



Utility – Data Analysis with Power BI

The art of balancing demand vs capacity



The Capacity Planning Tool will enable better decision making and planning around resource availability and utilisation for customer-related work in the field.

PROBLEM

One of our major utility customers identified that their current process for planning resources to meet the demand was not sustainable. Daily, there would be hundreds of customer calls requiring a myriad of different services, planned maintenance work as well as corporate demand. These calls often required crews of different levels of skills and plant equipment.

Simple decisions, such as approval of a leave application or the capacity to take on new work, was difficult for a subject matter expert to answer without a clear understanding of what period demand looked like.

This function was formerly done by regional planners using spreadsheets and other ad hoc methods. To formalise the process, a centralised tool was needed that could be managed and supported by IT.

SOLUTION

Exposé developed the solution in two parts. Bringing together source data from the HR system and works management system, and applying predictive analytics based on the past three years. This data was broken down by area, skill levels and time-period plus factored in other information like the average travel time to sites.

An algorithm based on complex business rules scanned over the final dataset, matching the prioritised work orders (demand) with the staff availability pool (capacity). The result was available at a glance which identified which work could be met and which needed attention for that selected period for the next two years.

Finally, Power BI helped present the information in a way that allowed the subject matter experts to identify periods where staff may be recommended to take leave, contact neighbouring workgroups for assistance or conduct “What if” scenarios.

BUSINESS BENEFITS

Greater insight into the availability of staff and equipment; both locally and at neighbouring work groups. This insight reduced the costs involved in hiring subcontractors and equipment.

District leaders having access to interactive reports directly, providing detailed information without having to go back to the source systems.

Elimination of manual, time consuming effort required for updating regular reports that had to be customised for each work group area.

The ability to perform “what if” scenarios to help understand the impact of shifting work around; can work be shifted to other teams, can work be contracted out, and can non-availabilities be reduced to increase capacity.