

Spend Categorisation Tool

Background

General Ledger data is collected from over 150 NSW Government Agencies

\$30 billion in annual spend data

More than 2 million transactions per quarter

The rule-based **system in place** utilises **over a million mapping rules**; **difficult** and **time-consuming** to maintain

The **DAC** has been engaged to develop an **automated** and **robust Spend Categorisation Tool** to **replace** this process

Implementation

Successful completion of 'proof of concept' with random sample

Currently undergoing acceptance testing, understanding how the model may be operationalised

The Solution



Uses AI to classify semi-structured and unstructured information into categories based on taxonomy



Can learn mapping rules from previously categorised spend data and apply insights to new raw data



Self-learning; accuracy will improve over time with use



Accuracy for Whole of Government spend data has exceeded proposed 90% benchmark



Use AI to remove use of 'other' category (~10-15% of total) and replacing these uncategorised invoices with correct classification

"The DAC has engaged really motivated scholars and used cutting-edge technology to deliver an outstanding result."

- Amol Chavan, NSW Procurement

Impact

Greater transparency of government spending

Demonstrates spending patterns through categorisation at a point in time, or over months or years

Allows elimination of silos where different departments purchase same assets. Encourages interdepartmental collaboration and economies of scale

Identification of areas where resources are over or under-utilised

"Machine learning has allowed us to automatically match category of invoice against agency, supplier and a particular kind of spend, using data science and deep learning technologies."

- Dr. Khimji Vaghjiani, NSW DAC

Next Steps

Improve accuracy to greater than 95%

Use tool for classifying whole of government spend data from multiple perspectives

Potential to commercialise the model into a solution that would be offered to other agencies across government, and even the private sector

