did it happen.

With Clean Audit 2014 in mind, this is exactly what needs to be achieved. In order to prepare GRAP compliant financial statements, proper systems need to be in place to provide a true and fair view of the financial performance and position of an entity – all assets, liabilities, income and expenditure must be recognized and measured.

Debt Collection, Revenue Enhancement as well as Infrastructure Backlogs and Economic Development can all be addressed simultaneously in the turn-around strategy with the focus on Clean Audit 2014.
Building Blocks of the Turn-Around Strategy

**What does IMIS do?**

IMIS addresses the heart of the problem identified by the Minister for Corporate Governance and Traditional Affairs. This is inclusive of Land Management information (GIS-based) with regards to property position, size and ownership, a foundational issue for any other information system to be based on, since a municipality earns its income from taxes based on municipal valuations and delivery of services to these various property entities.

The above information is integrated with the debtors’ information as managed by the municipal financial systems to extract spatial reports on debtors and services delivered assisting in the process of revenue enhancement.

IMIS also addresses document management to gain control over the paper explosion, ensuring an audit trail of communication and source documentation.

Apart from the above pivotal information systems, various other information modules are supplied as part of the total solution, e.g. IDP and Project Management, Customer Care, Task Management, Council Resolution Management, Infrastructure Management, etc.
The following list gives more information on the available IMIS modules and what roll they can play in effective municipal management.

- **IMIS Integrator** – Workflow platform, Tasks, Messages, Faxing and Email
- **IMIS Land** – Land Management, Town Planning, Estates Management and Valuation
- **IMIS Doc** – Document and Records Management
- **IMIS Build** – Building Control
- **IMIS Infra** – Infrastructure Management (Water, Sewer, Electricity, Roads and Stormwater)
- **IMIS Customer** – Customer Care
- **IMIS Projects** – IDP and Project Management
- **IMIS Business** – Agenda + Meeting Management and Contracts Management
- **IMIS HR** – Personnel + User Detail and Leave Management
- **IMIS Social** – Cemetery Management, Heritage Sites and Housing
- **IMIS Enviro** – Waste Management
- **IMIS Stats** – Statistical Information
- **IMIS Fin** – Financial System Linking

**IMIS**

*Built with passion to support municipal service delivery*
INTEGRATOR

IMIS-integrator forms the workflow platform on which all the other IMIS modules are running. It serves as the backbone communicator for all the users to be in contact with each other and have access to information, based on the level of access they have been assigned. IMIS-integrator can run independently from any of the other modules. It allows users to send and receive electronic files in a very similar way as in MS Outlook or MS Outlook Express, i.e. attaching the file and allowing the user to save this file to the hard disk of the user.

COMPONENTS

The IMIS-integrator module consists of the following components:

- Electronic Correspondence Management (my IMIS)
- Contacts Management
- Venue Management

Electronic Correspondence Management (my IMIS)

This section is the heart of the IMIS-integrator. My IMIS consists of the calendar, the inbox, and tasks. My IMIS Components:

- **Calendar** – an electronic calendar which can be used to make notes, schedule events and set reminders related to a specific time and date. The in and out whiteboard is also available via the calendar. This allows users to see whom in the organisation is currently on leave. My IMIS will forward the messages of organisational members on leave to a set alternative to ensure workflows are continuous and that all work gets completed.

- **Inbox** – All tasks, messages and emails are accessed here. Information regarding the sending and receiving is recorded, such as time, members involved and notes (if applicable). The process flow can also be accessed to monitor and update the status of the work required. Messages and emails can be archived to minimize inbox clutter or if IMIS-Doc is installed, they can be indexed and added to the electronic document library for easy access by all members with the correct access rights.

- **Tasks** – Tasks are messages which communicate a specific action needed to be performed. This is a delegation and automation tool. They may either be sent on an ad hoc basis or linked to a specific process from other modules which automatically sends tasks.

My IMIS provides the communications management functionality that allows users to track performance on tasks and messages. This ability is not restricted to work performed in IMIS Integrator only, but is provided as a service to all other IMIS modules running on the server.
This means that a task generated in any IMIS module, for example IMIS-customer, will be displayed and managed in my IMIS, while keeping all information on task execution, required by IMIS-customer, becoming instantly available in the IMIS-customer module at the time the user records any action using my IMIS.

