

STREAMLINING WORKFORCE SCHEDULING: ENHANCE EMPLOYEE PRODUCTIVITY AND EXPERIENCE WITH QUANTUM OPTIMIZATION

In organizations managing a vast and diverse workforce with round-the-clock operations, scheduling shifts can present significant challenges.

This process can involve navigating a complex array of factors impacting employees, including availability, skill sets, shift variations, and compliance with labor regulations. Manual scheduling methods often lead to inefficiencies and errors, such as double-booking, improper staffing levels, and regulatory non-compliance — all which can adversely affect operational efficiency, employee morale, and customer service.

Manual processes are not only time-intensive but also prone to mistakes, hindering managers' ability to swiftly adapt to sudden demand shifts or unexpected staff shortages, especially at large scale. Organizations need more flexible and precise solutions to optimize workforce scheduling to ensure that the right staff are in place at the right time, thereby minimizing costs and elevating productivity.

QUANTUM OPTIMIZATION: A POWERFUL SOLUTION

Quantum-powered workforce optimization excels at minimizing downtime and maximizing staff utilization by effectively managing numerous variables and constraints, from shift-preferences and changing regulations to sick leave. With enhanced scheduling accuracy, quantum optimization can reduce the risk of costly errors and disruptions, leading to smoother operations and considerable time and cost savings for organizations who require employees with specialized skillsets to oversee complex scheduling processes. Retailers struggle with seasonal demand spikes, often leading to overstaffing during slow periods and understaffing during peak times, impacting customer experience and employee satisfaction. Healthcare facilities grapple with fluctuating patient loads, where manual scheduling can result in misaligned shifts and staff burnout, affecting patient care. Meanwhile, logistics companies often deal with

erratic shipment volumes, resulting in under-staffing that can disrupt delivery timelines and impact customer satisfaction.

D-Wave can solve these and many other complex optimization problems through hybrid quantum computing solutions that utilize the best of classical and quantum computing technologies. D-Wave's annealing quantum computers, boasting over 5,000 qubits, are the largest in the world. They enable organizations to leverage quantum programming to develop advanced commercial applications. Through the Leap™ quantum cloud service, customers can access hybrid solvers capable of handling problems with millions of variables and hundreds of thousands of constraints. **This secure, real-time, production-grade service offers over 99% uptime and availability.**

BENEFITS OF QUANTUM-POWERED WORKFORCE SCHEDULING

- Eliminates time-consuming and inefficient processes while building a uniform schedule.
- Reduces labor costs by reducing overstaffing.
- Improves adaptability to market changes with real-time schedule adjustments, reducing manual workloads and boosting service quality.

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USE CASE: QUANTUM OPTIMIZATION IN ACTION AT PATTISON FOOD GROUP

Pattison Food Group, a prominent leader in Canada's food retail sector, has experienced the benefits of quantum-powered optimization firsthand. In response to the growing demand for at-home grocery delivery, Pattison sought to optimize its driver delivery schedules to meet this need. Together with D-Wave, the company built and implemented a hybrid quantum application that streamlined its scheduling operations. This resulted in an 80% reduction in e-commerce delivery scheduling workload, drastically simplifying the process.

"Meeting all these constraints concurrently is very difficult to do with classical compute...having D-Wave and the power of quantum allowed us to execute this efficiently and scale quite quickly."

— Lindsay Dukowski, Director of Data and Analytics, Pattison Food Group

GET STARTED NOW

Are you ready to explore how quantum optimization can meet your workforce scheduling needs?

With our hands-on team of experts and our Launch™ program, it's easy to reap the benefits of quantum optimization now. Our team will guide you through every step of your journey: we'll validate your use case, offer an optimized and thoroughly tested solution, and ensure a smooth path to production deployment.

Sign up for a consultation today.

