

# **DATA IS THE NEW GOLD**

Storage and Computing Infrastructure  
Forward Planning at Flinders University

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# Why and How - Data Growth

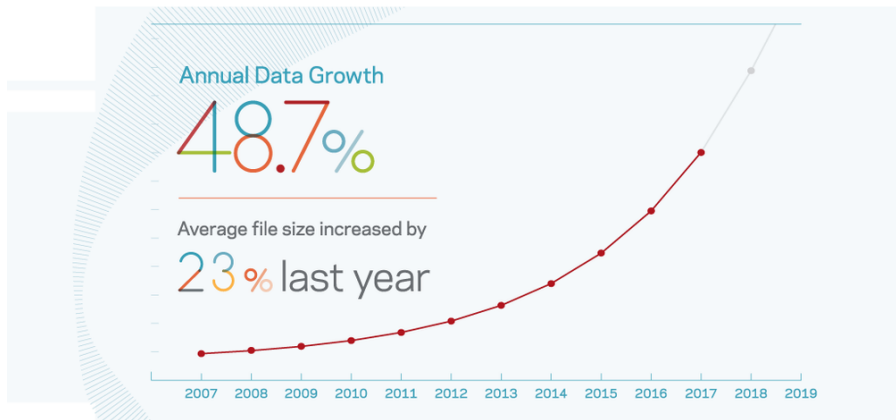


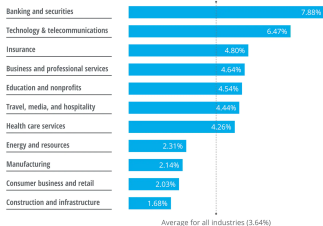
Figure: Rapid growth in global datasphere from 2007 - 2019. [1]



# Why and How - Data is Complex

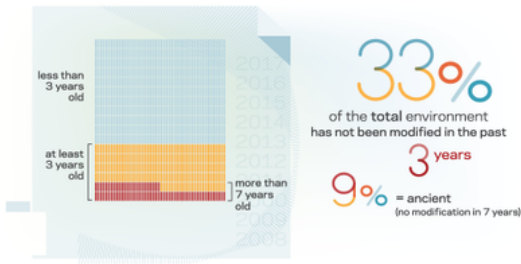
FIGURE 2

Average IT budget as a percentage of revenue



N=624.  
Source: 2018 Deloitte global CIO survey.

Deloitte Insights | [deloitte.com/insights](https://deloitte.com/insights)



**Figure:** The education sector spends big to deal with a complex data schema [2]



# Why and How - Model + Plan

## Significance of Data Modeling



**Figure:** Robust models provide unique insights about business and can help us to better understand the customer demand and forge a competitive edge. In the context of the tertiary education section, this advantage will be presented in terms of either financial savings or customer satisfaction. Above visual was obtained from the big data study.[1]



# Why and How - Summary

- 1 Data speaks insights
  - Review - Historical time series data
  - Insights - What the data says about the current data management strategy at Flinders
- 2 Scenario analysis with in-house visual dashboard
  - State-of-art analytical capacity
  - Informative visualization
  - Strategy simulation
- 3 Case demonstration
  - How the continuous procurement may save university big \$ and improve institutional agility



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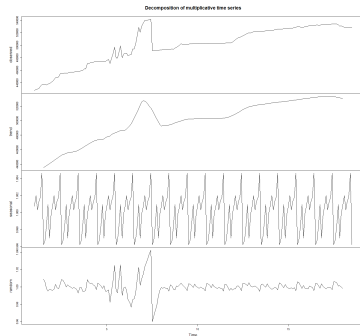
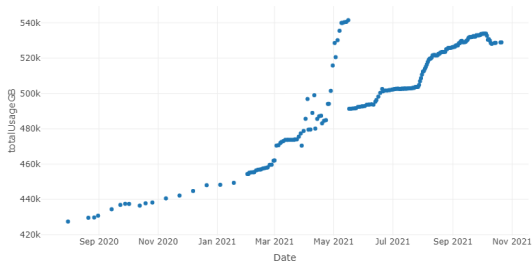
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# Data Speaks Insights - History data tells



**Figure:** Flinders University aggregated historical data storage data - Insights highlighted: 1. Data monitory apparatus was patchy, a reliable data gathering mechanism is worth more investment. 2. Data occupation cycles had strong seasonality. 3. Data utilization trace followed the infrastructure procurement schedule closely and reflected the current data management is more reactive rather than ideal proactive management.





