

ORBICA

LOCATION.
DATA.
CONNECTIVITY.

Data Visualisation

2018 FOSS4G Oceania Conference 21st November 2018

ORBICA . WORLD

github.com/neal-orbica/foss4g-oceania

Agenda

- **Introduction to Orbica and the Project**
- **The challenge and why open source?**
- **Solution and Tech Stack**
- **Quick look into design**
- **Demo**

Our **purpose** is simple

We strive to develop and inspire
Geospatial **Champions**

***champion = someone who raves about the value of
geospatial technology**

Initial project aim:

Present regional council rates and budget data in an easy-to-use format to provide transparency for residents of the region.





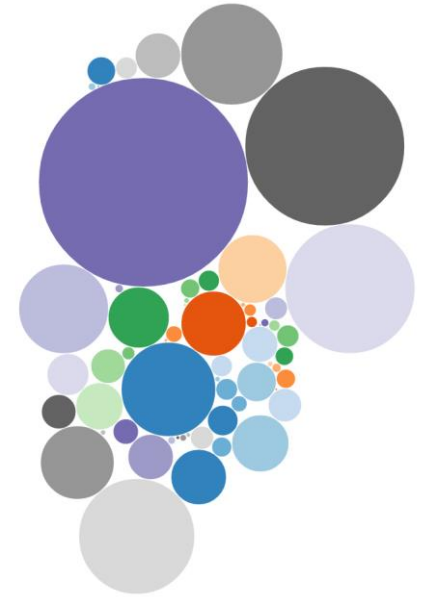
Context of Canterbury

- One of the largest territories in New Zealand
- Contains Christchurch (3rd largest city after Auckland and Wellington)

The Challenge

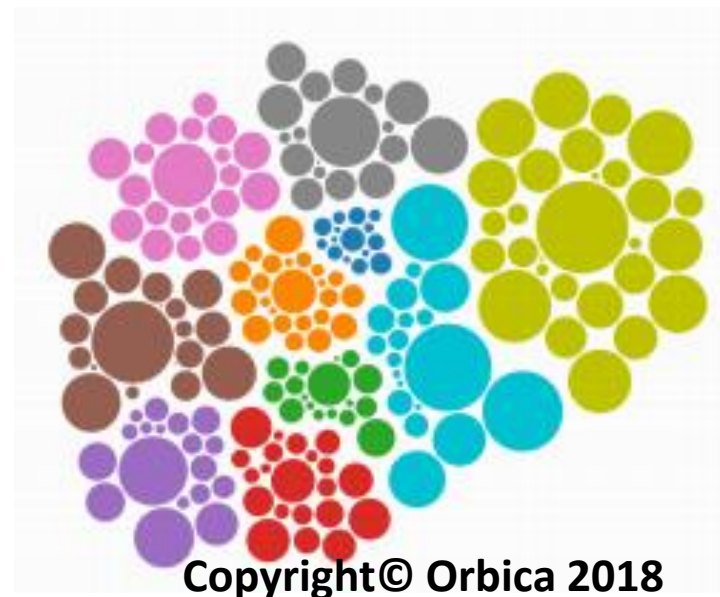
They needed something to:

- Be easy to use interactive experience
- Increase engagement through transparency
- Explain complex portfolios and programmes
- Be Cloud hosted
- Allow for multiple years (*multiple apps was ok*)