The person who sent the task or message is able to see when the task or message was read, as well as any action that the recipient recorded in response to that Task or Message. In the case of a Task, this could include accepting or declining a Task, each time the Task was forwarded to another recipient, as well as recording Task progress. When dealing with an Internal Message, the sender can see information about each time that the Message was forwarded or replied to.

This information can be used as the basis for performance management, as a detailed record is now available on the execution of all Tasks assigned within the IMIS environment, as well as on all communication sent and received using IMIS. Automated messaging is available using the organogram set up using the IMIS-HR module.

**Contacts Management**

**TYPES OF CONTACTS USED IN IMIS**

- **Corporate Contacts** – Corporate Contacts are address book listings of individuals or company representatives that anyone in your organisation may need to look up.

- **Personal Contacts** – Your Personal Contacts are address book listings of individuals or company representatives that only you need contact information for.

- **Favorite Contacts** – These are contact that are marked as favorite in the contacts list. This gives you the possibility to display only the contacts that are used most.

*IMIS-integrator* Contacts Management allows for the easy management and lookup of contacts. Corporate Contacts can easily be created, updated and deleted by the person responsible for managing the contacts while the other contact types can be created and updated by the specific user. The users can lookup contacts in various ways and a tab is also available to record any communication with a specific contact which may also be linked to specific tasks.

**Venue Management**

Venue management is intended to ensure that all venues are used optimally and to avoid costly and inconvenient double booking errors. The user who is appointed as the Venue Administrator will be responsible for the setting up and management of venues in IMIS. This will include adding venues, updating venues & equipment, booking of a venue and view all bookings made. Any user may view venue booking and apply to book a venue.

**Administration**

Administration deals with the IMIS setup, communication setup and access control within the IMIS system. All other modules installed within the IMIS system will have their own administration sections. The administration sections all have the same basic purpose in setting up the relevant module with access rights, privileges etc.
One of the core business processes of a Municipality is the handling of incoming, outgoing and internally generated documents, and controlling and tracking the flow of the tasks related to these documents. In most cases this is mainly done manually and tasks are tracked down telephonically or by going from office to office looking for the files. The ability to provide customer service is greatly limited by the speed at which these tasks can be tracked down and the person currently in possession of the file identified. Outgoing and internal documents are prepared and saved on personal computers, making the user of that machine solely responsible for document security. It also makes those documents inaccessible to other users who need that information.

**IMIS-doc** ensures delivery of a more effective service to the public and tighter control over internal communication in order to shorten the amount of time spent on document handling. Inter departmental communication is essential to all organizations. It is however a huge challenge. Using a centralized document storage/access point will effectively promote inter-departmental communication.

**IMIS-doc** is an extension of **IMIS integrator** (to manage the workflow of the documents) which caters for the need to manage electronic and paper documents. **IMIS-doc** is one of the few systems available in South Africa which is National Archives compliant which shows the module is efficient and important for all organisations. Meta-data is able to be captured in order to link a document to a variety of other entities such as tasks, processes, people, assets and land.

**PROCESS**

**IMIS-doc** is one of the core modules of **IMIS** as effective document, correspondence and records management plays a crucial role in managing any organisation. Access to information is a key factor to achieving effectiveness in all operations. The process and concept of **IMIS-doc** is as follows:
The IMIS-doc module consists of the following components:

- **Document Management** – This component allows the user to create new documents, index scanned and faxed documents, review indexed documents, review vital and security classified documents and view and export reports.

- **Library** – The Library section allows the user to access information using a file plan search, content search, date search and content management portal. Search for documents using phrases, key words and a catalogue.

- **Records Management** – The Record Management component deals with managing the physical File Plan of the municipality according to the guidelines set by National Archives. This section manages the file plan, file classifications, retention and disposal and also allows the user to view reports regarding these aspects.

- **Postmaster** – The role of IMIS-doc Postmaster is assigned to one user. This user is responsible for distributing electronic copies of all paper correspondence received by the municipality, and for the scanning and uploading of all signed outgoing post. This section allows for the distribution of post, manages outgoing and declined posts and view reports.

