JoGIS News
Progress Report

Joburg

a world class African city

January 2015   Communique to all

In this issue

Contact Corporate GIS

We value your comments and suggestions.

Please e-mail comments and suggestions to cgis@joburg.org.za

The Excitement of Summer

Here in Johannesburg we are in the midst of summer and experiencing nature at its best, being blessed with long, sunshiny days, showers of rain, vegetation in all shades of green and… the scent of roses and lavender!

Having said that, we are also aware that not all is sunshine and roses. The world, our country, our city and its citizens are affected by huge challenges, be it Ebola, strikes, power supply, or any of the other issues that we are confronted with from myriad of news and communication channels.

However, the exciting part is that Geographic Information Systems (GIS), in some form or another, are playing a major role in finding solutions for these challenges and making the world a better place to live in. During an interview with Esri President Jack Dangermond, he highlighted how GIS is helping to track and trace the Ebola situation, identifying hotspots through GIS crowdsourcing and spatial analysis, enabling pro-active, targeted actions. Furthermore, GIS allows municipalities and power suppliers to know which customers are affected by which node in the power supply network and GIS routing plays a major role in effective resource and asset management. Many more examples exist.

In line with the above, we have decided to add a section to our newsletter highlighting how GIS is used strategically in the City of Johannesburg. Those of you who attended our GIS Day in November 2014 would have had a taste of the topic already. To us, our 3D GIS application for the Corridors of Freedom is a flagship example, award winning and the envy of many municipalities. Well done team!

Although this issue contains a *"first shot"* at this topic, you can expect more in later issues and we might even publish a special issue for this purpose. CGIS is in the process of collecting information from COJ Departments, Municipal Entities and external customers to strengthen the strategic role of GIS in the City. We believe that through this exercise and your participation we will be able to quantify the GIS investment, identify gaps and design the *"GIS value-add roadmap"* to make you more effective in achieving your goals and your success.

Our GIS Champion has been identified and you might want to watch this space for more information.

Thank you for your continuous support. Stay *"cool"* and enjoy this edition of JoGIS News!

Marcelle Hattingh
Director: Corporate Geo-Informatics

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Customer Satisfaction Survey Results
July 2014 - Dec 2014

Corporate Geo-Informatics (CGIS) conducts a bi annual customer survey and recognizes the survey as an essential tool with information about our customer expectations, customer satisfaction and strategies for improvement.
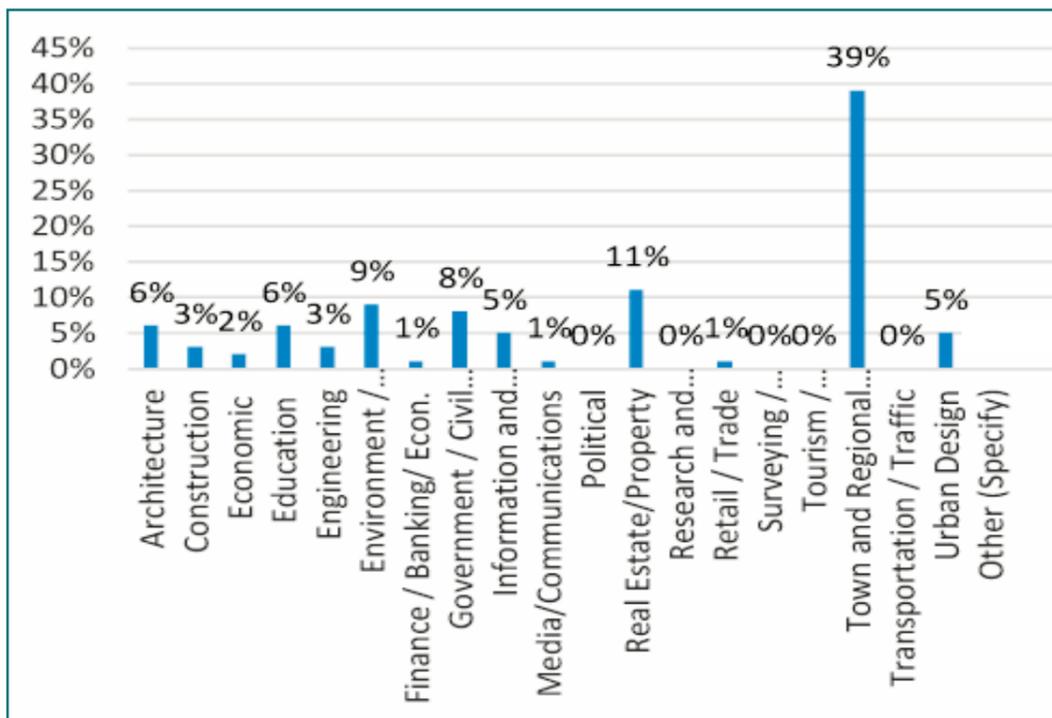
In December 2014, 67 questionnaires were returned.

