



Howick & Eastern Save \$100,000 in One Optimisation

Background

 240 employees

 182 buses

 117 routes

 7 million passengers a year

Industry

Bus

Challenge

Creating and optimising schedules

Solution

Planning & Scheduling solution

Results

- ✓ Time to create scenarios reduced by 66%
- ✓ Time to adjust schedules cut by two-thirds
- ✓ Saved \$100,000 a year
- ✓ Improved on-time performance

Howick & Eastern Buses (H&E) started using a planning and scheduling solution and improved contract performance, reduced man hours by 66% on tasks and saved \$100,000.

Background

H&E is an urban, commuter, school and charter bus operator based in East Auckland, New Zealand. Founded in 1939, H&E serves 7 million passengers a year with a modern, high-quality fleet of 182 buses including double deck buses on high-frequency routes. H&E's mission is to give every customer a safe and friendly bus service that is competitive, efficient and punctual. It is part of the InMotion Group, which also includes Fullers Ferries and Waiheke Island Buses, Mana Coach Services Wellington and Mana Bus.

H&E has been a customer of Trapeze Group for 10 years.

Challenge

Over the years, H&E has expanded from two buses to a fleet of 182 vehicles. Spreadsheets and manual processes were used to calculate schedules and rosters at the beginning, but in the mid-2000's H&E managers decided to invest in software solutions to streamline the process and manage the increasing complexity of network planning.

"As the business got bigger, it became more apparent that scenarios and the other options that a planning and scheduling software would supply was important to the business," said Sheryll Otway, General Manager.

"There comes a point where spreadsheets cannot achieve the results you need within a timely manner."

Elliott Agate, H&E's Planning & Logistics Manager, explained some of the limitations the company experienced. "When I started we were using Excel spreadsheets and manually cutting and pasting previously-created shifts, which obviously wasn't that efficient once we went through a timetable change. It wasn't very easy to do."

Cutting and pasting the shifts and moving them around manually would take around two hours, but it would take even more time to go through all the duty cards to ensure all the hours were correct and legally compliant with regulations and union agreements. Optimisation was out of the question due to being too complicated to calculate and recalibrate manually.

H&E was also focused on keeping its current work and winning more tenders to grow its business. However, turnaround time for tenders was a challenge: without a software solution, creating new schedules was time-consuming and left Elliott's team with insufficient time to make variations or changes to their proposal for optimisation.

"It would take a few weeks to accurately create a new schedule and running last-minute variations was almost impossible," said Elliott. "You'd have to rework everything to create different options and variations."

"There was a real lack of flexibility in the creation of new solutions and the speed of creation or making changes to schedules was a real issue."

Lastly, it was difficult to work out the costs of new jobs accurately through a manual process. If connections or routes changed, working out the distance between points could be a hassle because Elliott's team had to rely on online maps which were not always accurate. It was also



easy to overlook things because so many factors had to be taken into consideration during calculations.

Solution

To accelerate network planning, rostering and tender applications, H&E decided to invest in a bus-specific planning and scheduling software. Trapeze's Planning & Scheduling solution was chosen over several alternatives because it was the right fit for H&E's business: it could take into account the complex parameters and conditions H&E was operating under; the solution was created for bus operators and did not require expensive customisation; and the support team was located in Australia for easy access and high availability.

“We evaluated several different avenues and Trapeze was the right fit for our business.”

Sheryll Otway, General Manager

The most noticeable benefit of using this technology was that it sped up the network planning process considerably. Where it used to take H&E around 6 weeks to create a single accurate, reliable solution, it now takes less than a fortnight to create multiple scenarios and variations for optimisation and ensuring the solution proposed is the lowest cost overall and viable for H&E to run. Additional what-if scenarios can be created in less than half a day if necessary.

“The Trapeze Planning & Scheduling solution is a lot more time-efficient. If you're doing a tender, once you set up your repositioning, your kilometres, your map data and it's all ready to go, it's just a matter of changing your constraints and changing a few options to get a completely different scenario,” said Elliott.

“You can run multiple variations for the same contract and get multiple results and costs to weigh up and evaluate so you can propose the best result in your tender application. It's just more efficient in terms of time.”

On the operational level, schedule adjustments are also now quicker and easier to do. Changes to timetables and rosters can now be accommodated and done in one week instead of three weeks.

“The Trapeze Planning & Scheduling solution gives us improved speed, accuracy and flexibility in the construction of schedules.”

Elliott Agate, Planning & Logistics Manager

H&E also use the Trapeze Planning & Scheduling solution to improve on-time performance and manage the company's contractual key performance indicators. When H&E receive performance data from Auckland Transport, Elliot and his team use the software to analyse the trips that are performing poorly and make the appropriate changes to improve performance.

“Auckland Transport sent us data on our worst trips in terms of on-time performance. We made adjustments based on the information we were given and improved these trips, with some of them now reporting 100% on-time performance,” said Elliott.

Outside of tenders and contracts, H&E also uses the Planning & Scheduling software to review its schedules and improve cost efficiency.

“We look over them now and again to make small adjustments and make savings where possible,” said Elliott. “It's very satisfying when you run a solution and it comes out better than what you had previously and you end up with a cost saving as well as a saving in the number of buses.”

“We saved somewhere around \$100,000 a year by looking at our schedules, moving a few things around and changing relief points, and it was sort of a day's work.”

Elliott Agate, Planning & Logistics Manager

Today, H&E's network planning team is confident and creative in producing, optimising and adjusting schedules to suit the needs to the company. They can now investigate the viability of various ideas to find cost savings, reduce idle time or improve roster driver-friendliness, something that would have been too time-consuming if done manually, and also have no more concerns about the accuracy and completeness of the solutions sent out in tender applications.

“We definitely feel a lot more confident in our results. We can make adjustments really quickly – the Trapeze Planning & Scheduling solution makes the job a lot easier,” said Elliott.

Sheryll confirmed that H&E is very happy with the results she is seeing from the use of Trapeze's Planning & Scheduling solution and plans to use the knowledge and experience they have gained to benefit the wider InMotion Group.

Success

- ✓ Time to create scenarios for tender applications reduced by 66%
- ✓ Time to make schedule changes cut by two-thirds
- ✓ Improved on-time performance through optimisation
- ✓ Saved \$100,000 by optimising schedules

TRAPEZE GROUP

Trapeze Group works with public transport agencies and their communities to develop and deliver smarter, more effective public transport solutions. For more than 25 years we have been Here for the Journey, evolving with our customers around the world to helping them move people from point A to Z, and everywhere in between.

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