Watercare STP Building Technology Enabled Planning Capability

Brendon Harkness September 2019

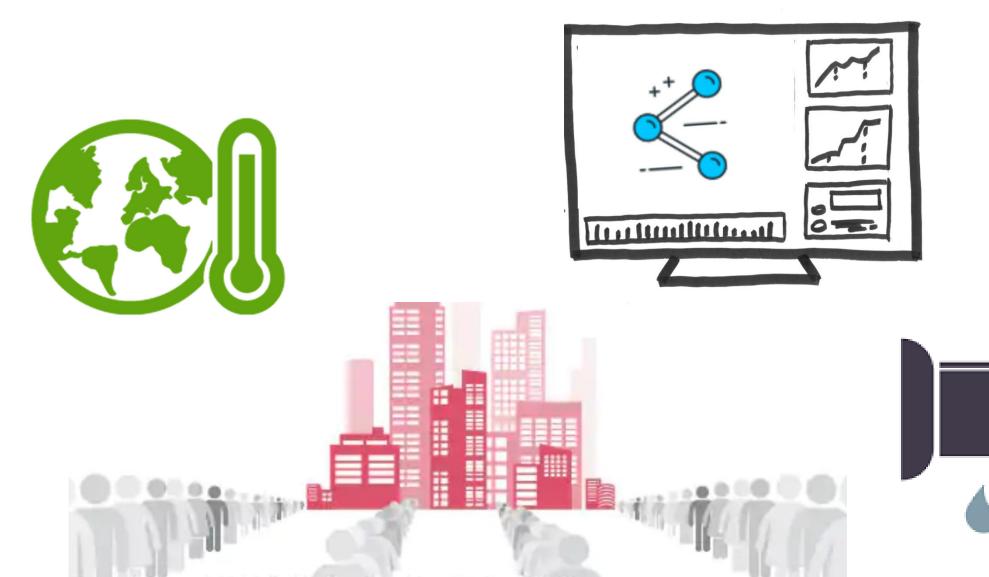


Strategic Transformation Programme

Every employee has the right tools, the best processes and is empowered. A customer can do everything for themselves, wherever they are, in a single interaction.

Every employee can make insightinformed, factbased decisions with confidence. (The view through the command pod of a B-wing fighter) Gyroscopic command pod Heavy Powerful

What problems are we solving for?



1. Smart storage

Outcomes

- Integrated sources
- Data visibility

- Infrastructure resilience
- Deployment pipeline



Outcomes

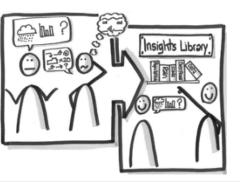
Insights library (cloud wiki)

Factical Insights Library

Welcome to the Watercare Insights Library

This is the place find out about data, models, scenarios and dashboards that we use at Watercare.

If you would like a short video tour (3 mins 40 secs) of the Insights Library please click here, this is a great way to jump start how you can use this resource.



Next you might want to:

- Check out the catalogue Expand the sidebar and click a category to get started Draft items (writeups on data, models and dashboards that are under review by the community)
- Learn about the processes that support effective use of the library
 - Approach for adding to the library
- Take a look at the user guide Find out how to contribute to the library and learn about the moderation process

Search Published Items



Featured Items Population Analysis Dashboard (Release V2.0) 🖹 Waste Water Dashboard (Release V1.0)



Nish Dogra

Bulk Supply Point (BSP) Mapping to Water Balance Zone (WBZ) updated May 15, 2019 - view change

Eric Lee

- 📄 Geospatial Consumption updated Apr 15, 2019 view change
- Geospatial Water Consumption updated Apr 15, 2019 view change



Outcomes



Insights library (cloud wiki)

- Concise requirements
 - Sharing / collaboration
 - Smart search
 - Links to data confidence & quality framework
 - Source / lineage of modeling
 - Version control

