



# TACKLING THE DRIVER SHORTAGE

How to Create Schedules that  
Attract and Retain Drivers and  
Increase Driver Happiness

optibus

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# About Optibus

[Optibus](#) is a cloud-native planning and scheduling platform powered by artificial intelligence (AI). Hundreds of public and private transportation agencies and operators around the world trust Optibus to modernize their transportation planning and scheduling functions.

Founded in 2014, Optibus is recognized as a technology pioneer by the World Economic Forum for its role in transforming the transportation industry, promoting equity, sustainability, and smart cities.

Learn more:

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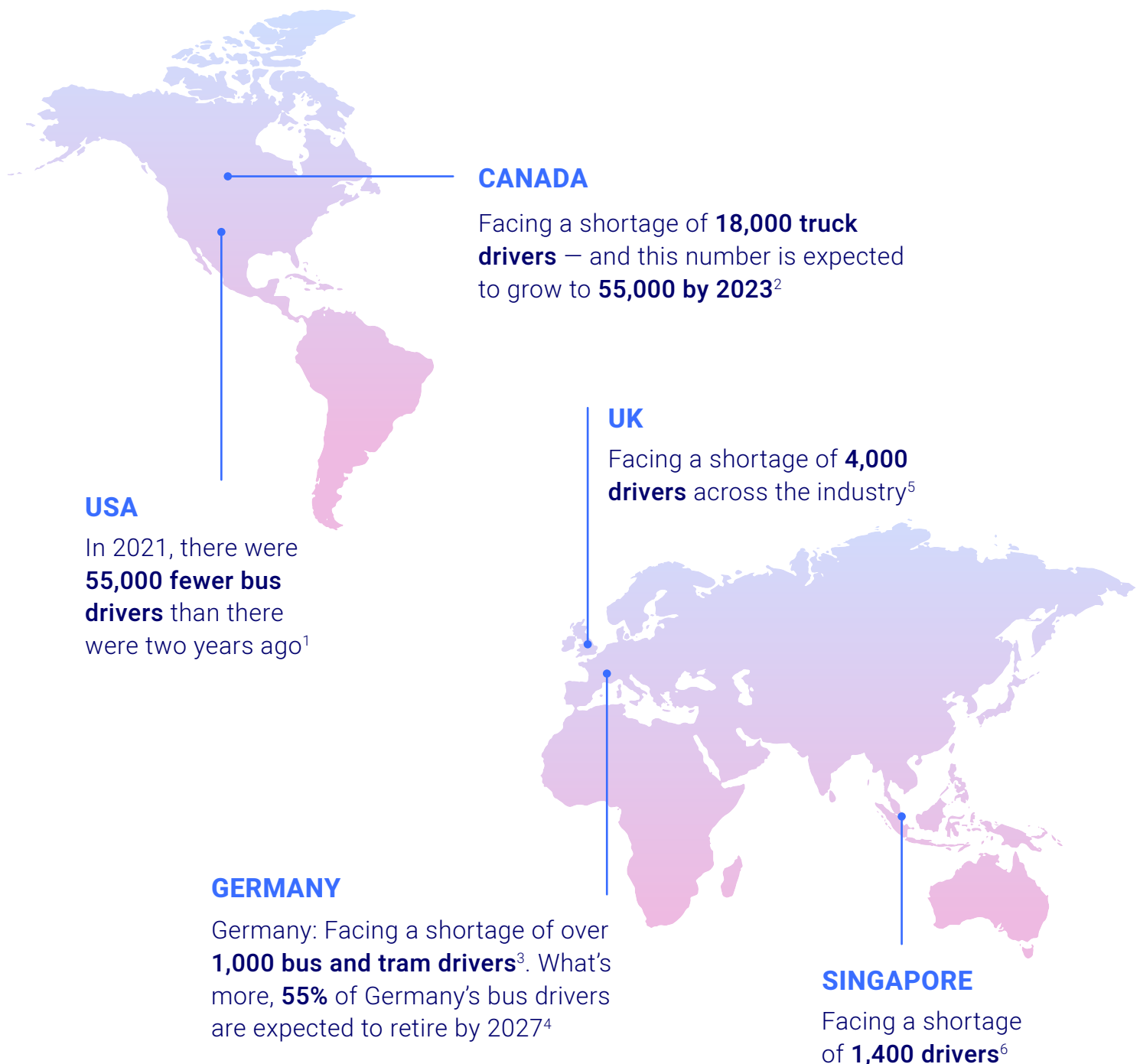
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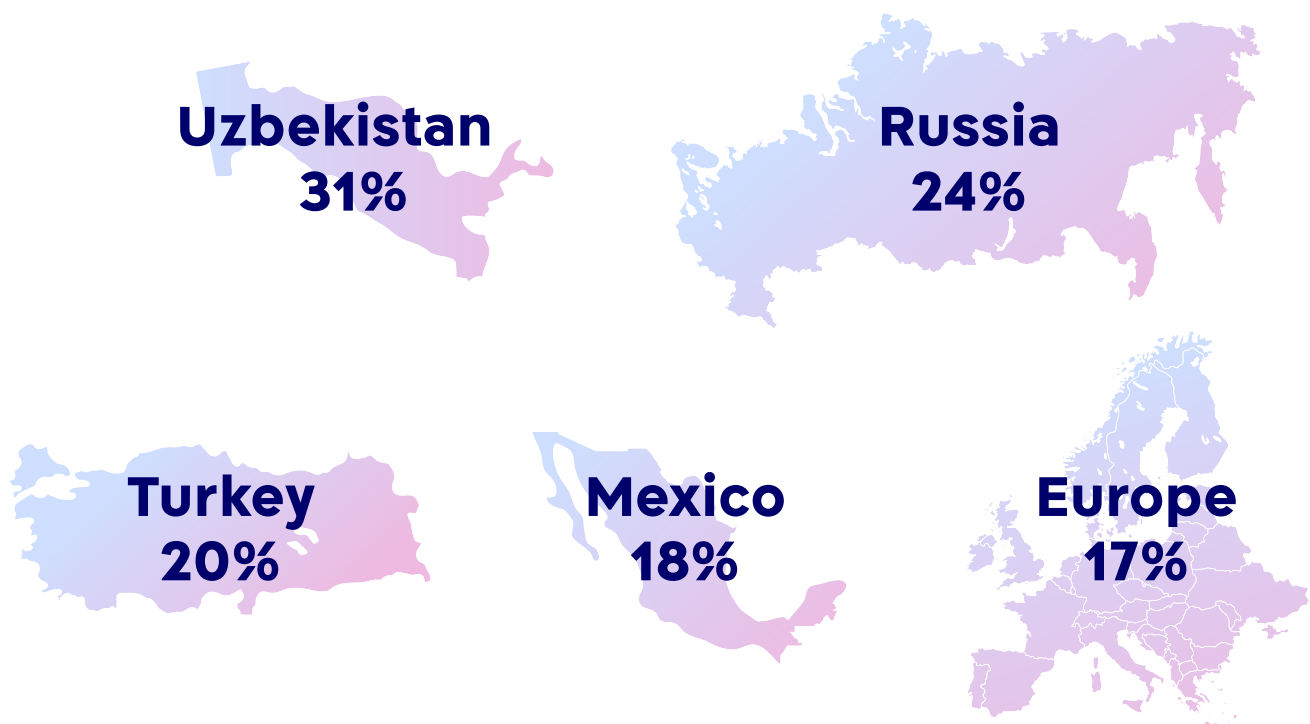
# Driver shortages are a major global issue

