Special report

Workforce Optimization for your Connected Fleet

How businesses can get more out of their workforce using technology

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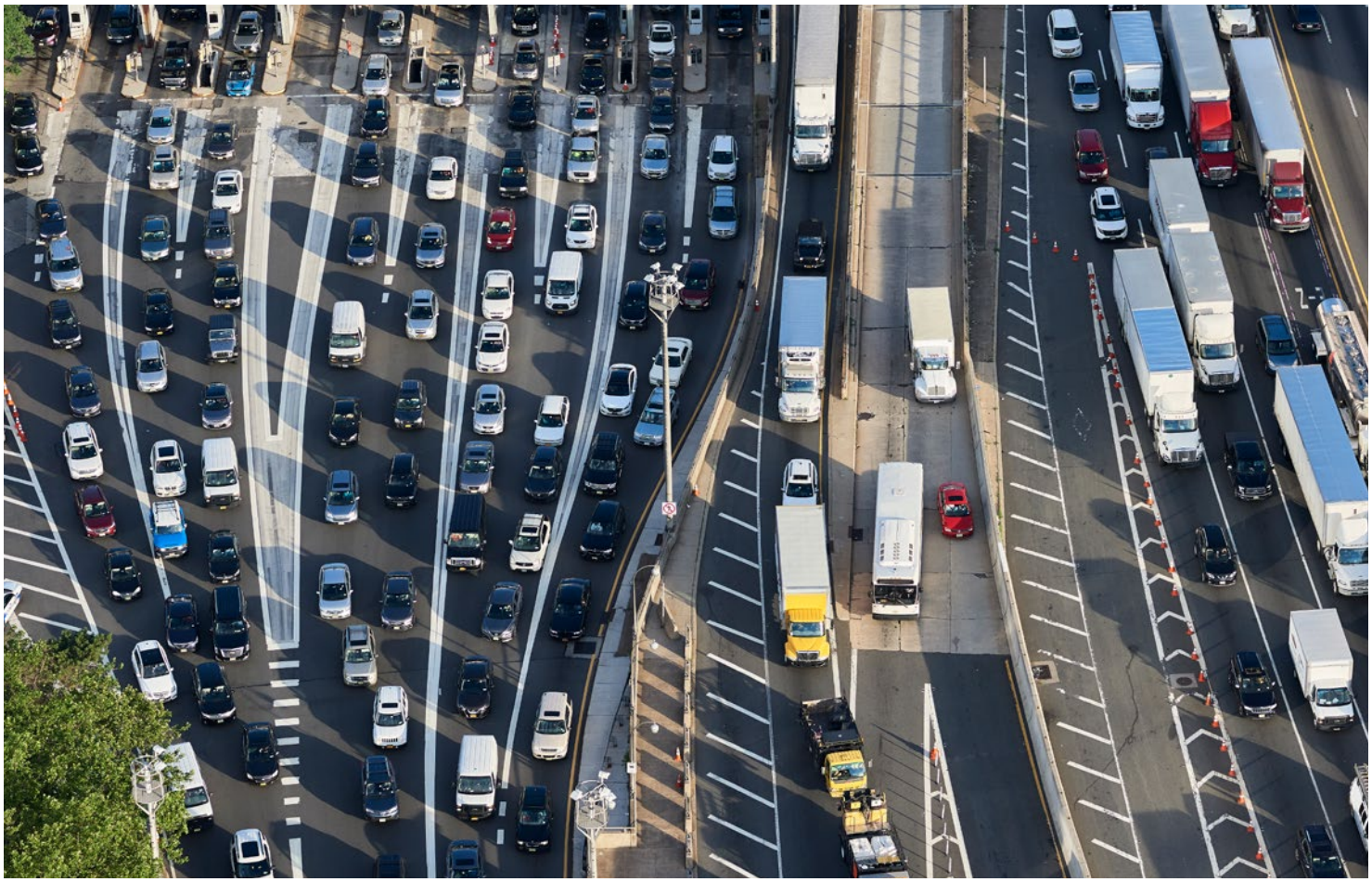
Introduction

Today, fleet organizations are tasked with ever-increasing challenges to be more efficient. From scaling their business as it grows to ensuring their workforce has the right skill sets to do their jobs, there are numerous moving parts. It comes down to managing the constraints of performance, time and money. Too much focus on one will compromise the remaining two. The goal is to achieve a harmonious balance between all three.

