exposé
Data Exposed

Case Study

RAA: Advanced Analytics and Big Data Platform

Provision of a highly responsive and cost effective advanced analytics and big data platform, capable of handling complex data use cases.

Case Study

Advanced Analytics and Big Data Platform – RAA

An advanced analytics and big data solution that allows for the acquisition and blending of large volumes of fragmented geospatial data, transforming it using massive processing capacity, using predictive analytics to assess the risk of millions of properties, and providing interactive and geospatial visualisations of the blended data and results.

Problem.

The Actuaries team within RAA needed to perform risk assessments over the properties of their customers. Previously, this meant a turn around time of over 4 days to prepare the data and perform computational heavy transformations. It was only then, that the predictive work to assess the risk could start, resulting in a lot of pre-work and waiting.

Due to the computational and time constraints, RAA limited the base data to just their customers in order to be able to meet their quarterly reporting timeline needs which meant that results, although fit for purpose, were not integrated into the broader analytical or operational landscape.

Solved.

Exposé employed best of breed advanced analytical and big data technology and services in Microsoft Azure, especially the key components of the Cortana Intelligence Suite.

The solution includes high performing SQL syntax, supported by database scale on demand up to massive computational scale to handle the very large data volumes.

The solution extended far beyond RAA's customer base data and now includes every single geocoded address in South Australia (1.14 million addresses), and their respective distances to 10,000 geocoded points of interest (which affects property risk). This equates to 11.4 billion combinations of addresses and points of interest.

The massive workload to derive these 11.4 billion records are achieved within a matter of 3 to 4 hours.

The solution then also includes a machine learning service used to model the risk by property, and interactive geospatial visualisations that can be accessed on any device.

Business Benefits.

The work which Exposé has undertaken allows RAA to significantly reduce the time and effort involved in this important quarterly workload. Manual effort has been all but eliminated, and the large scale transformations concludes in under 4 hours (versus 4 days), ready for downstream use.

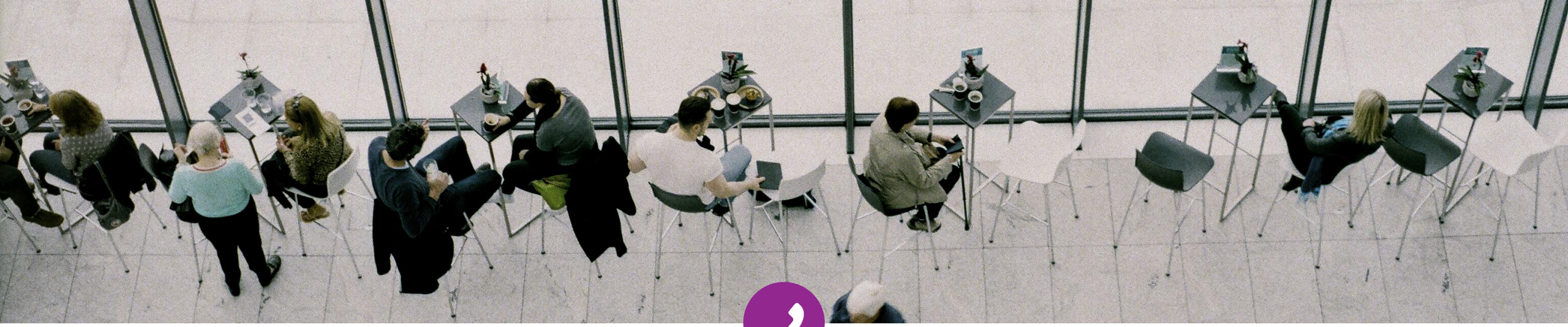
The solution extends risk calculations beyond the existing customer base to include the full state, and therefore prospective customers too.

The machine learning service allows for the authoring of many predictive analysis models (such as the determination of the risk of theft at, or damage to a property based on its distance from a particular point of interest such a train station).

These models can be put into production through a few easy steps, and is then available to any number of additional systems such as operational insurance systems or an online policy quoting engine.

Cost is significantly reduced as no hardware is involved, RAA pays only for what they use (including variable pricing according to computational scale) and the actuaries team are freed up from doing quarterly manual data processing.

Azure Cortana Intelligence Suite (Big Data and Advanced Analytics) • Power BI



Do you have any additional questions, or want to know more?

We would love to hear from you.

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