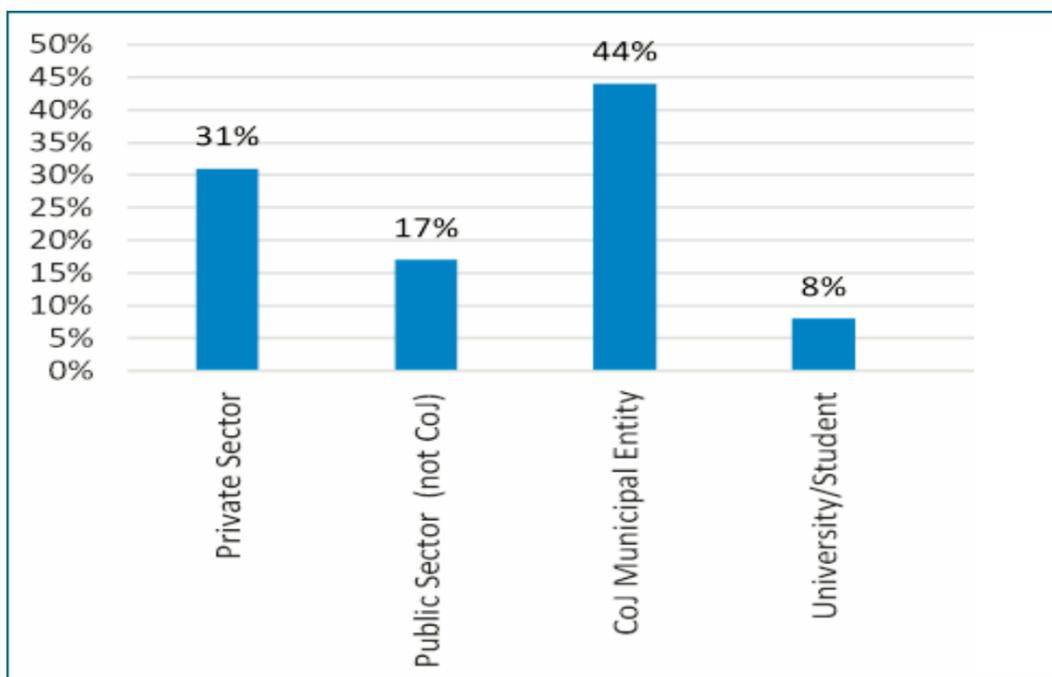A summary of the results are reflected below:
1 - Poor (0% - 29%)
2 - Below average (30% - 49%)
3 - Satisfactory (50% - 69%)
4 - Good (70% - 89%)
5 - Excellent (90% - 100%)

Overall customer service - 85.39%
The next survey will be distributed during the months of May/June 2015.

Primary industry segments that participated in the survey

Perspective of clients that participated in the survey

Progress Report July 2014 - December 2014

Spatial Information section:

For the period July 2014 to December 2014 the Spatial Info Section has captured 5 510 newly registered and S.G. Approved properties. A total of 104 Sectional Schemes with a total of 3838 units were attended to.

15 282 Cadastral Corrections were done and 5 347 Status Changes were attended to. 94 New CGIS Centre Lines (Roads) and JRA Road Links were captured. 83 Corrections to the CGIS Centre Lines (Roads) and JRA Road Links were done.

Fax service section:

There are currently 406 subscribed clients with 3403 requests each attended to within 2 working days (16 hours).

Projects section:

A total of 161 requests were attended to with an average of 98.76% requests completed within 3 days.

Online Maps website:

For the first half of the 2014/2015 financial year (July - December 2014) the internal website on "City Maps" via Jozinet received a total number of 1 530 017 hits with an average of 255 003 hits per month.

