



**ORBICA**

LOCATION.  
DATA.  
CONNECTIVITY.

# CAPABILITY OVERVIEW

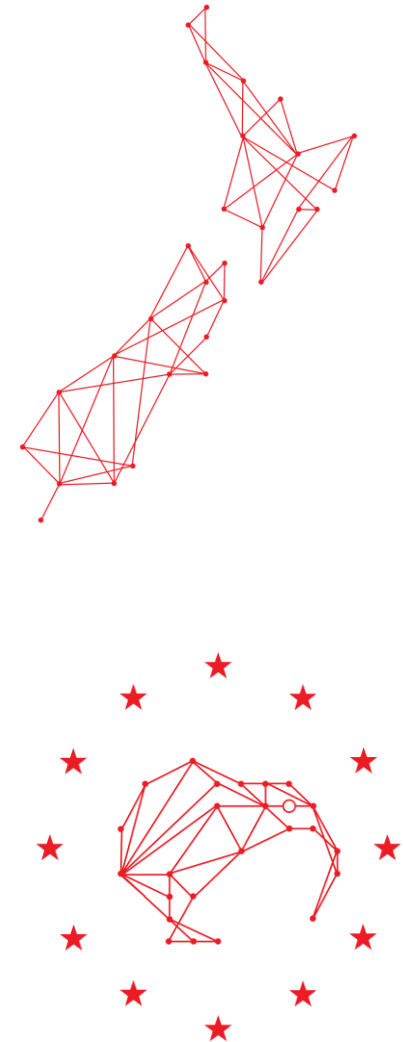
Venue: Zoom – video conference

O R B I C A . W O R L D

- Who are we and what do we do
  - Our strengths
  - How we contribute back
- Future opportunities
- Our expectations as a Business Partner

Our **purpose** is simple

**“To enhance a billion  
lives through the power  
of geography.”**





# MEET THE ORBICANS

CONSTANTLY THINKING OUTSIDE THE QUADRILATERAL



**KURT JANSSEN**  
CEO & Founder



**NEAL JOHNSTON**  
Location Data Specialist



**ANTONIN CAEN**  
Geospatial Architect



**BANIKA SIROHI**  
Full-stack Developer



**FAISAL ABBAS**  
Geospatial Craftsman



**LOUISA TAYLOR**  
Commercial Manager



**JUSTIN FAIL**  
Service Delivery Manager



**KURT JOY**  
Remote Sensing Specialist



**PETER ROSE**  
Director (Europe)



**SUNNY SUN**  
Geospatial Developer



**PHIL CLUNIES-ROSS**  
Freshwater Scientist



**SANTOSH SESHADRI**  
Geospatial Innovator



**LAURA WINDERS**  
PA/team support



**RIMU BODDY**  
Full-stack Developer



**SAKINAH ABDUL**  
Full-stack Developer



**ARTHUR MCGREGOR**  
Full-stack Developer



**BRIDGET EDWARDS**  
Chief Financial Officer



**SUVARNA DUDAM**  
IT Specialist



**WILL JONES**  
Location Data Specialist



**SAGAR SONI**  
Data Scientist (AI)



**ROB PARSONS**  
Business Development



**VANESSA O'BRIEN**  
Communications Manager



# Barriers to customer engagement



TIME POOR



THE AMOUNT AND COMPLEXITY OF  
INFORMATION



THEY CAN'T ACCESS INFORMATION IN A  
WAY THAT'S RELEVANT TO THEM

# But it's more than digital: it's got to be accessible

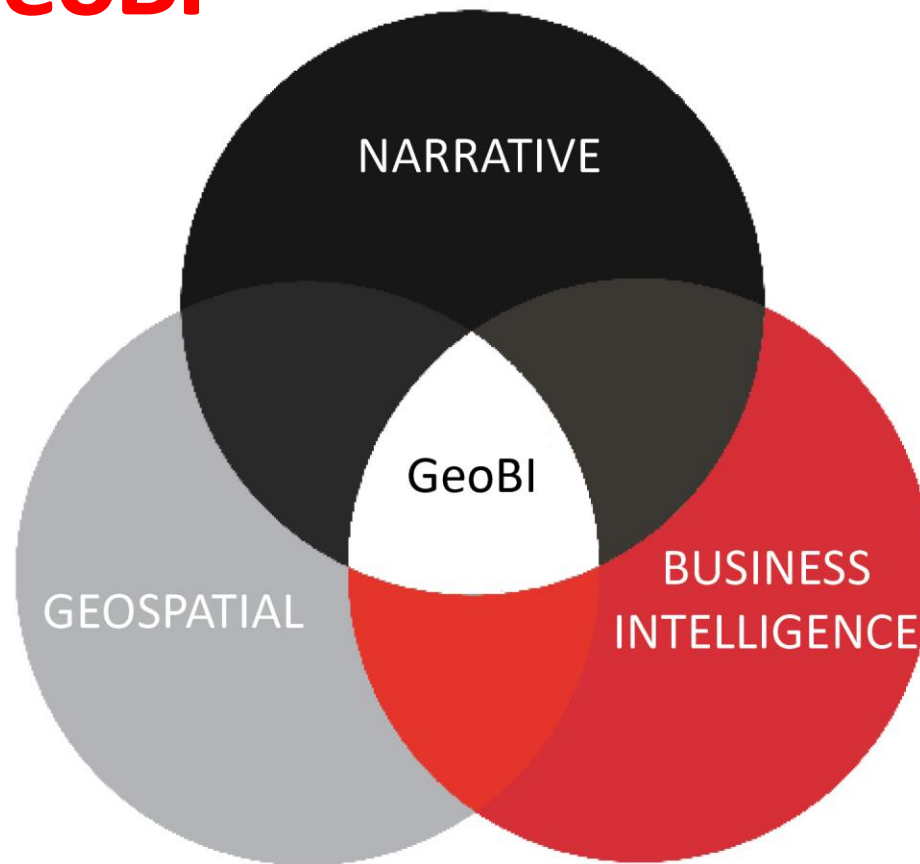


- The way we communicate data must be customer-centric
- Does your customer have time to read a 200-page annual plan?
- There may be better ways to communicate than the platform you've always used