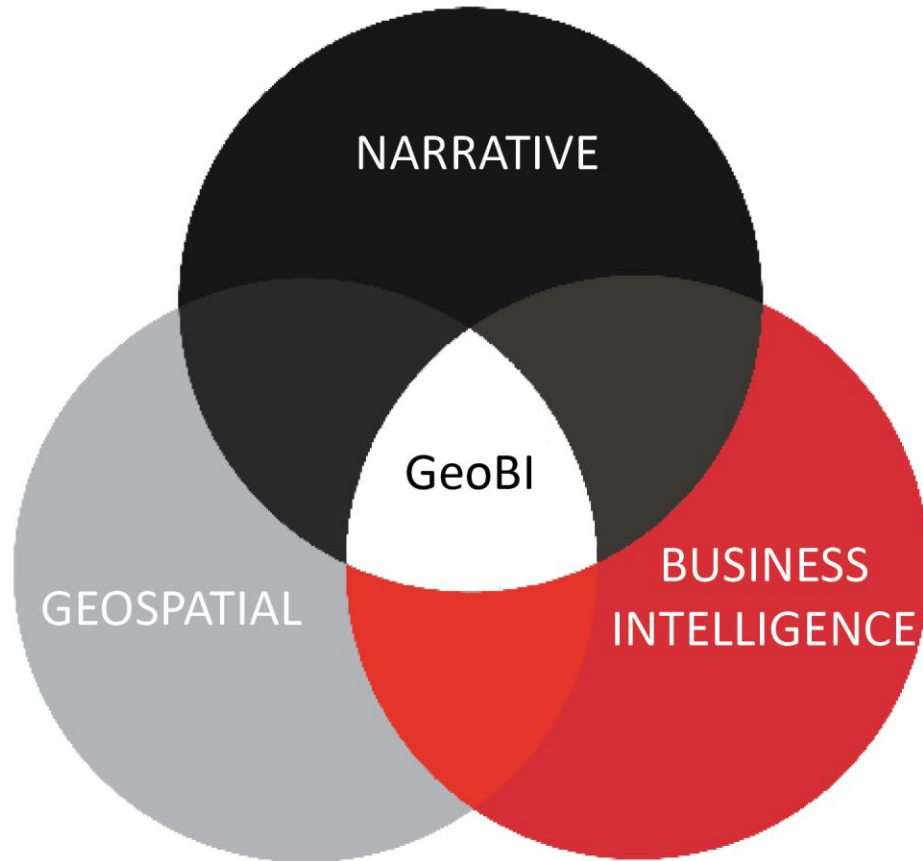


Why Open Source ?

- Integration (GIS and non-GIS sources)
- Substitute license cost with innovation
- Visualization freedom
- Lower implementation costs
- Scalability
- Awesome Community