The external website via eservices *(http://eservice.joburg.org.za)* experienced a total of 1 201 031 hits with an average of 200 172 hits per month, for the same period.

This is a total of 2 731 048 hits for internal and external websites over a 6 month period.

Top 5 themes accessed:

Property Theme
Zoning Theme
Planning Theme (Internal access only)
Transportation Theme
Census Theme

Top 5 users:

Corporate Geo-Informatics   Johannesburg Property Company
Valuations Department   Development Planning Department
Revenue & Billing

How GIS is used strategically within the City of Johannesburg

Problem solving:

The Property Information Systems section is responsible for all deeds ownership information and whether a stand or property should legally exist. Verifying ownership data cannot be done without verifying the spatial existence of a property. Discrepancies in terms of the size or description of a property are often only resolved after spatial investigations were done in conjunction with the deeds data. The lineage (parent to child relationship) of a property can clearly be seen spatially.

Spatial enabling Departments:

Various departments within the City of Johannesburg, inherently collect and process their data on a daily basis. This data is usually captured and stored as hardcopy within an arch lever file or electronically within an excel spreadsheet. As the data continues to increase, ways to effectively manage and distribute the data is required. The main challenge is to automate and properly handle large volumes of data and the exchange of information into user-friendly methods for visualization and interaction with existing spatial data.

During the 2010/2011, a project was embarked on to spatially enable the facilities of Community Development (Comm Dev).

Working together with CGIS, Comm Dev implemented a methodology to electronically capture their data. In 2011/2012, the Comm Dev started the development of a multifaceted Facility management system that would help the department to properly quantify the maintenance and budget requirements. During 2012/2013 Comm Dev embarked on the maintenance and further additions of the information such as status of the condition, inventory, scanning of building plans, compliance and occupational certificates etc. Comm Dev is now able to use the spatial information within the GIS environment to create required maps and make informed decisions. During 2012/2013 CGIS assisted the Department of Economic Development with creating a socio economic database for the City.
During 2013/2014 CGIS assisted Health with phase 1 of the Municipal ward based primary health care (PHC). In 2014/2015 we continue assistance with phase 2.

Ward delimitation of boundaries:

CGIS plays an important role with assisting the Municipal Demarcation Board by using GIS for the ward delimitations criteria such as residents that regard themselves as a community, factors such as distances that can be a challenge for participating in meetings of ward committees, the topography and

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physical characteristics of the municipal areas that need to be considered when drawing identifiable ward boundaries.

Ward profiles

Ward Profile Atlas for the City of Johannesburg was compiled based on the national population Census 2011 data release by Stats SA. An overview of demographic and socio-economic trends for the City's seven administrative regions per ward, which totals to 130 wards. Incorporated in maps showing pie charts and tables allowing for regional and City comparisons, so that the City's stakeholders can better understand the unique circumstances and needs of individual communities as broken down by wards. The profile would be used as a working tool for the Ward councillors, regions and departments to perform analysis based on the Census 2011 data. It is also used as a tool within the Transit-Oriented Development Corridor (known as the "Corridors of Freedom").

Municipal ward based primary health care:

The Municipal ward based primary health care (PHC) has been introduced by the national minister of health for better realisation of National Health insurance. Each municipal ward has at least one PHC outreach team. The team visits households in their catchment areas and documents the demography and epidemiology of those households and their health status.

Focus is on community mobilisation, health promotion and prevention and the priorities include maternal, child health, HIV and TB. 10 pilot sites were identified as phase 1 using GIS to create situational maps and a visual framework of the household health records.

Urban Observatory Project:

The various GIS components within the City of Johannesburg contribute certain data layers towards the Urban Observatory Project powered by ESRI. The observatory allows users to compare and contrast a wide variety of systems and structures including water distribution, power grids, street networks, population density, public transit, open public spaces and sanitation services. The hope is that users, whether it be government officials, business leaders, or ordinary citizens, can determine the impact of urban growth and how that growth is impacting the world. The maps from the Urban Observatory can also be used to view and compare population age, quality of life, health care and cost of living in a dynamic way. To explore a variety of cities and themes go to the link below:
http://www.urbanobservatory.org/compare/index.html

Registered vs unregistered property:

In the City of Johannesburg, there are incidents where informal settlements formed on either a farm land or proclaimed township, but the actual footprint of settlements does not merge with the cadastral footprint. There are also cases where land is being

used and occupied by the private sector without the legal processes being formally concluded. There are situations where housing projects have been initiated and developed on council and provincial land without the legal process of township establishment being concluded. The City has embarked on various projects to address these challenges. These include regularization of land, formalisation of informal settlements. This project focuses on the use of Geographic Information System (GIS) as a tool to aid in addressing some of these challenges. GIS technology is capable of answering spatially related questions such as what development activity is happening, where is it happening, why is it happening?