# Smart, interactive data visualisations and story telling


- **Make complex data easy to understand**
- **Engage with your community**
- **Visually communicate multi-level data and data siloes in an interactive, simple way**
- **Lead the story and make it relevant to your audience**

# Welcome to GeoBI





# Environment Canterbury rates' tool



Environment Canterbury  
Regional Council  
Kaitiaki Take Kōwhiri

## Your rates are helping to create the Canterbury of tomorrow

\$185,581,800

General Rates	\$ 67,867,900	(36.6%)
Targeted Rates	\$ 40,703,300	(21.9%)
Grants	\$ 36,029,800	(19.4%)
Other	\$ 40,980,800	(22.1%)

Environment Canterbury is the regional council for Canterbury

Through the work of Environment Canterbury you, as a rate payer, are helping to ensure we have the environment we want in Canterbury, and that together we can leave a legacy for future generations.

You can use this Rates Tool to see how the different portfolios and programmes of work are funded in general terms (regional wide view) and also geographically (map view). The figures in this tool are those in the draft Annual Plan 2019-20.

Our work is split into six portfolios (see portfolio tab) and each of these has a number of programmes of work. Within each programme of work, there are a number of projects. You can view the expenditure for each of these projects here.

More information about the work of Environment Canterbury; how we collect rates; and the individual projects is available on our website [www.ecan.govt.nz/rates](http://www.ecan.govt.nz/rates)

Note: projects with expenditure less than \$10,000 are not shown. All

Home

Portfolio

Air

Bio

Hazards

Leadership

Transport

Water

## Region wide projects

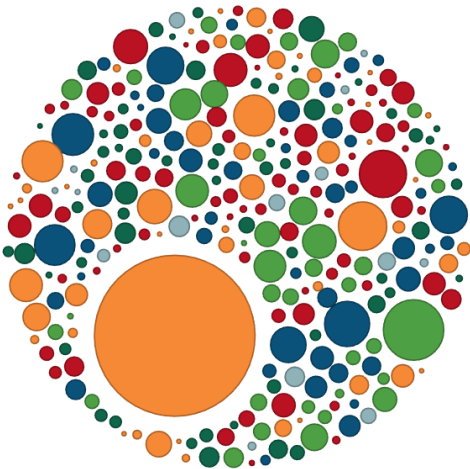
In region wide project view each of the bubbles represents a project. The colour of the bubble identifies the portfolio the project sits within, and the size represents the relative expenditure. Hover or click a project or programme to find out more information.

