Design and Implement a Solution for Managing Resource Demand within an IT Delivery Organisation

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"How to inform medium to long term decisions regarding workload capacity, in a large IT Delivery Organisation?"

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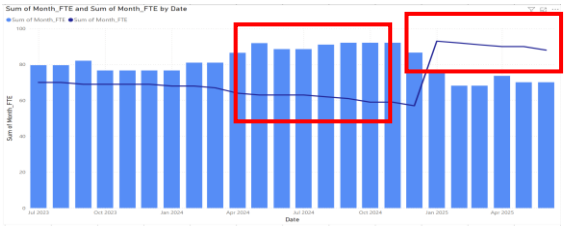
Key Findings



Workload can be moved from a point that it is undeliverable, to when it can be better managed.

Introduction

Large IT delivery organisations will often face problems when attempting to implement a change Portfolio, when that is balanced against the need to continue established contractual services, set against the backdrop of resource attraction, recruitment and retention.

This project seeks to deliver tooling that enables medium to long term decision making, which ultimately delivers a Portfolio of change in such an environment.

Aims

- Show the best form of Demand Management that can / should be employed within this organisation.
- Design and implement a solution to deliver this.
- Enable strategic decision-making.
- Provide tactical recommendations.

Method

Requirements were gathered from several key stakeholders and ordered from most to least essential.

These were then delivered iteratively.

Design

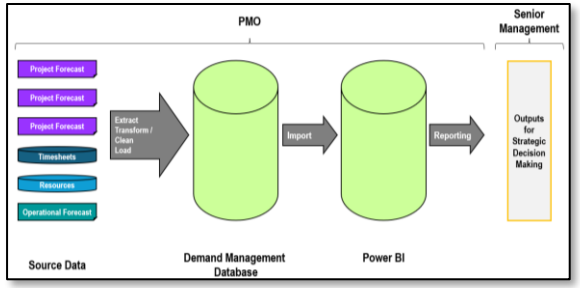
The solution will absorb *known* information across the organisation and provide comparisons of the data (*only pseudo data was used*).

This is a relational database, built using SQL, taken through to Power BI.

Visualisations will compare the data.

Database designs evolved based on needs to transform the data to ensure the varying data sets could be modelled over time.

Solution Architecture



Database Design Evolution

Implementation

Data was cleaned, standardised and transformed so that it could be accurately analysed. This occurred over several iterations.

The outputs were then packaged within a wraparound navigation.

Data outputs were compared to the source to test for transformation resilience.

Outputs were tested with stakeholders to gain feature delivery sign-off.

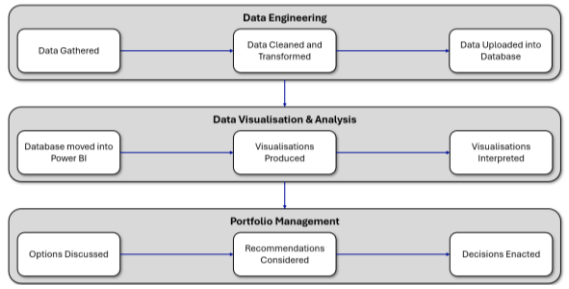
Analysis was given for context at each phase.

Data Interpretation

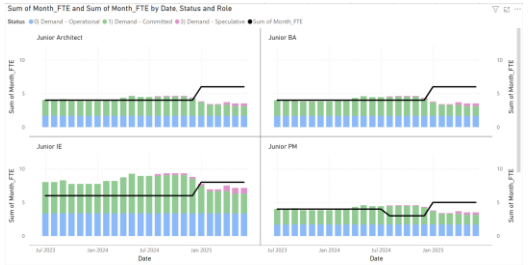
Where workload breaches supply for a sustained period, there is a threat to Portfolio delivery.

If workload falls below supply here is a potential opportunity to improve Portfolio Delivery.

Demand Management Process



Key Output Examples



Conclusion

For decisions to be taken, analysis of the outputs is required to assist with visualisation interpretation.

Now successfully delivered, the following could be considered for future development: -

- More robust data cleaning.
- A data warehouse to house the data.
- Modelling existing data to produce predictions for, as yet unknown events.