- **Content Management** – Allows users to access pre-determined documents from the my IMIS homepage via a portal. Rights must be given to write to and manage the portal and all users may read from the portal. This allows organizations to shorten lead times on important documents for example latest price lists can be placed here so users don’t need to search for price lists and then select which is the correct one from the entire archive.
**LAND MANAGEMENT**

Municipalities are required to keep track of all the properties within their area of jurisdiction for the following reasons:

- Income is derived from these properties.
- Services need to be rendered to these properties.
- Consumers of these services are located at these properties.
- It is mandated by legislation.

**IMIS-land** is the Land Information Management module of the **IMIS** range of products. This module caters for the need to manage land-related information and processes. It allows for the querying, display and manipulation of spatially referenced and related database information which is easily accessible through a easy to use Geographical Information System (GIS).

**COMPONENTS**

The **IMIS-land** module consists of the following components:

- **Land Management** – the section deals with the base information regarding properties.
- **Estates** – this section deals specifically with municipal owned properties.
- **Town Planning** – this section manages all the processes in the movement and changes in property and all town planning applications and uses.
- **Valuation** – Section which manages the valuation of properties.

Each component, allows for querying, displaying, manipulation and reporting of property information.
Land management

For a land owning or managing entity to effectively manage its land advanced knowledge of locations, services required, zonings and valuations is required. Municipalities own and manage vast amounts of land, more often than not, the records and information on specific land parcels is hard to find in paper filing systems or missing. IMIS-land will allow users to easily access all the information required on land parcels. This will provide exceptional results for speeding up decision making as well as making these decisions far more effective. The provision of services to the local population will become manageable as it can easily be broken down to indentify crucial areas and weak points in need of attention. The use of GIS will allow users to graphically display information. This will create understanding as trends and key areas are more easily identified and managed.

Estates

Estates are properties which the municipality owns, therefore this subsection is aimed at aiding municipalities manage their own properties. These properties could be held for a variety of purposes such as to derive a rental income or to be used as a base for the provision of other services. Having quick and easy access to the information on these properties will greatly enhance the capabilities of a municipality to manage its own affairs.

Town Planning

Town Planning is a subsection of the IMIS-land module which caters for the Administration and Management of Town Planning, with regard to geographical issues. The use of the IMIS-land module will prove extremely beneficial to all parties involved with the town planning function of a municipality. All types of applications are available for automation including Consent Usage, Consolidation, Coverage etc.

Information about these Applications can be extracted from the system in the form of reports. IMIS-land will simplify the process of applications as it prompts for all the pertinent information and automates the process to ensure timely correspondence between all parties involved. Town planners find this tool indispensible as it aids them on a day to day basis and provides enormous benefits.

Valuation Management

IMIS-land will aid a municipality in handling the valuations of erven within their jurisdiction. A valuation roll can be compiled and edited. Various reporting options are available for the municipality to derive valuable and key information when making critical decisions. Valuations of properties can easily be accessed to aid decision makers in determining which rates and taxes should be levied. Properties which are still requiring a valuation are listed and the process of acquiring the valuations can be managed easily with the use of IMIS-land. IMIS-mobile can be used to easily capture information in the field. This is captured electronically and instantly database ready.
QUERY OPTIONS

The property information is uniquely numbered using the 21 digit code of the Surveyor General. There are various ways to query property information. These search options are Town Name, Erf No., Farm Name, Farm Portion, Diagram No., Owner Name, Sectional Scheme Name, Demarcation and Property Unique ID.

There are a variety of ways to access the information regarding a land parcel due to the fact that when a query is placed all the information may not be known, the route to the parcel may vary but it must always end at the correct data set.

GIS

IMIS-land allows for Land Information to be viewed on a map of the area built on PlanetGIS.

When properties are selected, they will be shown on the map. Some of the features of the map include:

- Zoom in and out of the map depending on the amount of detail needed.
- Click on any land parcel and the information for that property will be displayed.
- Measure the distance between two points on the map.
- Capture entities on the map.
- Dockable tabs allows the user to switch(toggle) the legend on or off.
- Switch features like aerial photography, infrastructure, topography views etc. on and off.
- Print or Save the map area.
- Floating objects eg. scale, north arrow, legend etc. can be inserted.
- The status bar, which appears at the bottom of the screen, displays hints, map scale, measurements and coordinate information.

Tel: (012) 991-3624
E-mail: info@tgis.co.za
www.tgis.co.za
www.imis.co.za
SELECTED PROPERTY DATA

Once a property is selected, the property data will be displayed in several tabs each relevant to a certain aspect regarding the property. This allows users to create distinctions in information uses as well as in functional areas. Specialist users can quickly access the information they require.