- 

FAQs
- 

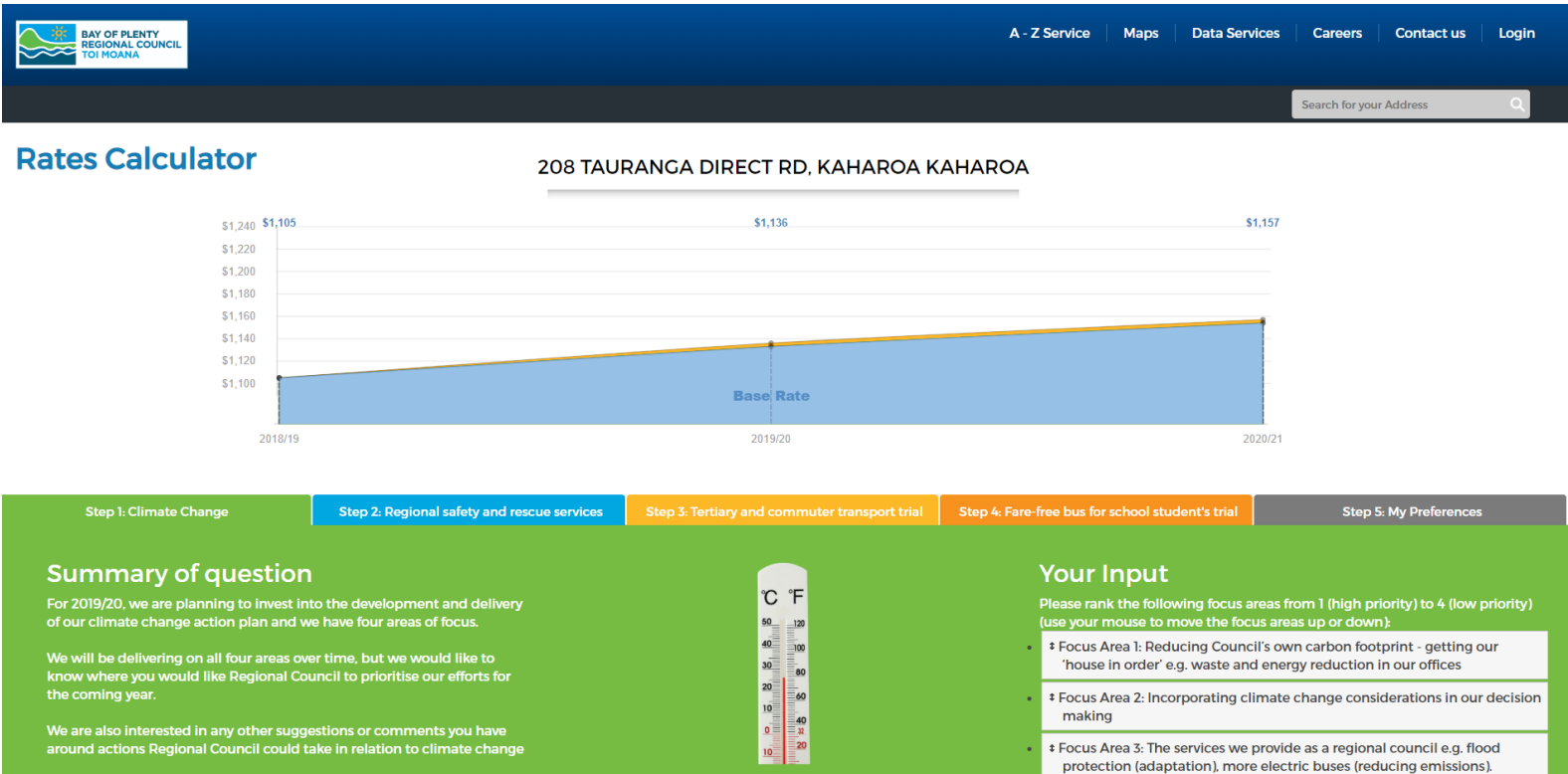
Region Wide
- 

My Rating Area



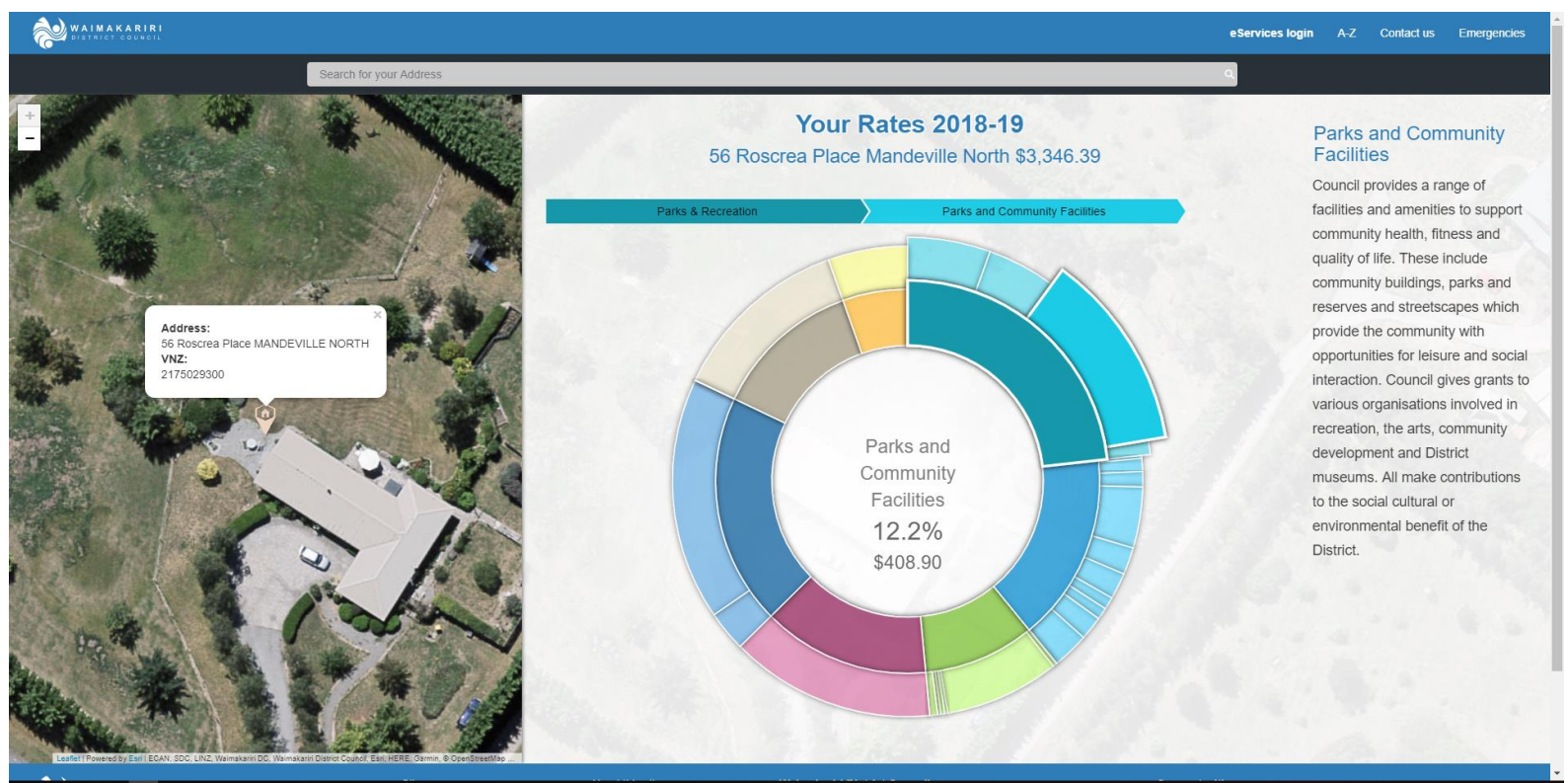
**OBJECTIVE:** To enable ECan to visually tell the story about the portfolios and projects its rates' collection funds.