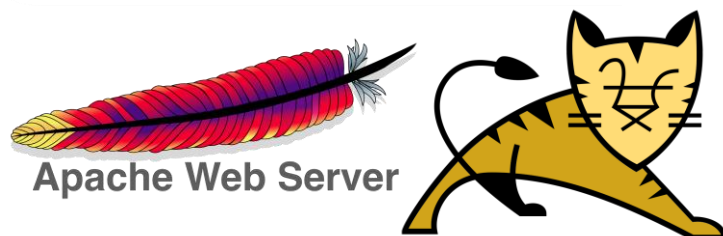


Solution



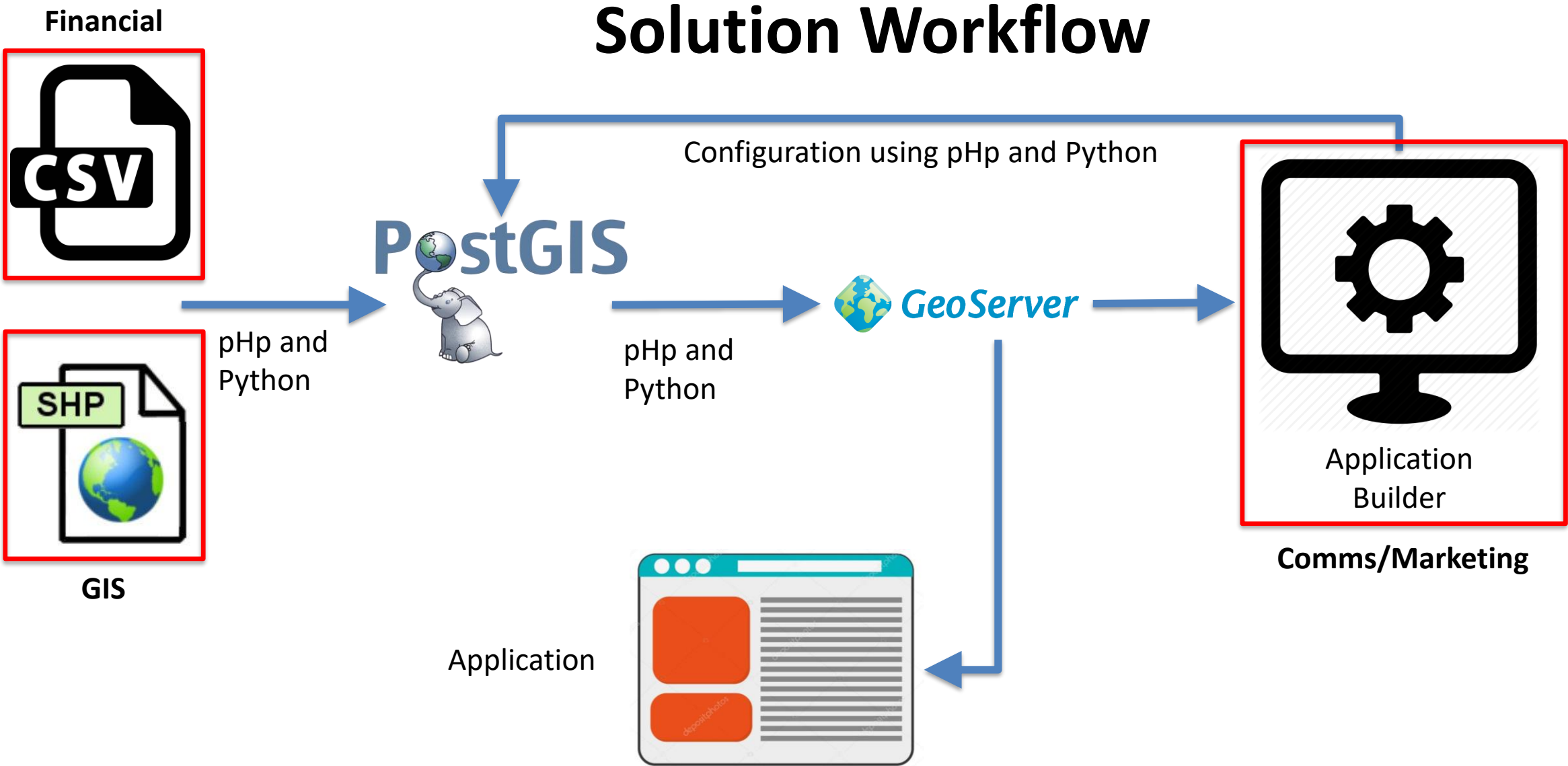
- A tool that allows councils to share rates information
- Visualisation for residents to view spatial and non-spatial representation of rates
- A narrative explaining how rates are spent

Technology Stack



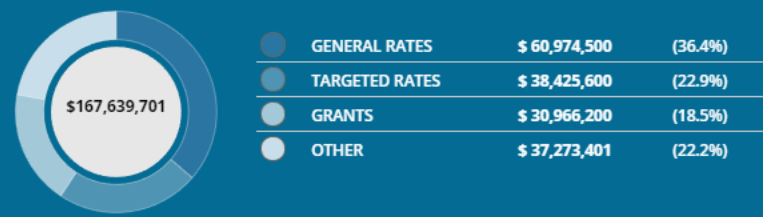
PostgreSQL

Solution Workflow





Your rates are helping to create the Canterbury of tomorrow



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 Desktop Rates Tool to see how the different portfolios and programmes of work are funded in general terms (project view) and also geographically (map view). The figures in this tool (until end June 2018) are those in the proposed Long-Term Plan 2018-28 for the first year of activity ie 1 July 2018 to 30 June 2019. When the Long-Term Plan is adopted following public submissions and any subsequent amendments, the finalised figures will be uploaded to the tool.