The purpose of the project is twofold. First, it aims to identify where development activity is taking place in the City and determine whether it is legal or illegal development. This refers to the properties within the process of township development or subdivisions which have not yet been concluded but the development is occurring. If illegal, the necessary measures are then to be taken by the Development Planning and other departments or entities involved.

Executive dashboard:

The Corporate Geo-Informatics Directorate (CGIS) identified an opportunity to develop a user-friendly, graphical, real-time representation of current City key performance indicators, allowing Instantaneous and informed decisions to be made by executive management.

A pilot project was initiated in 2014, sourcing most recent economic data from the Department of Economic Development and the Department of Group Strategy, Policy Coordination and Relations.

A user friendly executive dashboard application was developed, utilizing spatial data from the City's GIS database and combining it with the sourced economic data.

The interactive dashboard will allow users to customise their reporting requirements and view the result/s on the dashboard. Users will be able to access the application on any handheld device, spanning several platforms (e.g. Windows mobile, Android, IOS). Launch date to be finalized, once thorough testing has been concluded.

3D building models:

The Corporate Geo-Informatics Directorate's aerial imagery database is updated every three years, budget permitting. New aerial products and related technologies are investigated and sourced in order to expand on the existing range of in-house aerial products. 3D building models were requested for key areas (e.g. CBD's) within the City of Johannesburg's jurisdiction area during 2012.

The Corridors of Freedom project created an opportunity to represent development proposals on a 3D platform, showing existing and future scenario's side-by-side. The 3D models were successfully used by the City Transformation Department during a recent International Planning conference, for which they received an award.

Online map viewers:

The Corporate Geo-Informatics Directorate (CGIS) hosts and maintains two online map viewers for internal- and external clients. Core property related data can be obtained from the viewers, including (but not limited to) land parcels, street addresses, street names, zoning- & ownership information and aerial imagery.

The content of the online map viewers is updated twice weekly in order to reflect the latest approved property related changes within the City of Johannesburg.

Various City of Johannesburg business units utilize the internal online map viewer as part of their operational workflow process. The Township Application System (TAS), Building Plan application System (BAS), Law Enforcement System (LES) and Johannesburg Property Company application system (JPC) have been integrated with the online map viewer to validate property related information during the application registration phase.

The internal online map viewer has also been customized to empower selected Town Planning staff to create Map3 A- and B series maps as part of Town Planning Scheme amendment applications.

Development of a system generated Zoning certificate have been completed which will improve turnaround times at the CGIS Public Information Counter Section. Testing of the application is underway and will be implemented on the ArcGIS for Server platform.

C40 Cities Climate Leadership Group Mayors Summit Story Map:

Story maps use geography as a means of organizing and presenting information. They tell the story of a place, event, issue, trend, or pattern in a geographic context. They combine interactive maps with other rich content - text, photos, video, and audio - within user experiences that are basic and intuitive. Story maps also use interactive web maps created with ArcGIS Online, Esri's cloud-based mapping and GIS system. ArcGIS web maps let you combine your own data, including spreadsheets

and GIS data, with authoritative content and thematic maps from Esri and the GIS community. The web maps support visualization, queries, analytics, and popups for map features with rich content including photos and graphs.

This proved to be a very effective and relevant tool to showcase the C40 conference projects and measures that are and have been undertaken in an effort to mitigate, adapt and build resilience towards climate change.

Rates & Taxes:

GIS has been used for tariff modelling based on Land Information System (LIS) for property information.

GIS also supports the enhancements of the Rates and Taxes policy using zoning, area, values, categories and ownership information from the LIS.
Furthermore, Rates and Taxes (Finance) utilise the LIS Admin client system, Aerial photography, Pictometry and the GIS online maps website on a daily basis.