# Bay of Plenty Regional Council rates' calculator



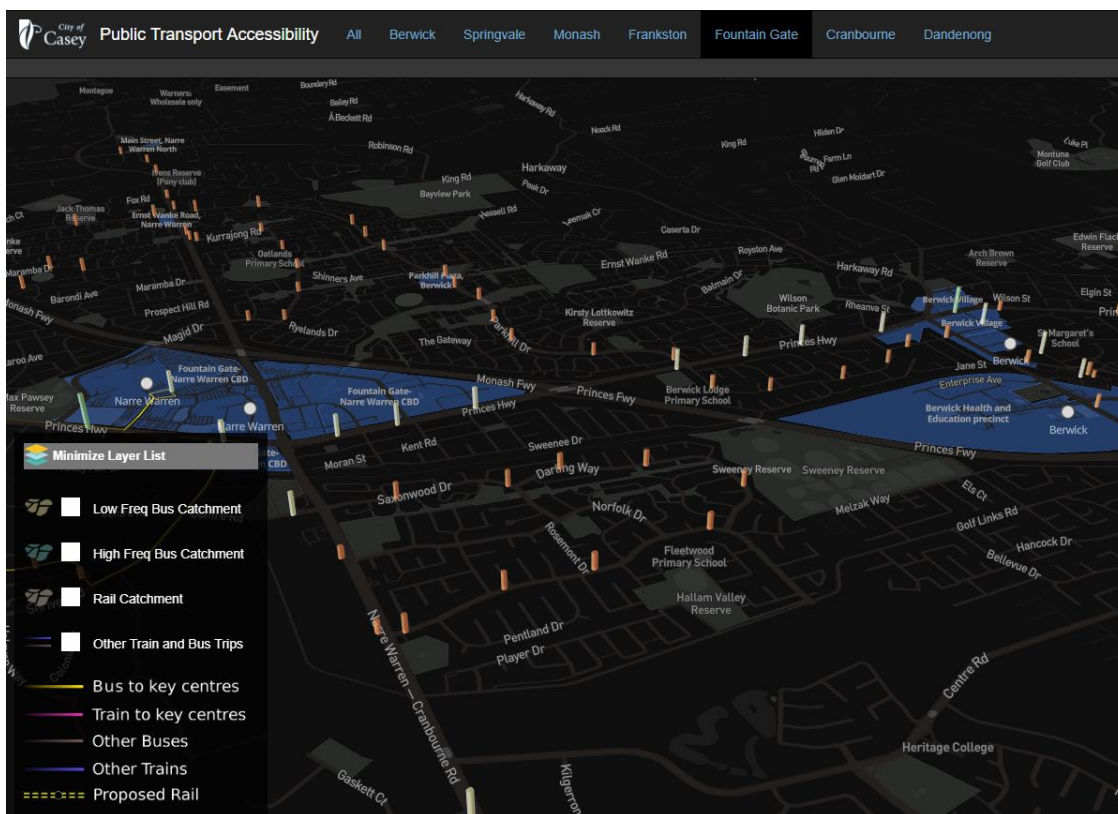
**OBJECTIVE:** To enable BOPRC to visually tell the story of the portfolios that rates fund, to enable rate payers to visualise their personal rates break-down and to get feedback on proposed spend.

# Waimakariri District Council “Your Rates”



**OBJECTIVE:** To enable WDC to visually tell the story of the portfolios that rates fund, and to enable rate payers to visualise their personal rates breakdown.

# City of Casey: Public transport accessibility



**OBJECTIVE:** To deliver insight into the inequality of public transport across Melbourne's South East



# BASF: Goal tracker

**OBJECTIVE:** To help BASF visually tell the story of how it's meeting UN Sustainable Development Goals.

**Farming Stories**

**BASF**  
We create chemistry

**BRAZIL**

**Sustainable Development Goals**

**4 QUALITY EDUCATION**

**17 PARTNERSHIPS FOR THE GOALS**

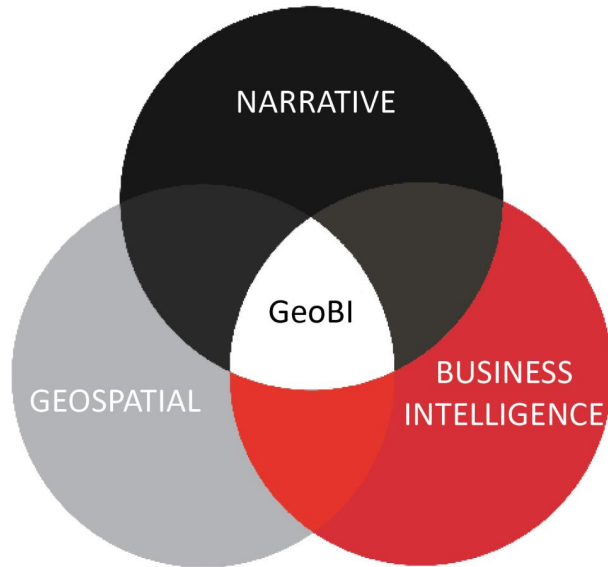
**Coffee with Excellence**

Brazil is the world's third-largest exporter of agricultural products. Agriculture is vital to Brazil's economic and social development, and coffee is an essential source of income and one of the main generators of agricultural jobs. This project in cooperation with coffee smallholders, Fundação Espaço ECO and Brazil's National Rural Learning Service (SENAR) promoted Good Agricultural Practices for sustainable farming, responsible handling and application of crop protection products, and water management.

**Why? How? Result SDGs**

There are almost 300,000 coffee growers in Brazil, predominantly mini and small-scale growers. Smallholders in Espírito Santo and Bahia are among the country's main coffee producers and their economic well-being depends on meeting the quality and sustainability standards of the coffee industry.

# GeoBI helps you achieve customer success



- Customer experience
- Engagement
- Transparency
- Understanding
- Relevance





➤ **Open data**



➤ **Transparency  
/engagement**



➤ **Improves customer  
experience by meeting  
customers online in a  
quick, interactive and  
easy-to-understand way**

Earth  
observation  
data – BIG  
data - is  
increasing  
exponentially  
... and fast