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](#).

Home

Portfolio

Air

Bio

Hazards

Leadership

Transport

Water

What are my rates funding?

Our projects

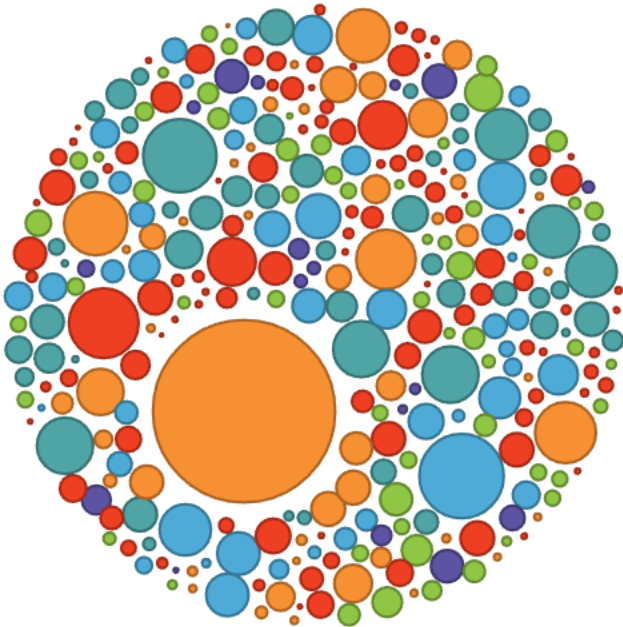
In Project View each of the bubbles represents a project. The colour of the bubble identifies the portfolio the project sits within, and the size represents the relative expenditure.

In Map View select a portfolio tab to the left and choose a programme to see where the funding comes from. The colours on the map represent the amount of funding (see key bottom right).

Project View

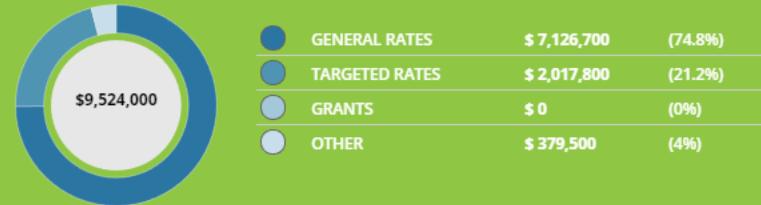
Map View

My Rates





Biodiversity and Biosecurity



Creating a step-change in effort in the regeneration of freshwater, marine and terrestrial biodiversity.

In the Biodiversity and Biosecurity portfolio there are four programmes of work:

- Regional Biodiversity
- Braided Rivers
- Wetlands
- Biosecurity.

The Biodiversity and Biosecurity portfolio accounts for 6% of total expenditure at \$9.5 million. Indigenous biodiversity is a strategic priority for Council.

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.

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Biodiversity and Biosecurity programmes

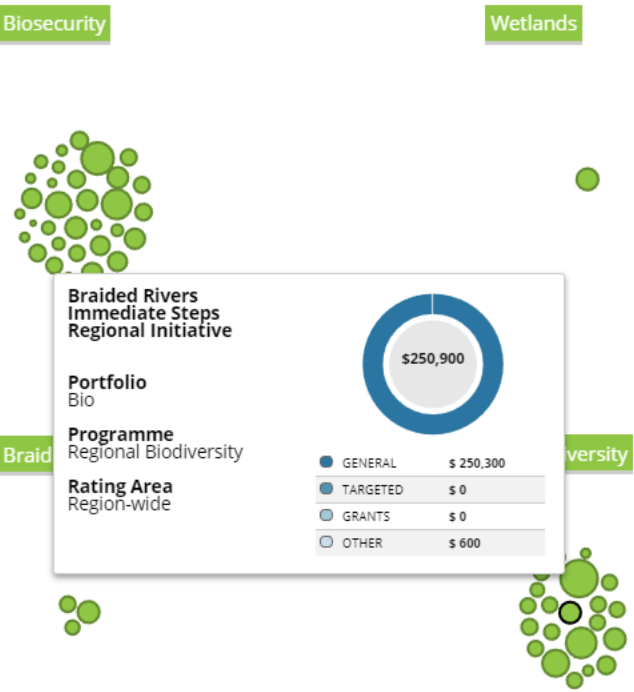
In Project View each bubble represents a project and these have been sorted to show which programme of work in the portfolio they fit within. By hovering over a bubble you can see the project information.