Outcomes

Population distribution model



Previous 2018 population distribution



Updated model - 2018 population distribution

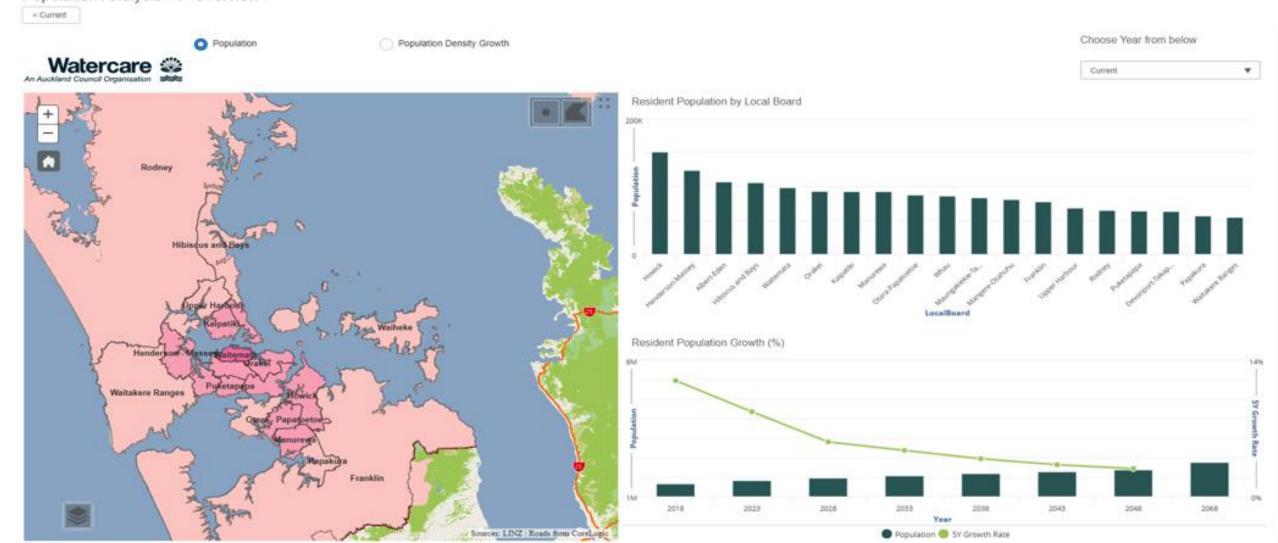
Outcomes

Population distribution model

- Further refinement required
- User experience at heart of delivery
- Limitations with architecture / solutioning

Dashboard 1.0

Population Analysis - / Overview -



Outcome re-validation

- Reimagining
- Value focus / review
- Impact mapping



System performance visibility through connected GIS network model avoids assumed capacity and informs better decicions between new vs optimised assets Additional system consumption and environmental data will improve modelling and predictive capability

and validate demand & discharge assumptions

Network & spatial model(s) can be regularly validated using system performance data, informing water balance / serviceability

Network & spatial model(s) can provide a greater range of future performance scenario datapoints and