- **General** – General Record Information for the selected Erf, such as the Town name, Registration status, GIS area, Registered area, Financial area and the Street Address, if available. For Farms, the Portion number and Farm name will be displayed.
- **Registrar** – Display’s all the information for the property as registered at the Registrar office. This information is divided according to the Owner detail, Property details, Endorsements, Clearance and Statistics gathered about the property.
- **Diagrams** – Display’s a list of the available Diagrams or General Plans available for this property, depicting the registration image from the Surveyor General. This will include information about the diagram eg. Type and Status. It can also include notes/comments from TGIS employees (whom captured the information) and other users about the diagrams and the filename and location of the diagrams on the system.
- **Photos** – Any photos linked to the entity (erf, asset etc.) will be displayed in this tab.
- **RDP Housing** – Summary information on the application process for RDP housing, which will include information on the applicant, the position on the waiting list and any decisions regarding the application.
- **Councillor** – Councilor information for each ward is easily available.
- **Town Planning** – Display’s zoning, scheme regulation and application information for this property.
- **Documents** – This will include any documents regarding this property including documents in the File Plan (if IMIS-doc is enabled), IMIS-land documents and any General Policies, Bylaws and Guidelines relevant to this property.
- **Complaints** – Any Complaints lodged against a property can be viewed.
- **Reports** – Several reporting options are available:
  - Deeds information – Full deed information for the selected property.
  - Land information – General property information for this property.
  - Map – Displays the property on the map with links to all information.

REPORTS

There are several reports available in IMIS-land. Each of these report types are applicable to the subsections as well but the information they report will vary according to the section. Such as Town Planning will have zoning reports and estate management will have property reports. Reporting will aid in performance management of employees and in locating trends.

BENEFITS ASSOCIATED WITH THE USE OF IMIS LAND:

- Keep track of all current pending applications and the progress thereof.
- Workflow options to generate messages to relevant users (no more running around with stacks of files and correspondence).
- Automatically generated letters and other documents by the push of a button.
- Flexability: User decisions for the preferred methods to be used.
- **GIS**: View all applications in map. Visual decision making aid.
INFRSTRUCTURE MANAGEMENT

One of the main functions of a municipality is controlling the Infrastructure within its borders. This will include water, sewer, electricity, roads and stormwater. IMIS-infra is the IMIS module that provides users a map-based solution for managing and capturing infrastructure data, fully compliant with GAMAP, GRAP 17, the DPLG Guidelines for Infrastructure Asset Management in Local Government, and the International Infrastructure Manual.

The module is composed of different sub-modules, each managing a separate infrastructure component or asset category, such as Roads, Electricity, Water, Storm Water and Sewer. It has links into other IMIS Modules and Functions, such as GIS, Land Management, Records and Document Management. It is strongly driven by Process Automation and Communication Management.

COMPONENTS

IMIS-infra consists of the Water, Sewer, Electricity, Roads and Stormwater modules. Each component is then broken down into:

1) Inventory
2) Assessment Information
3) Asset Register
4) Specific Processes
   a) Application, eg. Water meter replacements, etc.
   b) Comments, Approval etc.

FUNCTIONAL OPTIONS

For all the components of IMIS-infra there are a variety of tools or functions which may be used. Roads and storm water are networks are not able to be linked to specific land parcels but may be located by physical location. Whereas electricity, water and sewer are able to be linked to properties, by being linked to properties, customers may make applications for modifications to the assets and reports can be generated containing all information in one view based on property. These customer reports must be captured with IMIS-customer to ensure that the asset register is maintained.

Query

Locating asset information from the inventory is made easy by a search function. Users can search for a specific asset or for an asset category such as substations or for property linked asset may search using specific land parcel information. Upon locating the desired asset all the linked information will be available and displayed. This linked information will include location, condition, uses, description and value. The query function has been built so that with even the most minimal amount of correct information the desired asset may be located, this is to increase the ease of use, accuracy and speed with which decisions are made.
Manage

Assets may be added to the inventory upon completion of building and then the required pertinent information input. For property linked assets application for modifications may be lodged. Asset details may be updated as well as assessments modified to changes in asset condition, which is made easier with the use of IMIS-customer, as complaints/reports are linked to assets, a job card is generated tasking the repair which is only completed when changes, repairs, costs and all information relating to the job is logged and captured. This ensures integrity of the asset register.