In Map View you can select a programme to view funding areas.

Project View

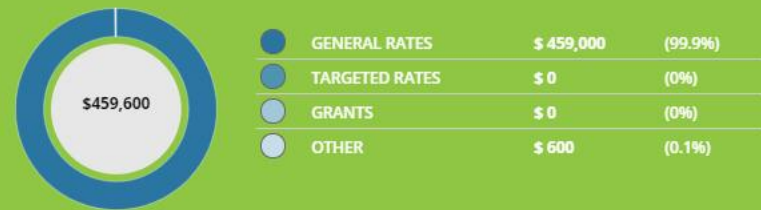
Map View

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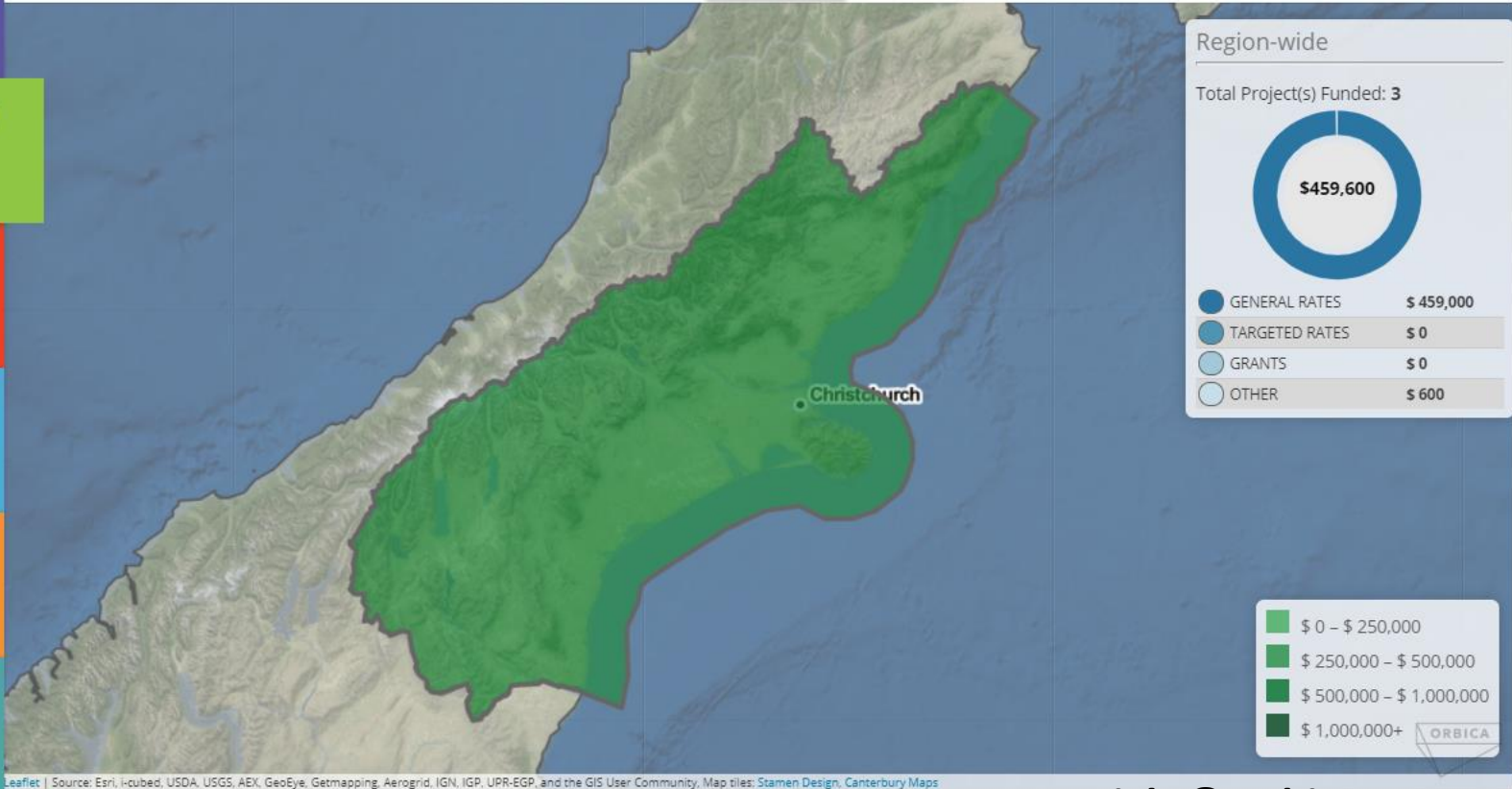
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- Project View
- Map View
- My Rates