Market  
identification

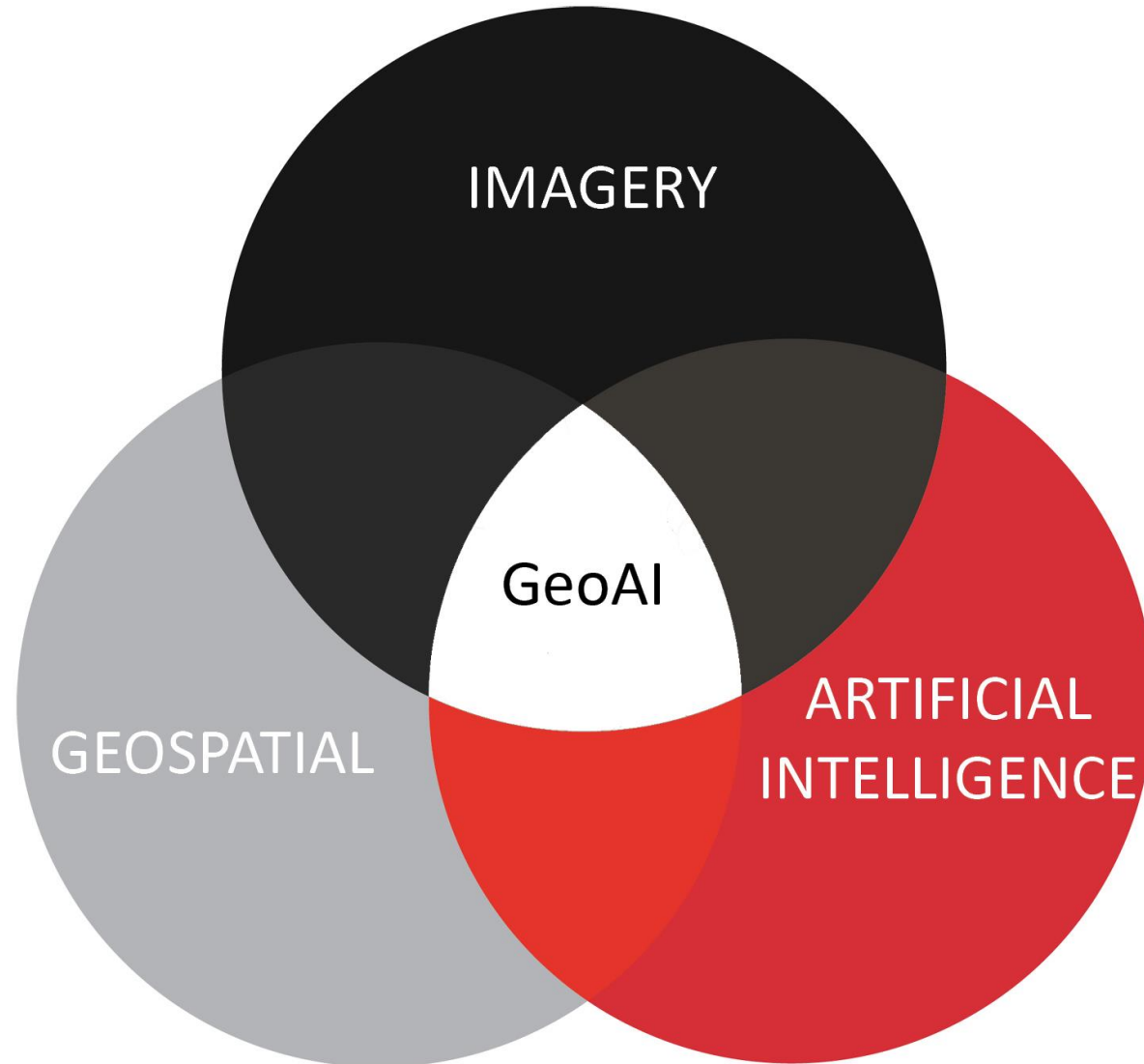
Environmental  
change

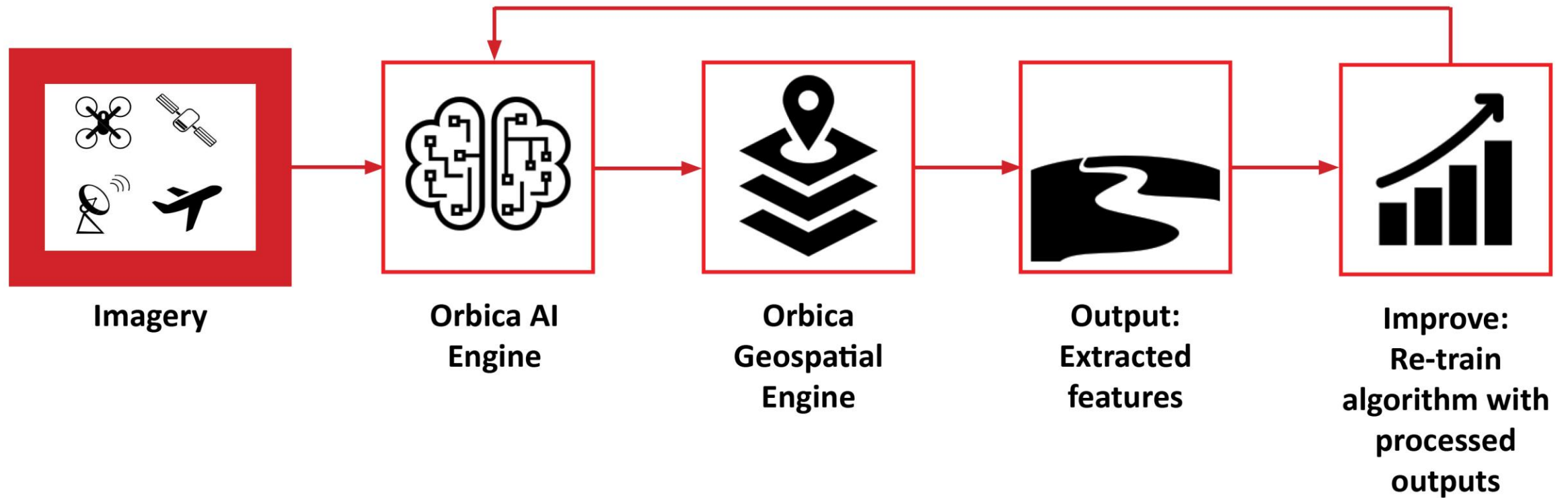
# TRANSFORMING DATA INTO INSIGHT, IN NEAR REAL TIME, CREATES VALUE

Construction progress  
reporting

Disaster  
management

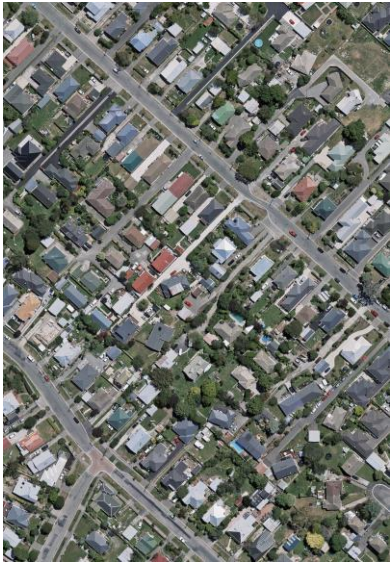