Report

Reports may be generated for asset populations or for specified groupings (location, class, type, condition, etc.). These reports fall under the general categories of reports namely discrepancies, inventory, asset register, assessments and progress reports. Under each category there are a variety of sub reports. Each category of reports may not be applicable to all asset sub modules of IMIS-infra and may not be available.

The reporting function will allow decision makers to generate the necessary and desired information into easy to understand and use reports. This will allow them to make the correct decisions with regards to budgets allocations and planning on maintaining and upgrading the infrastructure.

PROJECT METHODOLOGY

IMIS-infra is designed for the Management of Infrastructure Assets, through the creation and maintenance of asset registers. These projects follow a specific process as there are a variety of spheres or factors which can be incorrectly completed and will undermine the entire operation. TGIS has extensive experience with these projects and has developed sound skills to manage the process to eliminate the majority of problems experienced. TGIS are the cadastral experts and will provide extra value by using software and processes which link assets to land parcels and locations, as this allows for easy graphical representation which promotes understanding and issue conceptualization. To utilize our field data gathering tools please refer to IMIS-Mobile and our 3D Mobile Mapping service.
FINANCIAL MANAGEMENT

Accurate Financial Management is vital in any Municipality. The IMIS-fin module links financial information to the geographical land parcel and allows for spatial queries to be run on the financial information.

The information in the IMIS-fin module is data retrieved from the financial system. This data is extracted through an automatic process running at specified times. The financial system information is updated to IMIS on a daily basis. This information can then be queried for spatial reporting.

The main function of this module is to align the Municipal Financial System with the real world as defined in the IMIS-land module. Graphically displaying financial information will aid in conceptualization of information which will provide decision makers with an edge to govern more effectively.

PROCESS

IMIS-land links to Municipal Financial System → Query Property Information → View Financial Information for selected property

Spatial Analysis

Discrepancy Reporting

COMPONENTS

The IMIS-fin module consists of the following components:

- **General Information** – This section displays general financial information about a selected property. This will include general debtor information, age analysis information, consumption information, balances, valuations and indigency.

- **Query Options** – This option allows the user to query properties and accounts.

- **Reports** – Various Reports are available to provide financial information in a printable format.
**Integrated Municipal Information System**

**BUILD MANAGEMENT**

**IMIS-build** is an extension of the **IMIS** system which caters for the management of Building Plan applications with associated operations. It will also serve for the electronic filing of digital plans which may be captured from paper plans. In order to utilise **IMIS-build** the **IMIS-integrator** module and the **IMIS-land** module must be installed and functional, as much of the data and settings are extracted and utilised from these base modules.

**COMPONENTS**

The **IMIS-build** module consists of the following components:

- **Building Plans** – to add and maintain Building Plan applications.
- **Building Register** – to create a register with detailed information about buildings to be used for reports and to form a basis for improvement valuations.
- **Inspections** – to locate outstanding inspections, to add inspection dates and capture routine inspections and relating information.
- **Sewer Connections** – to capture Sewer Connection applications.
- **Vehicle Entrances** – to capture Vehicle Entrance applications.

**BUILDING PLANS**

Building plans are submitted to a municipality to ensure that all criteria and legislations are in order to have safe and functional buildings. The Building Plans module will inform the user of all previous applications logged against this property. New applications can now be captured easily. **IMIS-build** will prompt the user along the following automated process:

![Building Plans Process Diagram]

**BUILDING REGISTER**

All information captured or altered regarding building is stored within the building register. Once an application has been approved, the building work information becomes available in the Building Register section, and further information about the building can be captured and updated for the Building Register. The register’s database structure is logical which allows the user to easily view the entire dataset or to filter specific searches to extract specific information.
INSPECTIONS

Building inspectors, whom check the progress of the building during the building process at various predetermined stages and occasionally randomly as well, can be more effectively utilized. IMIS-build will help manage this process. Inspectors will receive orders automatically, be booked via the system for inspection and all pending and completed inspections will be viewable via the reporting capabilities.

After an inspection is completed the inspector will update the system by completing a variety of information including the number of the visit the reason for the inspection, as well as any notes taken. Once construction is completed and the final inspection has taken place and certification is granted a certificate will be generated and can then be delivered to the applicant.

