Business Value of Imagery

Data Dissemination monitoring, Legal Disputes and GeoAi

Luvo Qumba | eThekwini Municipality

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Introduction

About eThekwini Municipality

eThekwini Municipality serves the greater Durban area, South Africa's third-largest city with a population of 3.9 million.

Our GIS department manages:

High-resolution aerial imagery (10-50cm)

Aerial dating back to 1931 + Satellite imagery : SANSA, etc

LiDAR from 2016, capture once in cycles of 3 years

"Imagery transforms from visualization tool to decision-making engine"

Our imagery serves 8+ municipal departments and supports critical decision-making across urban planning, environmental management, and emergency response.

Evolution of Imagery Use

2010

Basic aerial photography for visual reference only

2016

Acquisition of LiDAR

2020

Generation of 3D Products

2025

Drone Acquisitions, Data Sharing Agreement with CD:NGI

Key Challenge Overcome:

Transitioning from siloed imagery use to enterprise-wide integration across departments, Delayed signing & SCM issues on Contracts
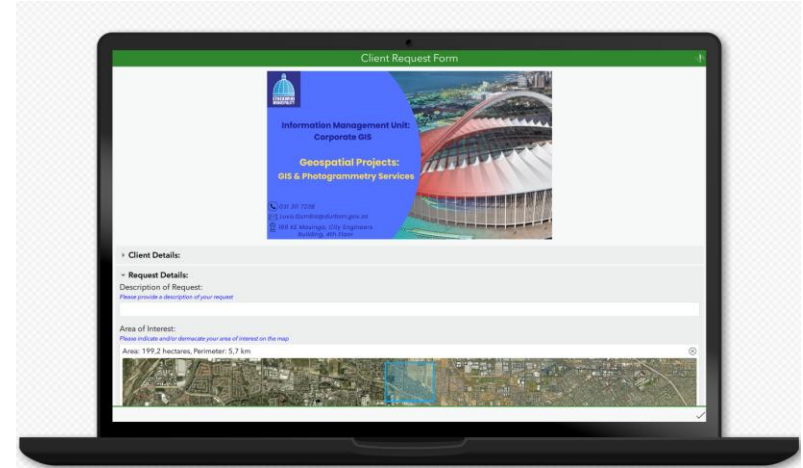
Data Dissemination: Survey123

Challenge

An Auditor General acceptable reporting on use of Data. Improved service to the the Tax Payer for a product costing 2-4 ml per year

Solution

Use of Survey123 & Dashboards:

+ Request forms

+ Use of cloud platforms to deliver the product

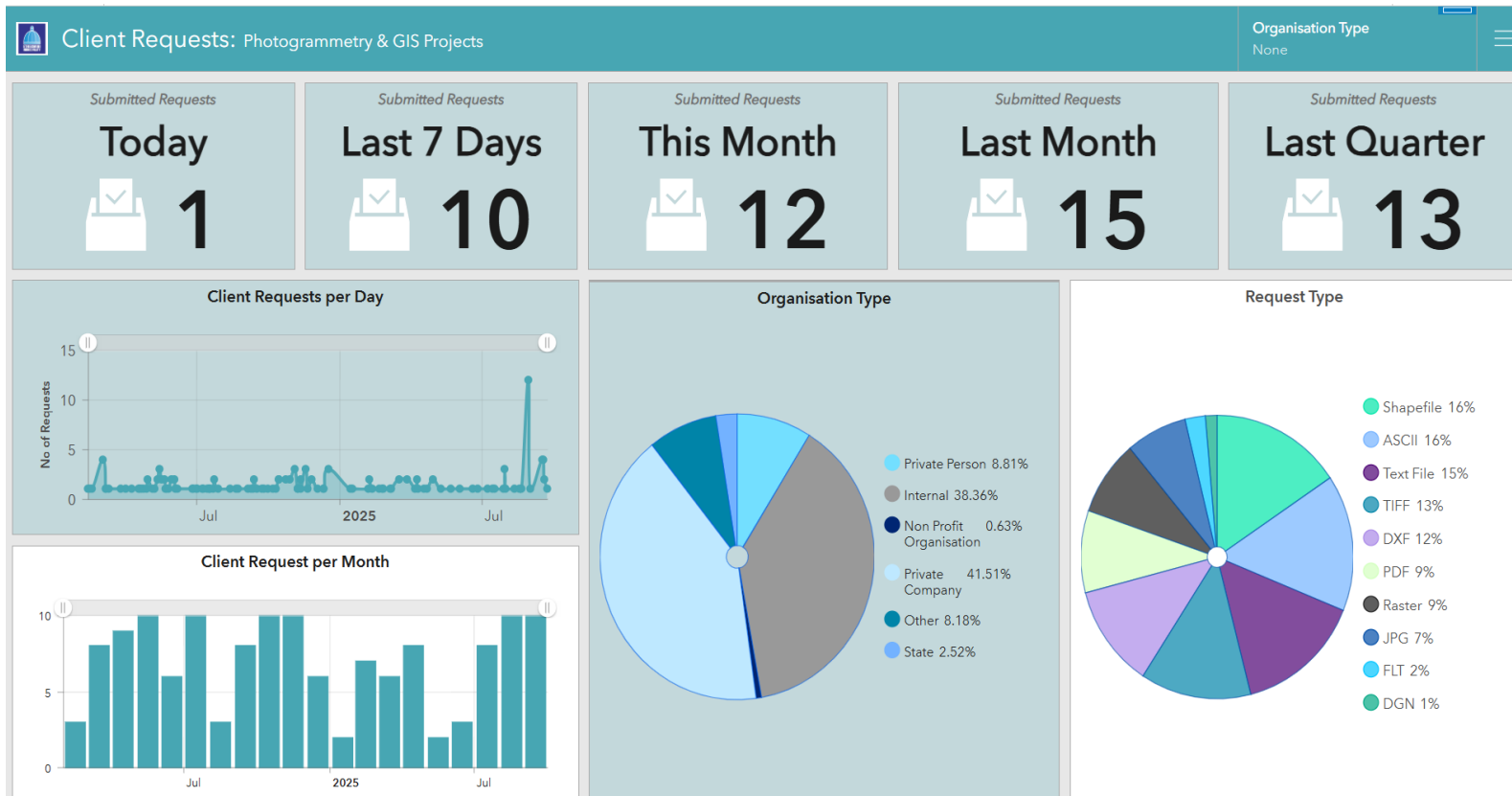+ Geospatial Advisory through understanding client need