Urban  
development



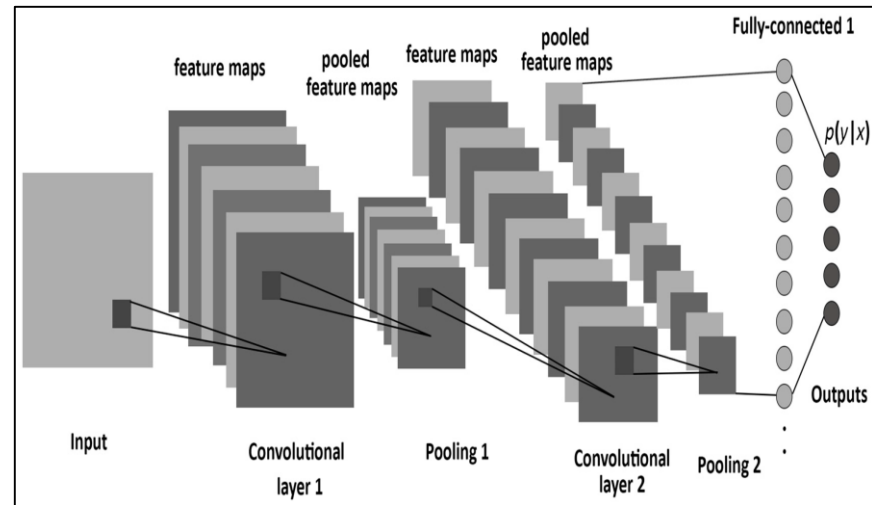




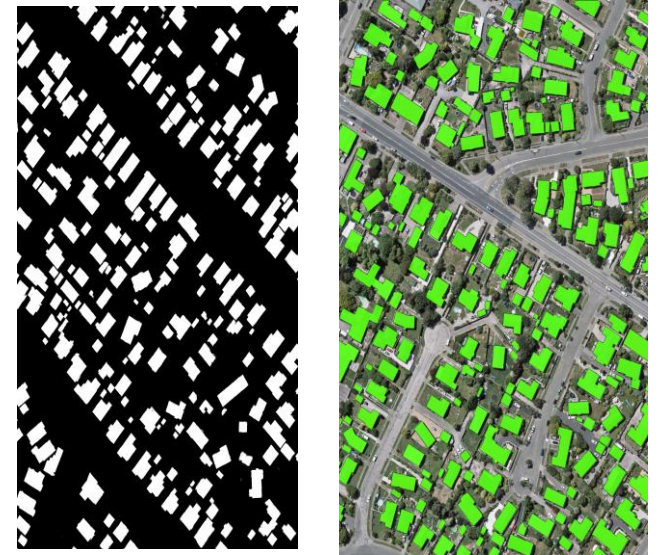
## RGB Image (Input)



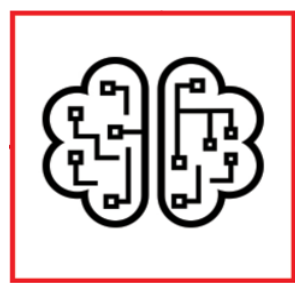
## Feature Extraction + classification



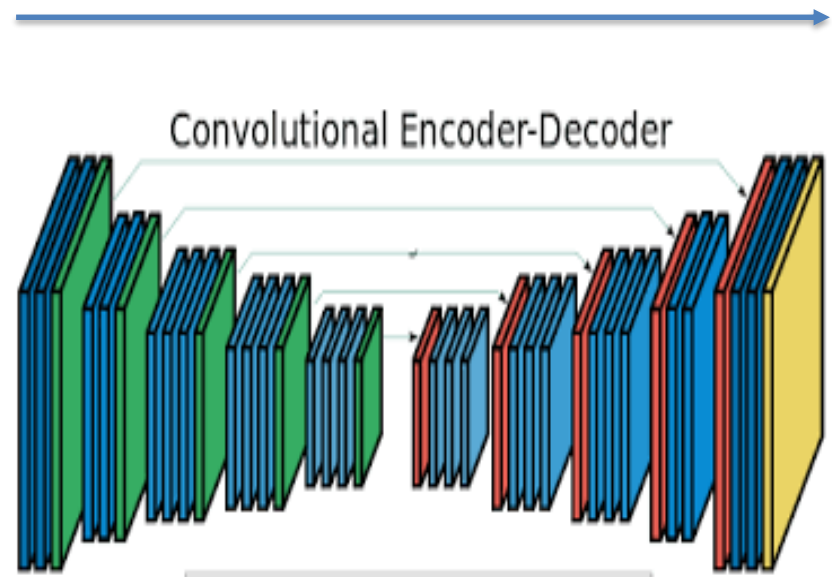
## Output (Raster &amp; Vector)