Research and Development (students etc.): Spatial risk assessment for an earthquake scenario in Johannesburg

Recently CGIS assisted a student from the University of Pretoria, studying his BSc (Honors) in Geo-Informatics. His research project was to assess the effects of earthquakes on both buildings and people, seismicity on infrastructure in the Greater Johannesburg area, particularly the potential loss that might be caused. His main challenge was to obtain seismic event data in the Greater Johannesburg area for the last 10 years so that he could map out points of current high seismic values. CGIS requested the Council for Geoscience to assist the student with the seismic data. He also collected building valuation information for specific buildings in the City of Johannesburg for his analysis.

With the data gathered he then identified further study areas like Sandton.

Thereafter he ran earthquake simulations. Once he collected enough data on the areas affected, he finalized the areas to then focus on the physical loss modelling, his risk assessment.

Corporate Geo-Informatics was invited to attend his final presentation contributing to his final year mark at the University of Pretoria. The CoJ received recognition and appreciation for GIS support and supply of crucial GIS data.

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Analysis of road traffic accidents hotspots within the corridors of freedom

The aim of this CGIS analysis project was to identify accident-prone areas in the three Corridors of Freedom (CoF) areas using GIS tools. This involved plotting individual accident spots, identifying accident-prone areas using GIS's spatial analysis tools.

The above aim was achieved through generating a data analysis map for the three CoF areas using ArcGIS 10.2. The data used involved two sources i.e. primary and secondary data sources. The data collected from primary sources included the geographic coordinates of some of the accident hotspots and the secondary data source involved sourcing information from existing records. Such data included traffic accidents records for different road junctions in the city.

The map on this page shows the result of the hotspots analysis of fatal car accidents within the three Corridors of Freedom, namely; Louse Botha, Empire-Perth and Turffontein.

The map gives an insight of the most fatal car accident prone areas in the CoF areas. This information can be used to inform the decision-making process especially with the transportation department, traffic and other departments.

The project equally showed that GIS technology is able to handle traffic accident analysis. As the result is presented in a single map format, it is easy to interpret. The GIS is an effective tool to display different types of spatial accident distribution. The use of GIS enables relevant accident data to be quickly processed and displayed on a map. The results of this project can also help to improve the road safety by pro-active advanced planning and maintenance.
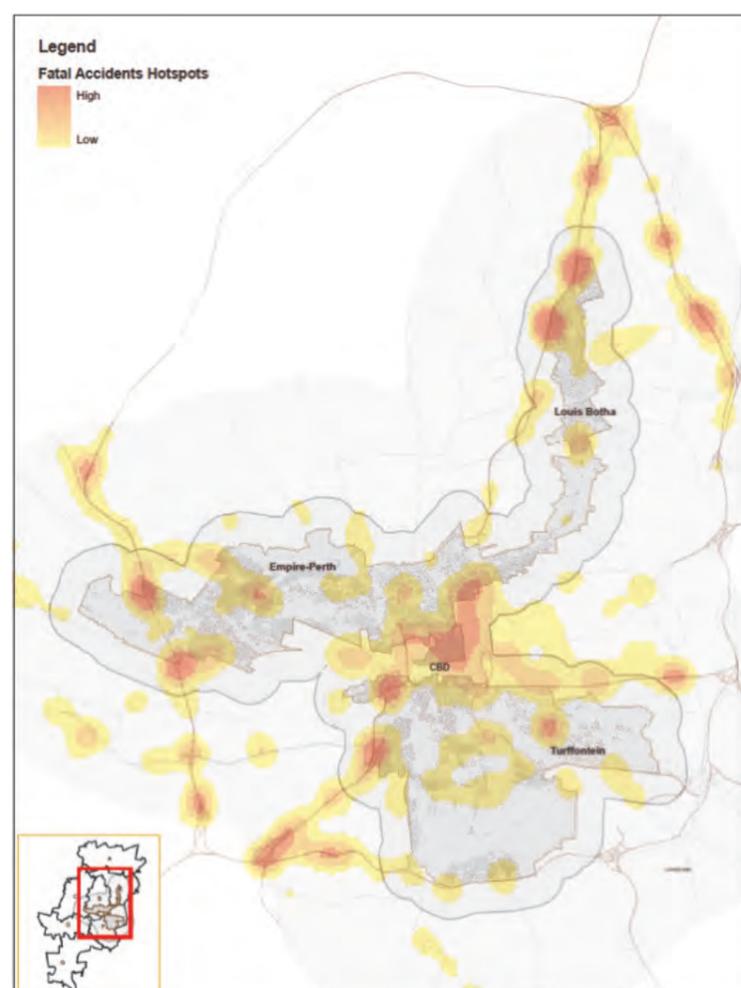
Data Quality