SEWER CONNECTIONS

Allows applications for additions or alterations to sewage works to be captured and monitored in much the same fashion as building plans.

VEHICLE ENTRANCES

Allows applications for additions or alterations to vehicle entrances to be captured and monitored in much the same fashion as building plans.

PROPERTY DOCUMENTS

All the reports, certificates, invoices for a specific property are printed during the workflow processes and can be reprinted at a later stage if necessary. These reports are customized to auto complete from the information already on the system. This auto complete function will save valuable time and eliminate errors. Invoices, Approval certificates and occupancy certificates are easily generated, distributed and managed within IMIS.

REPORTS

Building Plan reports can be extracted from the IMIS-build system on all the properties in the Municipality or on a specific property. The Reports are divided into Management Reports available to management for day to day, weekly, monthly and yearly reports as well as Discrepancy Reports used to identify skipped processes and re-introduction of the application into the system for completion.
**PROJECT MANAGEMENT**

Any entity has the need for efficient project management to keep track of time and money spent on a project or on projects. All the estimated time and costs added during the expected duration of the project will sum up at the end to set the estimated time and costs for the different phases of each project. Constant vigilance is essential to ensure these targets are met. IMIS-projects allows for the efficient management of any project by following the process from start to finish.

With IMIS and the various reporting options any decision maker will have access to the necessary information to analyse and break down any activity to understand the process and costs involved. One of the most vital facets of project management is that of understanding the end goal of the project and linking each activity towards achievement of that end goal better project management and better management of infrastructure, which will provide a higher quality of life for all South Africans.

**IMIS-PROJECTS PROCESS**

- **Project Definition**
  - Using IDP Module
    - Integrate with project management - YES
    - Finished
  - Using Project Management Module
    - Integrate with project management - NO
    - Project Management
    - Time Management

**COMPONENTS**

IMIS-projects consist of the following sections. The IDP and Project Management Sections can run independently or function together depending on the desired setup. When IDP functions independently, there are no time management facilities.

### IDP

Municipalities are required to create and submit Integrated Development Plans (IDP’s), and then to execute the projects defined in the IDP’s. In the Department of Provincial and Local Government (DPLG) guide pack literature and legislation, the IDP process comprises of five major phases:

- Analysis when issues in communities are identified, and prioritised.
• Strategy when developmental objectives are defined and strategies to reach these conceived.
• Projects when project proposals are designed.
• Integration when these are rationalised into programmes.
• Approval when comments are received and council approves final plan.

**IMIS-idp** is the High Level Project Planning section of the **IMIS** range of products allowing creation of the IDP-document and all its required processes and reports. **IMIS-idp** manages the entire process and allows for analysis of plans as well as setting the plans, with a special section to manage the execution of plans. The system will not only simplify this complicated process it will also allow for effective management and thus produce excellent results.

The planning for projects is logically done by specialists in their particular domains, which all eventually end up in a “Project Group” for reporting and execution, by specialists. Beginning with the end in mind, and to ensure that project planning is done by the right people, the **IMIS-idp** begins by identifying the major “Project Groups” for which reporting will be done and within which planning responsibility can be clearly assigned.

**PROJECT MANAGEMENT**

The Project Management section provides the functionality to register, manage and monitor projects and performance. Project Management typically records the following components:

- Link Organisation
- Project Group, Type, Group Output, Name and Number, Phases and PhaseGoods as well as Output Activities
- Project Manager and Team linked to the Organogram

Projects are managed through all phases including planning, activation, execution, monitoring and then reporting after completion. Various reporting options are available so the decision maker will be able to visualise the data in a way that will be easily interpreted by them.

It is important that the administration of the projects is done and has been defined in consultation with the different team members to define the necessary activities and time frames for each to complete the project on time and within budget. The automated process flows ensure all parties are informed of their duties and bring in the all important aspect of accountability.