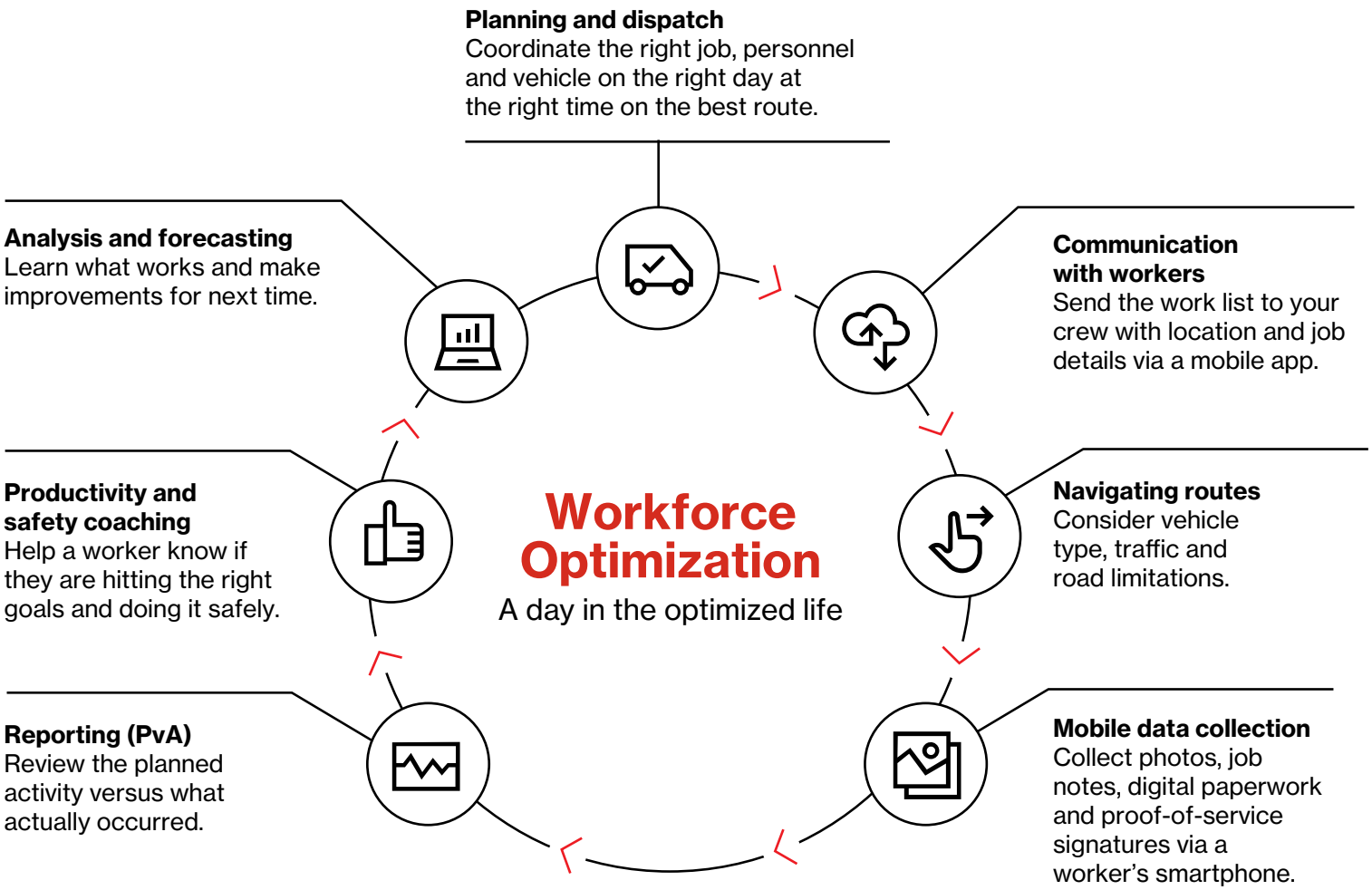
And how are businesses trying to walk this tightrope? Data.

However, the problem that many companies run into is sorting through the vast amount of information they receive. Even when workloads are static, managing the data can be overwhelming. When variables change, making sense of the numbers can feel impossible, especially for businesses still using manual and legacy methods.

Capitalizing on workforce technology tools for planning, forecasting and analyzing is your most powerful ally when trying to improve performance while maximizing your time and money. Through predictive analysis, strategic planning and clear job execution, you can take steps toward optimizing your workforce.