Orbica AI Engine



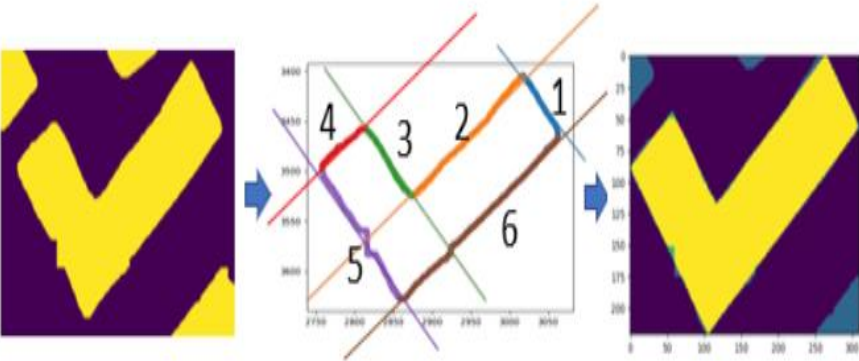




Orbica  
Geospatial  
Engine



Geoprocessing

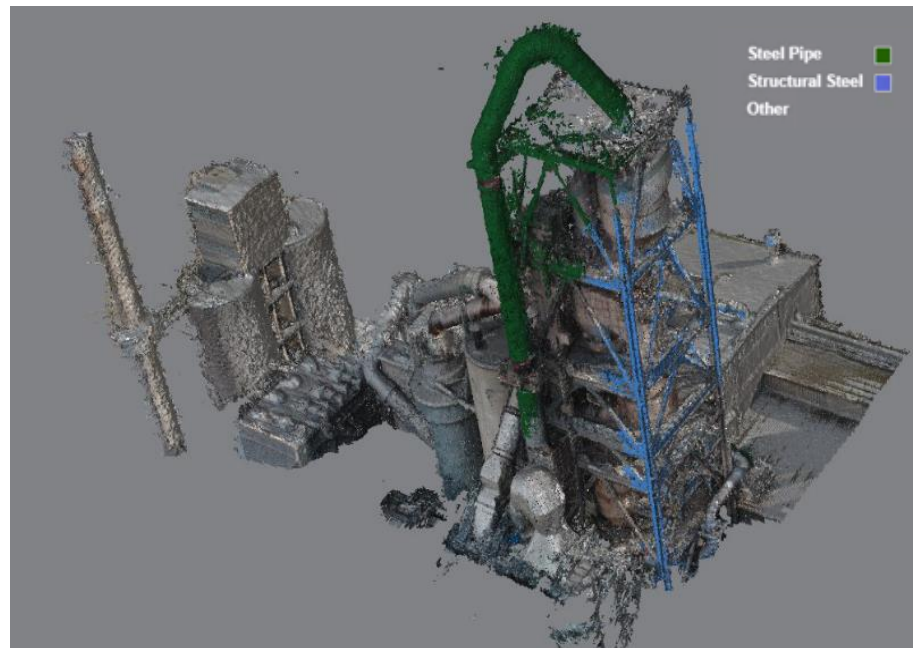
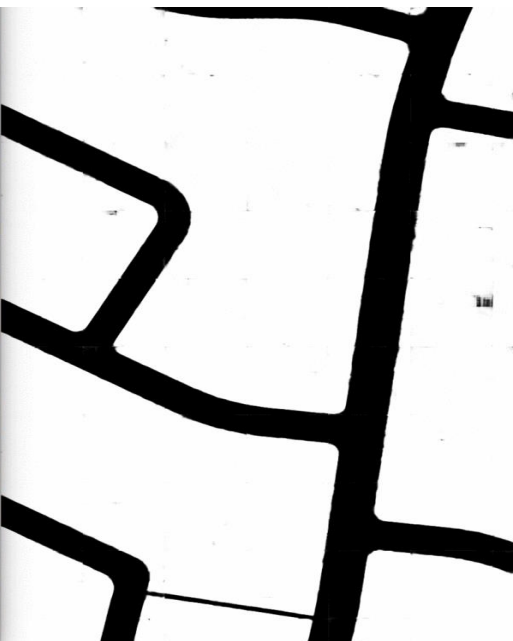
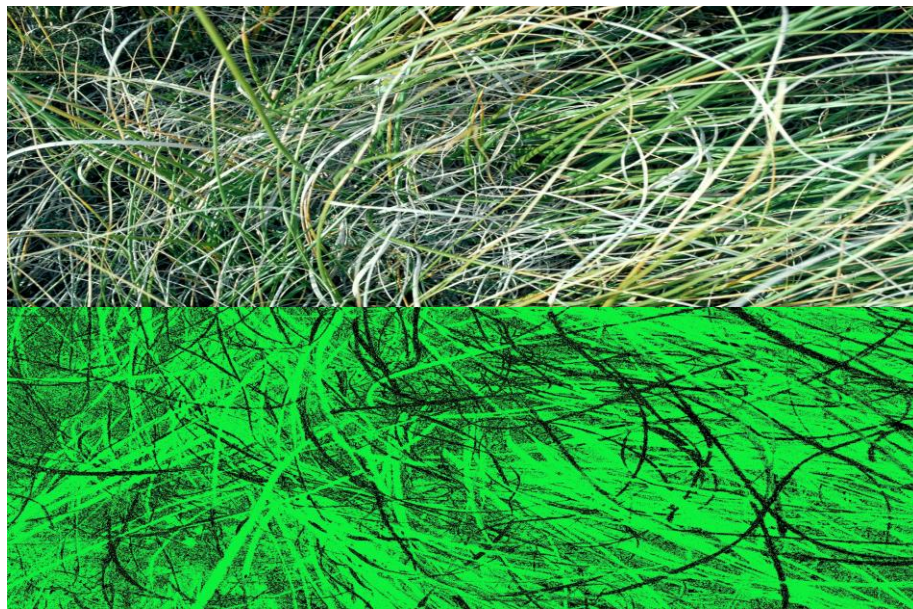
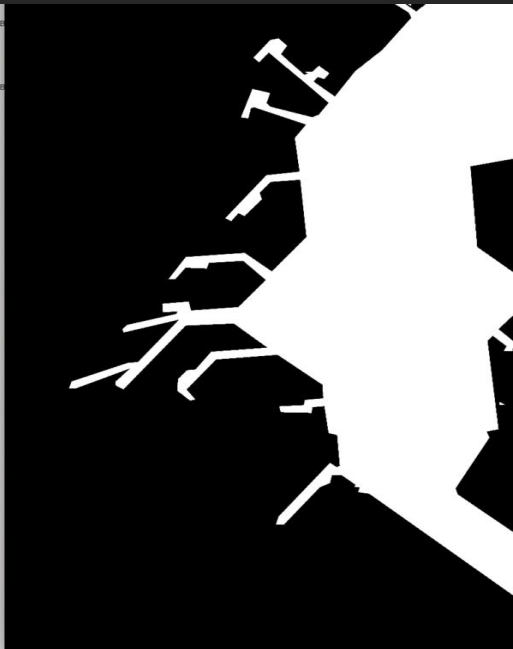