Registered Properties/Sectional Title Units without owners on LIS

LIS became responsible for the loading and processing of Deeds ownership information in 2010. Between 2010 and 2012 focus was on the enhancement of processes and applications to load and process the weekly deeds transfer files as received from the Deeds Office. In June 2012 a project was launched to enhance the quality of the Deeds Data on LIS especially transfers registered prior to 2010.

The number of registered properties and sectional title units on

LIS without owner information was identified. These properties need to be investigated individually in terms of the correct ownership and status of the property according to the Deeds information. The ownership information is then manually captured on LIS accordingly.

Significant progress has been made since June 2012 as indicated below:

	Total registered properties	Properties without owner information	% of registered properties without owner information
June 2012	620 719	28 433	4.8
June 2013	623 323	16 436	2.7
June 2014	625999	11 636	1.8
January 2015	634224	7 300	1.1

	Total registered properties	Properties without owner information	% of registered properties without owner information
June 2012	191 020	41 247	27.4
June 2013	195 341	8 116	4.32
June 2014	197 188	941	0.47
January 2015	203134	524	0.25

Ownership information currently outstanding is more time consuming to resolve due to missing information either in the Deeds Office (e.g. ID numbers of buyers or sellers) or the Survey General Office (e.g. subdivision diagrams or consolidations). The aim is to complete the project by June 2015.

Deeds Alignment Project

The aim of the project is to compare the City's existing property and ownership information with the Deeds Information. This is an extremely complex process that requires special technical skills and property knowledge. Both the deeds data and the LIS data are also dynamic as it is updated daily.

A pilot project (phase1) was launched in June 2013 to determine the methodology. An area of 1 520 properties were identified and validated.

The process entails the purchasing of the raw deeds data, the loading and formatting of the deeds data in a usable format and the validation of the individual deeds records in terms of completeness.

The raw deeds information is then compared to the existing data on LIS in terms of:
  i)   The legality of the property (existence of property and status of property on LIS)
  ii)   The ownership in terms of the buyer information, seller information and possible endorsements
  iii) The lineage of the ownership information (current and history owners)
  iv)   The lineage of the property (the 'parent/child' relationship of the property)
  v)   The completeness of the street address information on LIS.
  vi)   The completeness of the zoning information on LIS.

A second phase was launched in June 2014. The area identified includes 10 533 properties. The aim is to complete the validation of these properties by June 2015.

Special projects:

During the course of the 2014/2015 financial year, the Spatial Information Section will be attending to various projects to ensure the continuous adherence to Data Quality. Six Projects have been identified for this purpose and are currently in progress excluding the Township Title project:.

1. **Reverse Status List No.16**
   This project entitles a number of 1 621 records which were identified for reversals. The reversal in 99% of the time evolves the status being changed from registered to S.G. Approved as the properties either do not yet exist in Deeds Office or are still registered as T/T (Township Title) . This project has been completed and is thus 100% resolved. The Reverse Status List is sent to all the role players in the various Departments that are also affected by these corrections to inform them of the changes and to supply additional information that assist other role players in the value chain(s) to their work easier.

   The following is attended to during the course of the project::
   • Name of township / farm / agricultural holding
   • The SG_id of the property to be reversed
   • From current status
   • To new status
   • The SG_id of the property replacing the existing property
   • Registration date of the replacing property
   • Current value displayed of the property to be reversed

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- Current value displayed of the replacing property
- Legal area of the replacing property in square metres
- The reason stipulated for the reversal to be done (Not yet registered in Deeds Office, Property still T/T in Deeds Office or General Plan withdrawn / Property re-layout)

2. T/T Properties

The T/T Properties Project also entails the reversal of properties This project will commence during January 2015. It exists of 3 258 properties that need to be investigated and if need be, the status reversed.