Optimized life cycle of workforce management



What is workforce optimization?

Workforce optimization (WFO) means working smarter: Assign the right resources to the right jobs at the right times with the right tools on predetermined routes optimized for efficiency, cost and productivity.

Of course, that's easier said than done. However, the right technology can do most of the heavy lifting, while providing you with key data points to help improve:

- Customer satisfaction
- Capacity loads
- Work scheduling
- Service levels
- Operational costs
- Economies of scale

These primary pieces of the workforce optimization puzzle always should be taken into careful consideration when planning daily, weekly and monthly routes. The goal should be better performance and efficient use of your time at a minimal cost.

Workforce optimization features

A professional WFO platform can assist you with:

- Predictive analysis
- Spotting trends
- Dynamically adjusting for staffing needs
- Skills matching
- Cost modeling
- Recognizing potential conflicts on routes
- Planning multiple what-if scenarios

How can workforce optimization help businesses?

Any business that is considering a workforce optimization solution should carefully evaluate the specific benefits each vendor's solution offers related to their own employees' skills, the vehicles and assets they utilize, and the work being done.

Potential benefits of WFO solutions

- **Cost-efficient customer service**
- **Accurate, reliable navigation**
- **Flexible scheduling and planning**
- **Better visibility in the field**
- **Optimized routes and fuel costs**
- **Dispatching based on specific needs**
- **Near real-time communications**
- **Get more work done with less paper**

What technology is behind a workforce optimization solution?

The algorithm employed by a workforce optimization solution is by far its greatest driver. Think of an algorithm like the brain, or collection of rules and instructions, that runs the technology. However, the unfortunate truth is that many of today's planning solutions have minimal – if any – routing and planning intelligence algorithms.

The ideal workforce optimization algorithm can take into account many constraints and variables, and suggest the best route or routes. It can scale from dozens of job requests to tens of thousands, processing this data quickly, while taking into account the static and dynamic nature of the work, people and equipment needed.

How does workforce optimization work?

The formula to optimize your workforce and routes comes from a combination of employees, assets, jobs, times and route objectives. It is from these main parameters that the best options, or scenarios, are presented to you by the optimization solution.

If there are any caveats to the options presented, these will be pointed out to you, so you can reconsider. These alerts allow you to see what the cause and effect is of certain route constraints, and if you can live with the consequences, or perhaps reassign certain jobs for another day.

Workforce optimization alerts

- The route is too long (e.g., miles or hours)
- The driver will exceed overtime constraints
- The wrong vehicle is being considered
- The employee lacks the necessary skill set
- The ETA of one or more jobs would be affected adversely
- The preferred driver or technician is not assigned to the respective job

Employees

The unique constraints of every situation are critical components for deciding who to assign to a specific job. You must take into account unique factors related to your employees, physical assets, costs and jobs.

Some employee-related constraints may be:

- Hours worked in a given day, including overtime limits
- Shift patterns or days of the week when they can only work certain hours
- Hourly pay
- Individual skills sets, like security clearances, operator licenses and certifications

There can be the added complexity of federal hours of service (HOS) rules and electronic logging device compliance (i.e., FMCSA regulations) that must be taken into consideration when assigning employees to jobs and routes.

Resources

The vehicle or equipment being used is also very important. Some vehicles may be down for maintenance or are restricted from traveling on certain roads. Each piece of equipment may also carry its own unique configuration (e.g., two-door, four-door, fire extinguishers, hazmat kit, boom, bucket) that will need to factor into your decision-making.

Operational costs

Fuel costs and engine hours need to be taken into consideration as well. You may not want to send out an older, less fuel-efficient vehicle on a long trip or to a job site where it will be idling for a long time.

Jobs

Lastly, but most importantly, are the jobs or stops themselves. Here, the usual suspects of time-delivery windows (i.e., time, day and week) of course will be key factors, but what about other key considerations that are critical to the job and the customer experience?

- Customers' preferred drivers, technicians or representatives, and conversely, the ones that are forbidden from servicing certain customers
- Jobs that require someone with special skill sets, like being bilingual
- Technician training for certain assets, such as forklifts or large trailers
- Capacity metrics to fully utilize resources

With the right workforce optimization solution, you will be able to consider all the above factors, metrics, constraints and situations before committing to plans.

How can specific industries benefit from workforce optimization?