**TIME MANAGEMENT**

Time management is the section that handles all the time capturing aspects of **IMIS-projects**. When a new project is activated in **IMIS**, it will immediately display under the time management module to allow users to log time against that project. This allows for efficient record keeping and reporting on the projects. Users should log time at least every day and will specify which project they worked on how many hours they spent and will provide a brief description of the exact activity undertaken. Reports can be generated to view the time and individual has spent or how much time has been spent on a project. There are reporting options available so that project managers can break down the project and develop an understanding of what occurred and can begin to conceptualise the reasons for these occurrences offering increased knowledge and skills for future projects. Trends and critical areas for projects may be identified allowing management to take the necessary actions.
**Integrated Municipal Information System**

**HUMAN RESOURCES MANAGEMENT**

**IMIS-hr** is an extension of **IMIS Integrator** catering for the need to manage the administration of employees and manage the **Leave** cycle process. It is a standard module as it drives the process of many other modules, the entire module is not standard as there are added functionalities that should be requested.

The main asset of a Municipality is its employees. The **IMIS-hr** module assists in the process of Human Resource Management. With the effective management of employees a myriad of benefits are achieved. Efficiency, accuracy, timeliness, accountability and cost savings will all be achieved once personnel management is conducted in a fair and effective manner.

**COMPONENTS**

The **IMIS-hr** module consists of the following components:

- **Personnel Management** – Deals with the management of the employees in the Municipality, capturing of employees on **IMIS**, setting up of the Organogram and assigning employees to posts in the Organogram.
- **Leave Management** – Deals with the entire leave cycle, from planning to approval of leave.
- **Performance Management** – Generation and viewing of reports related to personnel and their **IMIS** usage levels.

**IMIS-HR PERSONNEL MANAGEMENT**

This section consists of the following components:

- **Manage Employees** – New employees are registered on the **IMIS** system as **IMIS** users. Changes to the employee status can now be managed on the system. This allows management to hold complete records of employee information.
- **Organogram Setup** – The **Organogram** determines the organisational and reporting structures in the Municipality. The system uses the Organogram to determine the path of automated correspondence.
- **Post Declaration** – This section deals with linking employees set up in the **IMIS** system to posts defined in the Organogram. This ensures that all task and message are sent to the correct employee.

**IMIS-HR LEAVE MANAGEMENT**

This is an extra section that should be requested and deals with the whole leave cycle, including planning, request, approval/rejection, cancellation and reports. Managing the leave cycle will allow managers to control supply and demand for employees and other HR resources. This is beneficial as it will ensure that there is always sufficient staff to keep the municipality functioning. Users can set a replacement for themselves to handle critical tasks when going on leave, using the in/out whiteboard function. This ensures no backlogs.

**IMIS-HR PERFORMANCE MANAGEMENT**

This section displays a set of reports relating to **IMIS**-Usage statistics. Reports are subdivided and reports are available for General Usage, Workload, Messaging, General Tasks and Workflow Tasks.
CUSTOMER CARE

One of the most important functions in any business sector is to manage customer correspondence (eg. Complaints and Requests). IMIS-customer is a spatially integrated and comprehensive tracking and management solution that offers municipal officials and councilors constant updating, management and reporting on customer complaints, compliments and queries. It also allows tracking and management of internal complaints.

The main functions of IMIS-customer is to improve response time with customer complaints, decrease cost for municipality and improve overall customer satisfaction. All correspondence is linked to either a land parcel, or to a geographical point, and the process is divided into four sub-processes.

IMIS-CUSTOMER PROCESS

IMIS-customer uses the built-in process automation in IMIS-integrator to ensure that relevant parties get the information relating to customers in a timely manner. This is to ensure the fastest possible response times. It also includes elements of responsibility as managers will be able to view how the process has progressed. The process is graphically represented below:

- **Logging Correspondence** – This is the first step in the process and is a two fold step. Firstly all details must be logged and in the second step a location must be assigned to the correspondence.
- **Task** – A task is generated and forwarded to the relevant department and individual and depending on the nature of the correspondence, an artisan can be tasked to execute inspections and repair actions in the field.
- **Updating Job Card** – The artisan must complete a job card in the field of the actual work performed and this must be captured onto the system into an electronic job card.
- **Financial Report** – The final step in completing a customer correspondence is to determine responsibility for costs incurred. This section will inform the Financial Department to do the correct allocations.

IMIS-customer is essential for municipalities as it encompasses customer touch points. It is crucial for effective service delivery as it decreases lead times and place the onus for service recovery onto a specific entity. IMIS-customer is essential to the maintenance of Asset registers within IMIS-infra as asset condition is affected both during the failure and repair. This information must be captured to maintain the integrity of the asset register.