3. Deeds Alignment Pilot Area

This project commenced during the previous financial year and was completed during this financial year. This project attended to all land type codes, erven, farms and agricultural holdings. A total of 1 114 records were verified during this period. This project is 100% resolved.

The following was attended to during the course of the project :

- Name of township / farm / agricultural holding
- The topology of each property verified
- If any topology error exists, it is corrected
- The lineage of each property is verified
- If any lineage error exists, it is corrected
- The legal area of each property is verified
- If any legal area error exists, it is corrected
- The land type codes of each property is verified (1 = erven, 2 = farm and 3 = agricultural holding)
- If any land type codes exists, it is corrected
- All slivers (overlapping and possible gaps in the data) that might exist are checked and corrected accordingly

The Phase I is a continuation of the Pilot Area. 10 518 Properties were identified for this project and is currently in progress. Of the 10 518 records 3557 have been verified to date. The project, from a spatial information context, is currently 33.82% completed.

4. Legal Area Phase IV

The last Phase of the Legal Area project, Phase IV, is also currently in progress. These are all the legal areas that could not be resolved via Phase I to III. The correction requires a geometry correction first.
This project consists of a total of 29 457 records of which 3 035 have been completed to date. In 99% of the cases it is not just the property in question that needs corrections to be done, but the surrounding properties as well.
The project is also not just limited to current registered properties, but history, S.G. approved and withdrawn properties are also attended to. This project is currently 10.30% completed.

The following is attended to during the course of the project:

- The geometry investigated and corrected according to the S.G. diagrams / General Plans
- The newly created legal area field (CURR_LGL_AREA_M2) populated once geometry corrections are done
- The existence of the Legal Units are also verified (square metres, square feet, square roods, hectares etc.)
- Where required the legal units are updated

5. Alignment of the CGIS Centre Lines and JRA Road Links

In conjunction with the Deeds Alignment Project, a project was identified for the alignment of the CGIS Centre Lines and the JRA Road Links. It covers the Deeds Alignment Project Phase I and 2 areas.
Where possible road names are verified against the S.G. General Plan and the 2 road layers aligned to match. Where renaming of the roads occurred and it is not available on the General Plans,
it is referred to the Street Address Section for investigations and confirmations. A total of 7 050 CGIS Centre Lines and the JRA Road Links combined, have been identified of which 5 187 have been completed to date. This project is thus 73.57% completed.

The following is attended to during the course of the project :

- Name of township / farm / agricultural holding
- The spelling of each road is verified
- If any spelling error exists, it is corrected
- The"path" of each road is verified
- If any error exists, it is corrected
- The data is checked for any missing CGIS Centre Lines and the JRA Road Links
- If any is detected, it is captured
- After all the checks and validations have been done, the alignment of the 2 layers are done

Zoning data clean up

The Zoning section had embarked on zoning data clean up, the major projects that are currently in progress are as follows:

1. **Sandton Town Planning Schemes (TPS) Zoning Verification**

   Project Overview
   There are 1257 townships within the Sandton TPS that were verified. The main objective of this data cleanup is to have (i) error free zoning; (ii) updated zoning according to recent amendment scheme/s; (iii) ensure all the properties have zoning and; (iv) ensure all amendment schemes are complete and linked to the corresponding properties.

   Some townships, Bryanston in particular, are dominated by properties with more than one rezoning on one property. We ensure that the zoning is in line with the latest use zone as on the latest amendment scheme.

   Challenges
   The following challenges were encountered during the project; (i) incomplete amendment schemes linked; (ii) incorrect amendment schemes linked to properties; (iii) unclean cadastral boundaries (slivers) and unable to locate amendment scheme from archive (Records).

   Achievement
   • With the exception to Byanston, the overall project is 99% complete. Investigation of incomplete information is in progress.
   • Bryanston is 22% complete.

2. **Reverse Status Change List 16**

   Project Overview
   The main objective of this data cleanup is to (i) verify use zone on the properties on List 16; (ii) update zoning according to recent amendment scheme where necessary; (iii) ensure all the properties have zoning and; (iv) ensure all amendment schemes are complete and linked to the corresponding properties. There are 1621 records identified.