### Water Detection use cases:

- Consenting/legislation/monitoring of water – i.e. identifying illegal water use
- Biosecurity and biodiversity – protecting species/migration etc
- River monitoring – flooding purposes
- Change detection
- Recreational purposes – identifying fishing/swimming locations etc
- Emergency response

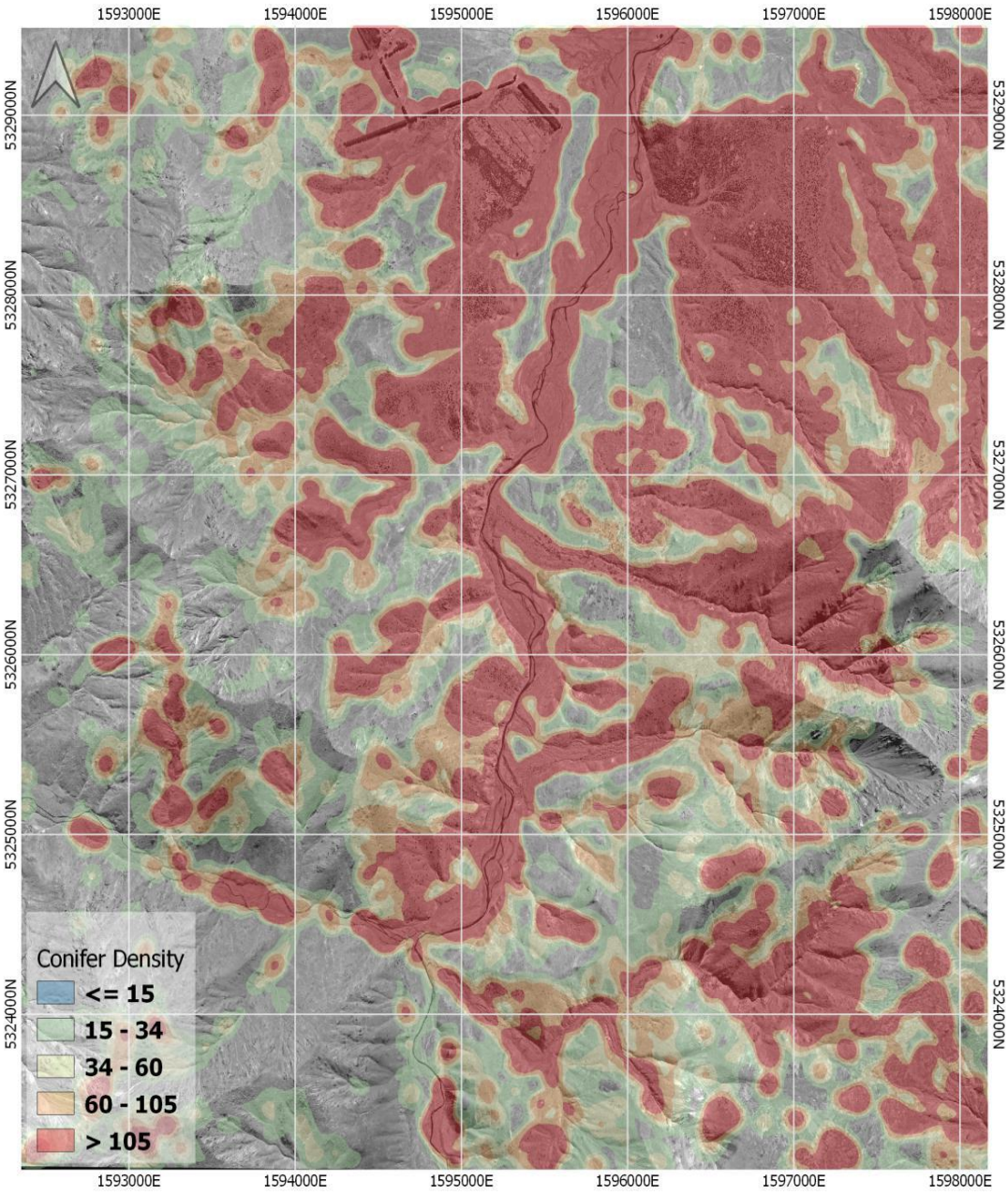








50 25 0 50 Meters







## DATA AGNOSTIC

- Data from any source – satellite, drone, aerial
- No vendor contracts



## AS A SERVICE

- Near real-time results
- Instant feedback on results
- Ease of process



## VALUE

- Extract value from existing data investments
- Flexible pricing models



## GLOBAL

- Data from anywhere
- Algorithm trained to locale specifics
- Custom algorithms on request



## Location Intelligence 2019

- Digital geography
- <https://www.locationintelligence2019.nz/>
- NZ Tech Week

## Conferences

- FOSS4G attendance Boston, Dar-es-salam Tanzania, Bucharest, Melbourne
- Locate
- Geospatial Research Conference

## Internships and Mentoring

- University of Cant. GIS and Geography, and data science
- Signal ICT Graduates
- NZ Space Challenge
- Smart Seeds

## Functions and tours

- ALGIM
- Foreign and national dignitaries
- New Zealand Aerospace Meetings

## Sponsorships and Memberships

- FOSS4G Sponsorship (OSGeo)
- TedX
- Children's Christmas party
- GIS in Conservation
- Chamber of commerce

## Space and Spatial

- Operational tools
- <https://explorer.orbica.world>

## Product Development

- Collaboration
- DevOps with deep geospatial domain knowledge

## Our expectations as a Business Partner

- Introductions to networks
- Making more data available
- Breaking down barriers to NZ business working in Aussi



THE FUTURE

ASK US YOUR QUESTIONS



LOCATION.  
DATA.  
CONNECTIVITY.

**ROB PARSONS**  
Business Development Lead  
rob@orbica.world



A FUTURE OF EXPERIENCE, INNOVATION AND CREATIVITY

Know the world, change the world