IMIS-CUSTOMER REPORTS

IMIS-customer has several reports available for monitoring and statistical purposes. The reports are divided into Progress reports that will monitor and report on the progress of calls logged and Performance reports that will monitor the actual call operator.
**BUSINESS MANAGEMENT**

Business Management entails all the functions that are intended to make a business run smooth on a day to day basis. For this to occur all functions within the business must be managed effectively and efficiently. The **IMIS-business** section of **IMIS** entails all functions surrounding the management of a business, not covered in other specific **IMIS** modules.

**IMIS -BUSINESS COMPONENTS**

**IMIS -business** consists of various components to help in the managing business processes. These are:

- **Supply Chain Management** – Management of the procurement process
- **Contract Management** – Process of managing contracts to highlight key clauses and expiration dates.
- **Meetings Management** – Setting of agendas and resolutions recording for meetings.

**SUPPLY CHAIN MANAGEMENT**

Supply Chain Management is a subsection of the **IMIS-business** module which caters for the Administration and Management of Suppliers and the requests to purchase services/goods from registered and accredited suppliers. Petty Cash and the process of procuring petty cash for the purchase of goods and services by municipal employees can be managed and audited easily.

**CONTRACT MANAGEMENT**

Contract Management caters for the Administration and Management of Contracts. Various actions and or functions within a Municipality are governed by Contracts or Agreements. Various clauses exist in these Contracts that can have a large influence on the financial status of the Municipality. It is thus necessary to keep track of all these Contracts and the Conditions therein. Effectively monitoring the contracts entered into will ensure that there is accountability for all shortcomings by contracted entities. The expiration of contracts often happens unnoticed and may cause service delivery problems as nobody is contracted to fulfil the obligations. Tracking expiration dates and reminders to indicate renewal activities are in order and will ensure a consistent and efficient delivery of services by the municipality.

**MEETINGS MANAGEMENT**

**IMIS–business: Meeting Management** consists of two main processes, namely Agenda Management and Resolution Management.

Various types of Agendas can be managed by means of **IMIS**. Agendas are compiled to give a formal structure to a Meeting. These can be compiled in a participative or a non-participative manner.

This is a process driven module, various role players will be involved and each role player will have to perform certain actions. Various directorates or departments can request that Items be put on the Agenda. **IMIS** will ensure effective communication takes place to facilitate meetings becoming more effective.
SOCIAL PROCESS MANAGEMENT

Social refers to events that affect the community on a inter and intra personal level. These will include heritage sites, cemeteries, health inspections and so forth. The module in IMIS that deals with these issues is IMIS-social. Each of the subsections allows for the user to capture the relevant event as well as link the event to a geographical spot on the electronic map or Geographical Information System (GIS).

COMPONENTS

The following components can be found in the IMIS-social module.

- **Cemeteries** – This section enables users to manage the allocation and use of graves, including the financial aspects involved, such as funeral services. All these processes are linked to the geographical information system.

- **Demographics** – Demographics is an extension of IMIS-land which enables users to query and view census data on maps. This module is only for information purposes and the information is historical. Demographics including age, race, income, religion, language, gender, employment status, occupation, education, residence and sources or facilities available (water, electricity, refuse, telephone and ablution) are all tracked and are reportable on.

- **Disaster Management** – Disaster Management allows users to capture, manage and view reporting information about natural disasters as well as linking these disaster areas on the map. Reports are generated and displayed which may list all recorded disasters as well as financial implications. This section is for the capture of disasters and not for the direct response management of the disaster such as disaster relief, however the information being viewed in a graphic manner will aid decision makers more effectively and quickly resolve the negative impacts of the disaster.

- **Health** – This section will allow for the efficient management of Health inspections. Health allows for the user to capture dates and times for Health Inspections done at clients as well as extra information captured relating to the inspection, including a tool to manage the inspectors schedules and performance. Reports are available listing all recorded inspections. These health inspections are also displayed with the GIS.

- **Heritage Sites** – This section enables the capture and viewing of information about Heritage Sites. Heritage Sites can be segmented according to type or location.

- **Demarcation** – This module displays the municipal boundaries as set by the Municipal Demarcation Board of South Africa. The Demarcation section enables users to add/update councillor information in wards. Reports are also available listing all properties in a ward.

- **Housing** – Housing enables users to capture and manage applications for RDP housing facilitating better management of the process in order to streamline the process.