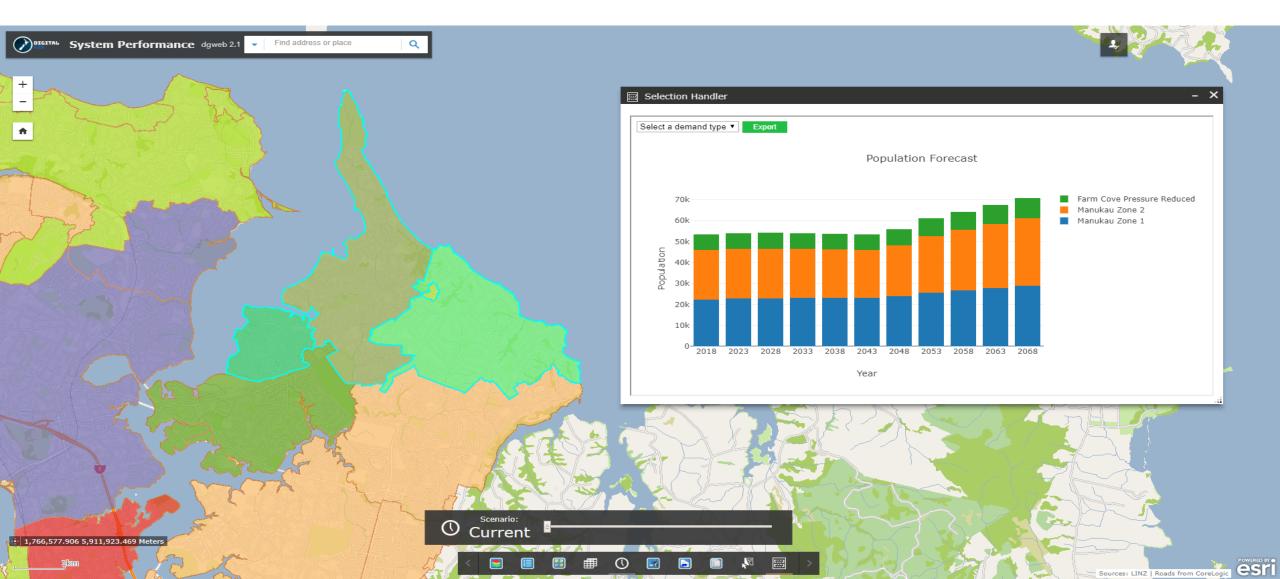
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> Timeseries dash geospatial link to automatate/stre continuous valio dashboards to f 5%

Connect model

Planners

Dashboard 2.0



Dashboard 2.0

Outcomes

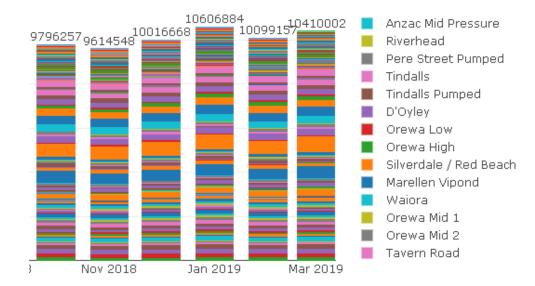


- Custom dashboard
- Historic / dynamic insights
- User focus

Learning

- Full stack architecture required
- Reusable microservices
- UX / UI input

Historical Consumption



3. Next gen GIS

Outcomes

- Geometric network PoC
- Wastewater network tracing
- Dynamic labelling
- Digital twin enabled

- Network wide GIS cleanse = value
- Streamlined model build





Where to next...

Digital twin

- Stakeholder impact assessments
- Boundary isolation
- Model validation & automation

Network analytics

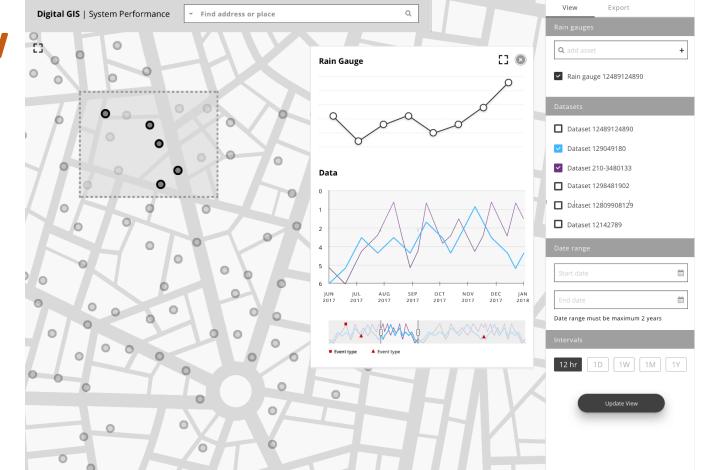
- Regional activities
- Climate / disrupters



Where to next...

- User hub & Workflow UX / UI refinement Field data integration Ways of working
- Agile planning
- Programme approach

System / data scaling



In conclusion

- Disruptive planning horizon requires stability
- Integrated storage improves pace; visibility
- Resilient deployment essential
- Dashboards provide powerful insights
- Geometric network improves network capability
- Future value through analytics; data integration
- Agile practices are effective in planning
- Watercare's approach is adaptable and scalable