Distribution industry

The distribution industry faces a number of planning and routing challenges given how often drivers must stop on each route. Disputes regarding late or missed delivery time windows are common due to poor planning and inefficient routing, which affect the driver's ability to execute their routes in a timely and cost-effective manner.

Additional job complexities exist, like capacity management (e.g., pallets, boxes, cubes, gallons, weight) for the trucks and trailers to ensure that each asset is being fully utilized before it leaves the depot. Drivers' shifts and HOS, along with labor and fuel costs, are also constraints when planning efficient distribution routes. Do you know when each driver is going to hit their maximum number of hours, or which driver has the longest route in terms of time and distance?

Many distribution companies employ routing strategies based upon territory planning. This strategy uses factors like number of jobs per region, square miles, time required onsite or jobs outside a service area — all of which dictate how a driver's routes will be constructed.

Traditionally, this manual planning process requires hours to complete using legacy methods, like basing decisions on historical data. Critical information may be out of date or no longer relevant due to recent changes. A workforce optimization platform can crunch this data in near real-time to optimize routes and save hours of manual work for territory planning.

Lastly, outside influences like seasonal changes, such as holidays and summer vacations, that affect business ebb and flow require careful historical and predictive analysis. Using what-if planning can provide a number of best-case scenarios for you to consider using specific job, driver and resource requirements.

Services industry

The services industry encompasses businesses that can be separated into two camps: time-window services and recurring services. Time-window companies can be equipment-delivery professionals, telecommunications providers, construction contractors (e.g., painters, plumbers, roofers) and appliance-repair technicians. Recurring services include landscapers, pest-control businesses, laundry-uniform services, medical-supplies-delivery companies, custodial services and pool cleaners.

These businesses require the technician to arrive during a specific time frame on a certain day of the week with the proper tools for the job. Being able to notify customers of potential delays or early arrivals is critical to customer satisfaction.

Responding to unforeseen events during the day, like technicians calling in sick, truck breakdowns in the middle of a route and customers who are not available for their appointments, all require dynamic replanning and rerouting existing resources in the best order to accommodate all the day's jobs.

Workforce technology can address these dynamic events in seconds, enabling businesses to efficiently schedule the jobs that need special attention.

And when caveats to completing the jobs occur during the day, an ideal workforce optimization platform can provide preemptive notifications to the dispatcher or planner to let them know the consequences. With this proactive data, they can decide if the job can be executed later in the day, or perhaps another day. A workforce optimization solution lets you run multiple scenarios with the data to see what the best options are in terms of performance, time and money for each available driver, job and resource.

Utilities industry

The utilities industry is composed of companies in both the private and public sector that provide products like gas, electric and water, and services such as emergency outage response, power transmission and distribution, metering, and utility repairs. Although they have differences, they face similar fleet challenges when it comes to servicing their customers.

For example, consider the benefits of being able to quickly dispatch emergency response crews to a specific location, or reroute the closest vehicles with the right equipment and personnel on board. Each piece is critical to emergency response. Sending the right technicians to an emergency job request without the required vehicles or tools would accomplish nothing.

Maintenance requests, meter readings, gas-line inspections and installations of new service also require special technicians, tools, skill sets and vehicles.

If a bilingual technician is required to complete a new service request at a customer site, is this being taken into consideration before assigning this job to the technician's route? What if you need a boom truck or an auger for the job? Did you remember to match up this equipment request with a qualified technician? What if there are 50 of these types of situations?

Trying to successfully manage all these factors with manual or legacy methods would not happen efficiently. The right workforce optimization solution has a robust algorithm engine that can take into account the myriad of constraints and present one or more options to consider. This will give time back to your route planners and dispatchers, so they can do other tasks.

Conclusion

In the past, workforce optimization was attempted using manual or inefficient solutions, such as spreadsheets, disparate databases, whiteboards and consumer-based scheduling software. In today's business environment, these practices are not scalable, and they will fail to help businesses design and execute plans that balance performance, time and money.

Workforce optimization solutions that contain strong routing and planning algorithms can consume many data points, constraints and complexities to produce routing options in minutes or less. They offer you the ability to consider multiple outcomes and contingencies, and help you select the best one for your needs.

It is all about improving your performance, getting more out of your time and money, focusing on the big picture, and staying ahead of the competition. The path to an optimized workforce starts with employing a workforce optimization solution that is powerful enough, scalable enough and smart enough to analyze all your people, assets, costs and jobs, so you can improve operations and satisfy your customers.

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