   Challenges
   Movement of cadastral boundaries which affect adjacent properties that were not identified for verification. *Example: North Riding Ext. 92 is identified for verification, but the zoning was not aligned to cadastral boundaries. The zoning was updated but North Riding Ext. 54, Ext. 60 and North Riding A.H. were affected (see below).*

   Achievement
   • Out of the total list of 1621 records, 1597 records were verified (99%).

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3. Deeds Alignment Project

Project Overview (Pilot - Phase1)
The main objective of this data cleanup is to (i) verify use zone on the properties identified; (ii) update zoning according to recent amendment scheme where necessary; (iii) ensure all the properties have zoning and; (iv) ensure all amendment schemes are complete and linked to the corresponding properties.

Some new townships are established on portions of farms and /or agricultural holdings. This list was divided into three classes, namely (i) Farms; (ii) Agricultural Holdings; (iii) Townships.

There are new townships that are not yet proclaimed, the zoning section cannot allocate new zoning on SG Approved townships (Chartwell Ext. 7, Chartwell Ext. 14, etc.).

Challenges
• Cadastral slivers caused zoning overlaps.

Achievement
There were not many changes in zoning, we monitor the new townships. As soon as we receive documentation for new promulgated townships, we will update accordingly.

Events

CGIS celebrates GIS Day and emphasise quality data

The City of Johannesburg's Corporate Geo-Informatics (CGIS) department has been celebrating GIS Day since 1999. This year's theme was "Data Quality" with an open day allowing visitors the opportunity to gain an overall perspective of the importance and value of GIS technology.

Each section within CGIS presented their work and explained their role within the data stream, the type of data they collect, as well as how the data is filtered and cleaned of duplications and errors.

CGIS also has data partnership agreements with other organisations, clients and companies to obtain quality data that would be too resource intensive for CGIS to source themselves.

The event was a reminder of the importance of good quality data. CGIS is actively improving the property information to ensure the billing, zoning and other GIS related challenges are minimised.

The CGIS Zoning Section made the most of the occasion to celebrate GIS Day. From left: Petros Hlengwa, Janie Thomas, Rendani Pharamela, Clifford Lebokela and Herbs Mulaudzi.

Snethemba Yengwa shows the different CGIS datasets.

Moses Letsatsi takes a group of visitors on a tour of the CGIS office, starting with the type of data CGIS produce.

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University of Johannesburg

Promoting GIS careers to learners

The City of Johannesburg's Corporate GIS (CGIS) unit in conjunction with the University of Johannesburg's Department of Information and Knowledge Management, Esri South Africa, and GISSA hosted the annual "Map your world through GIS" event for school pupils on 3 and 4 September 2014 of which 16 schools attended.

The event was held in UJ's computer labs at the Kingsway campus, and was divided into six sessions.

This year the value of information in decision-making was highlighted using Statistics South Africa Census data and CGIS Land Distribution data in Esri's educational map work software, Funda Lula.

The concepts such as vector and raster data, and how projections work and the importance of interpretation of the data were also emphasised.

The Department of Information and Knowledge Management added an introduction on Information and Knowledge management, explaining how the internet is changing the way people communicate with one another, do business, exchange ideas, study and transmit information. Right information at the right time is essential for good decision making. The know-how of information management is therefore an essential skill needed in the modern corporate world.

Since its inception five years ago, the event has kept growing and receiving good feedback. Six schools have already booked for the 2015 event.

Students experience GIS hands-on with Esri's Funda Lula map work software.

Dr. Paul Laughton (UJ) explains Information and knowledge Management

Sparkle Committee

Inside the hour glass…..

Applause is given to the CGIS "Sparkle Committee" who was formed as an initiative to raise "fun"ds towards the office year end function. Don't be embarrassed if your jaw dropped when you witnessed the thrilling stunts THE STAFF of Corporate Geo-Informatics attempted. They are fearless!! They don't just work hard but they play hard as well. CGIS enjoyed their fun filled team building event and a wide number of "thrilling rides" at the Gold Reef City Theme Park where there is no shortage of incredible things to see and do.

This unique group of GIS Species lit up the theme park with excitement and energy! Everyone joined in with playing, relaxing & laughing… and once our bellies began to grumble, we met up as one big family to enjoy a tasty lunch around a long stretched out VERY buzzing table.

With Corporate Geo-Informatics staff you can find yourself, lose yourself, we have it all!