



Solving the Complex Challenges of Workforce Management

With Gurobi, Workforce Analytics helps their clients reach maximum sales potential by ensuring optimal resource allocation



Workforce Analytics uses mathematical optimization, machine learning, and factual insights to help businesses better engage their workforces and unlock a superior level of performance. Using world-leading technologies and methodologies, they can also help organizations ensure compliance with legal workforce requirements while achieving optimal results.

Industry: Workforce Analytics

Location: Australia

Use Cases: Workforce Allocation/
Scheduling

Website: workforceanalytics.com.au

Results

- Workforce Analytics can help their clients maximize profits simply by having the right people working at the right time, rather than reducing headcount or making other cuts that could negatively impact performance.
- Clients no longer need to build rosters from scratch, and they have more time to work on the strategic elements of their business.

The way your business manages its workforce affects so much more than just the hours your employees work. It ultimately impacts your customer service, legal compliance, and bottom line.

Until now, most business owners and managers have designed their workforces using a combination of historical data, expert insights, and gut instinct. But to remain competitive in today's rapidly evolving commerce environment, those methods simply aren't enough.

That's why Workforce Analytics set out to revolutionize the way businesses engage their workforces by applying sophisticated mathematics, optimization, and machine learning. These methods provide accurate daily forecasts to help organizations—across industries, including the disability sector, aged care, and fast food, to name a few—avoid the wasted costs associated with over-coverage, as well as the poor customer service that can result from gaps in coverage.

In addition, Workforce Analytics helps businesses ensure that their employees are paid correctly in compliance with government regulations, while reaching maximum sales and service potential.

To solve these complex business challenges, Workforce Analytics needed a powerful tool that could mathematically construct rosters—and since finding Gurobi, they've been able to address problems that would otherwise be unsolvable.

Building Rosters That Satisfy Key Business Requirements

"In my HR consulting business, I'd sit in on a lot of leadership meetings for businesses in retail, hospitality, fast food, and so on," said Lisa Spiden, CEO and founder of Workforce Analytics. "There would always be knee-jerk reactions to how they could save dollars, and often it came down to rosters and cutting hours on the floor. But then sales would take a hit, because they didn't have the

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Workforce Analytics*



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right people present at the right time to convert the sales—so the hours would go right back in.”

This seemingly never-ending problem is what inspired Spiden to develop a roster-solving solution that could meet four key requirements in the most cost-efficient way:

- Legal requirements: Legal conditions that must be met in rosters, such as break times and total hours worked
- Business rules: How a business wants its brand to be perceived
- Coverage: How many people are needed on the floor at any given time to guarantee optimal performance
- People issues: Constraints that can include employee availability, skills, or coworker compatibility

“I was looking for a product that could do all of this for my clients. I had no desire to build it, but no one in the world was doing it, so at that point I started working with a mathematician who has worked with IBM Research,” explained Spiden.

After finding that open-source solvers couldn't handle the job, Workforce Analytics decided to try Gurobi, which provided consistent, accurate results, as well as greater price clarity compared to its competitors.

Now, clients of Workforce Analytics no longer need to build rosters from scratch, and they have more time to work on more strategic elements of their business.

Gurobi Brings Precision and Optimality to Workforce Management

With Gurobi as their solver, Workforce Analytics has been able to create not just better rosters, but optimal ones.

“We don't just look at historical data. We look at today and bring our clients forward,” said Spiden.

Whereas clients would previously try to cut costs by reducing hours or making other gut-feeling decisions, they can now achieve the same—if not better—results simply by having the right people scheduled at the right time.

“Our results have been really consistent and Gurobi performs the strongest for us,” Spiden emphasized.

Next, Spiden would like to focus on conveying the true impact and value of mathematical optimization to their clients, and bring more clarity around its powerful capabilities beyond the academic sphere.

She feels they're already on the right track with support from Gurobi.

“The Gurobi team is fantastic to work with,” she explained. “We feel we can work with them to change the perception of this just being academic, and work together as a community to successfully break into the commercial space.”

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