- Biosecurity
- Wetlands
- Braided Rivers
- Regional Biodiversity





Project View



Map View



My Rates



What are my rates funding?

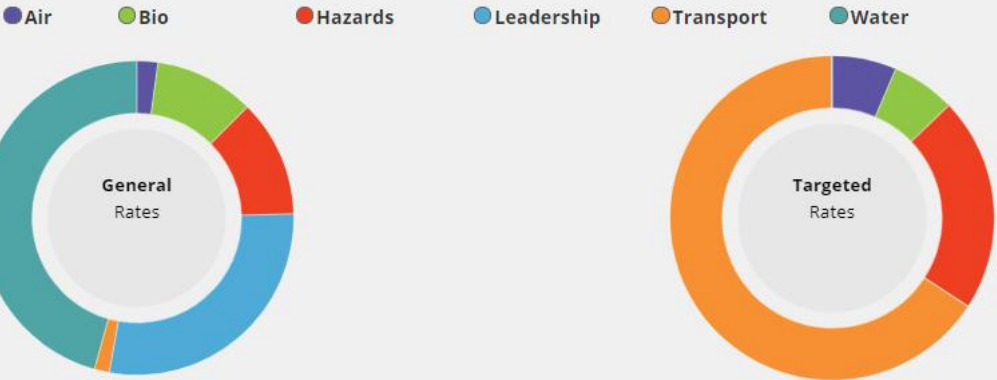
My Rates

Search for places or addresses

Rates by Portfolio for: 130 Lichfield Street, Christchurch Central, Christchurch City

Rating Area(s) which you live in	Funding Portfolio	Number of Project(s) Funded	View Rating Area(s)
Christchurch, Region-wide	Air	11	
Chch/West Melton zone, Region-wide	Bio	47	
Ashley Rakahuri, Region-wide, Waimakariri, Waimakariri Eyre Cust, Waimakariri River Flood Protection	Hazards	51	
Region-wide	Leadership	45	
Christchurch, Region-wide	Transport	27	
Region-wide	Water	53	

Rates Breakdown



DEMO 1

Road ahead and wider adoption

- Opportunity to develop a data visualisation platform for all regional councils (1 common platform for all NZ)
- Other regional councils are investing in the platform
- Opportunity to visualize other datasets beyond rates
- Create a unified look and feel across all visualisations

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Thank you
Questions ?

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