Results

"Democratisation of spatial data as a greater vision together with open GIS data"

Data Dissemination: Monitoring

Challenge

Tracking use

Legal Disputes: Use of Aerial Imagery

Challenge

Compliance between Spluma Act, Land Survey Act/Deeds Act and Property Valuation Act

Solution

Clean the registered layer through a GIS approach:

- Align Deeds extent to SG extent
- Allocate correct Land Use
- Rate property according to the correct property size

Results

Challenge

Acquire Photogrammetrically
acceptable Ortho Imagery

3. SCOPE OF WORK

To capture and provide 2cm-5cm / pixel resolution, vertical (ortho-rectified) aerial imagery

Digital file of the boundary to be uploaded on the system with document

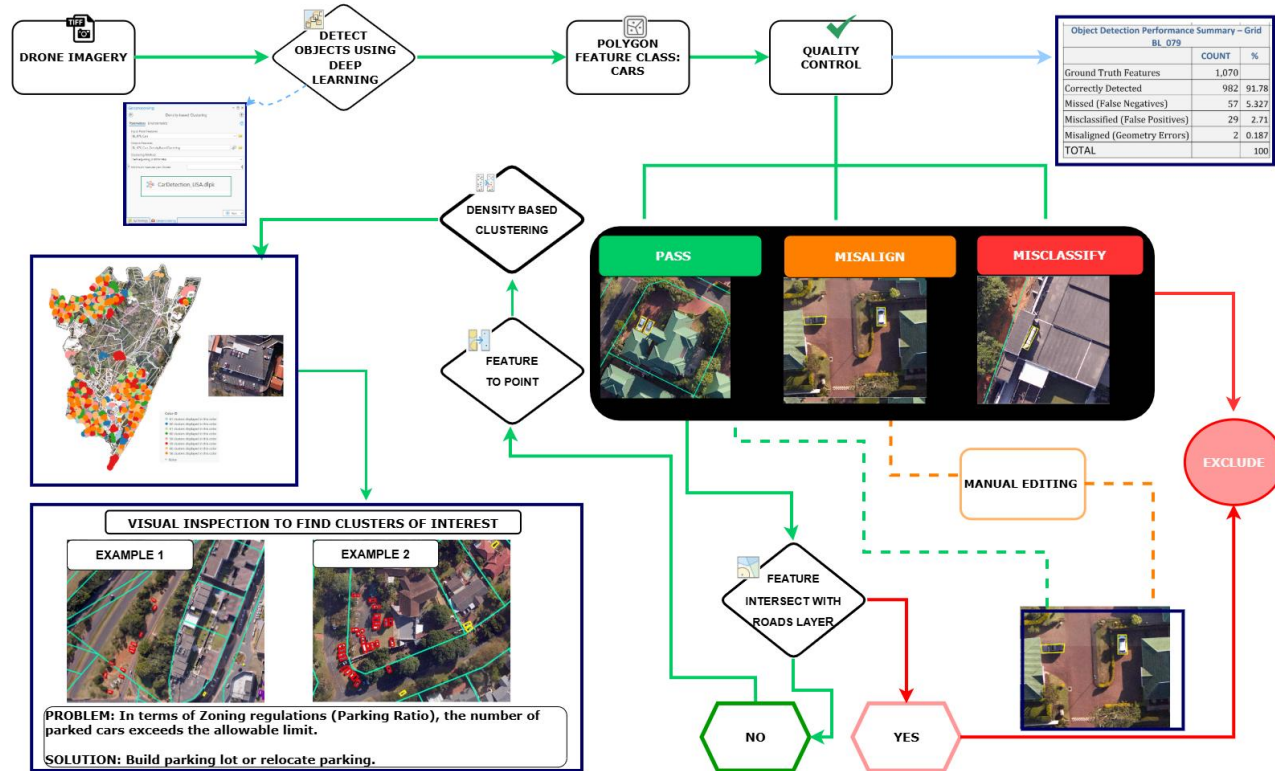This information can also be made available from Corporate GIS Department on request.

The submission is to comprise a single, all inclusive, quotation, as per the specifications :

GeoAi: Detection of Cars

Challenge

Workflows and continuous improvement

Thank You!

Questions & Discussion

Connect with eThekwini GIS

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