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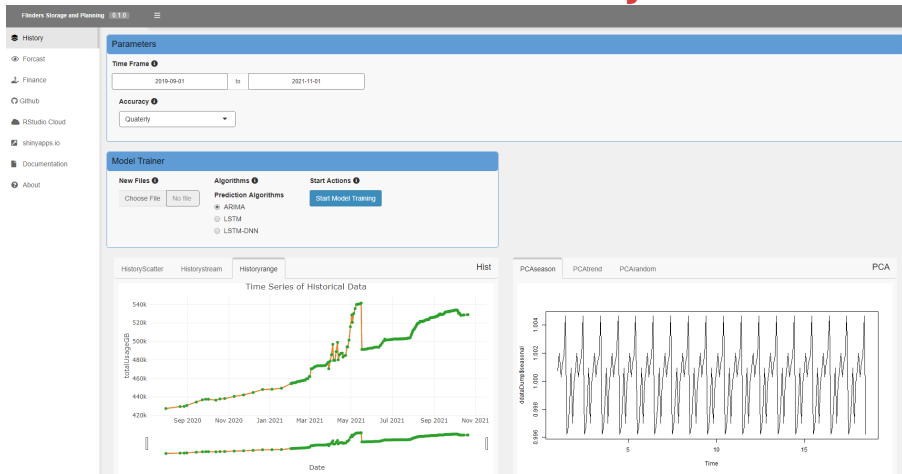
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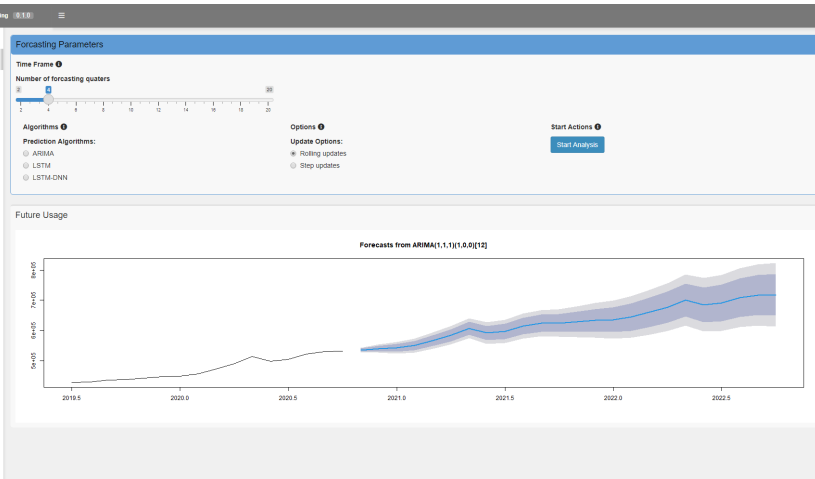
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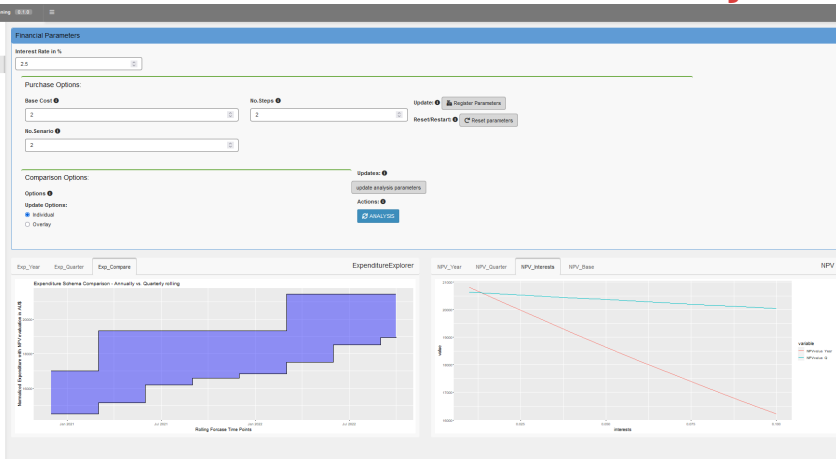
# In-house Dashboard - History



# In-house Dashboard - Multi-spatial Forecast



# In-house Dashboard - Financial Analysis



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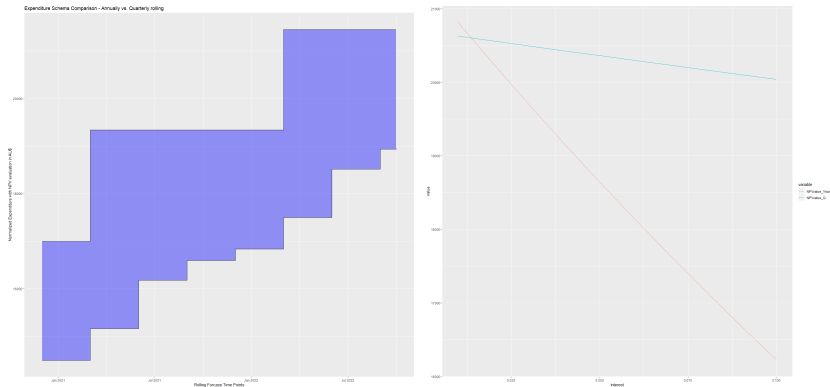
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# Demo - Procurement Strategy Analysis



**Figure:** Procurement strategy analysis based on Flinders University historical data storage data. Two strategies compared here were annual bulk purchase order vs. quarterly rolling purchase order. The financial decision was normalized to NPV in AU\$. The current model took into account the base order price and value depreciation due to inflation as well as the interest benefits obtained due to prolonged possession of fund. However the enhancement of purchasing power due to silicon chip advancement was not incorporated in current models. Parameters for this demonstrate: the base procurement fee (\$3.5K - each/year, \$1K - each/quarter), interest rate was 2.5%. Left - Shaded region represented the benefits in \$ term derived of quarterly rolling schedule. Right - Benefits derived from rolling strategy in relation to cash interest changes



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