Driver shortages have been a growing problem across the globe for quite some time, and the pandemic has exacerbated an already troubling situation.

As a result of the pandemic, driver shortages — across virtually every aspect of the transportation industry — are at record highs worldwide. Here are a few statistics that demonstrate just how bad things have gotten:



What's more, according to a recent IRU survey<sup>7</sup>, the following global driver staffing shortfalls were expected for 2021:



Specifically, when it comes to public transportation, driver shortages impact the entire ecosystem. Fewer drivers means fewer routes, longer wait times, lower ridership, a lower quality of service, and frequent changes to rosters — not to mention the fact that it likely means more cars on the road, thus significantly increasing carbon emissions.

So, what can be done about the shortage? In this eBook, we'll explore this very topic — how to mitigate the shortage by attracting and retaining drivers at scale.

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Source<sup>1</sup>:

<https://www.coshoctontribune.com/story/news/local/2021/09/21/coshocton-impacted-school-bus-driver-shortage/8383943002/>

Source<sup>2</sup>: <https://globalnews.ca/news/8384435/canadian-trucking-industry-driver-shortage/>

Source<sup>3</sup>: <https://www.swr.de/swraktuell/baden-wuerttemberg/verkehrswende-busfahrer-mangel-100.html>

Source<sup>4</sup>: <https://www.iru.org/resources/iru-library/tackling-driver-shortage-europe>

Source<sup>5</sup>: <https://www.route-one.net/news/still-a-challenging-time-for-operators/>

Source<sup>6</sup>: <https://www.channelnewsasia.com/singapore/bus-industry-aims-to-hire-more-singaporean-drivers-khaw-653166>

Source<sup>7</sup>: <https://www.iru.org/news-resources/newsroom/new-iru-survey-shows-driver-shortages-soar-2021>



# Challenges and benefits of bus driving

Driving a bus is no easy feat. Drivers often face long and strenuous, or inconsistent, inconvenient shifts that are far from the standard “9-5.”

Many drivers work “split” schedules, which are especially challenging for people hoping to take on another job, spend time with their children or take care of extended family. New drivers are often dealt the most challenging schedules, which hurts recruitment efforts ever further.

Some drivers also worry about their physical safety. According to a [February 2021 article](#)<sup>8</sup>, violence toward drivers is on the rise in the U.S., and many drivers are constantly fearful of being attacked or assaulted by passengers.

There are also the safety concerns of being on the front lines of the pandemic and dealing with passengers who refuse to wear masks.



Nevertheless, there are many perks to being a driver. The camaraderie among drivers is legendary, and riders come to think of their “regular driver” as part of their extended family. Transit drivers are trusted, respected members of the community.

Union benefits, healthcare, public pension, a social, people-facing role, and the societal contribution of helping communities travel safely all make for a fulfilling job. The actual work schedule could be another benefit, if the schedules were made with the driver's needs in mind.

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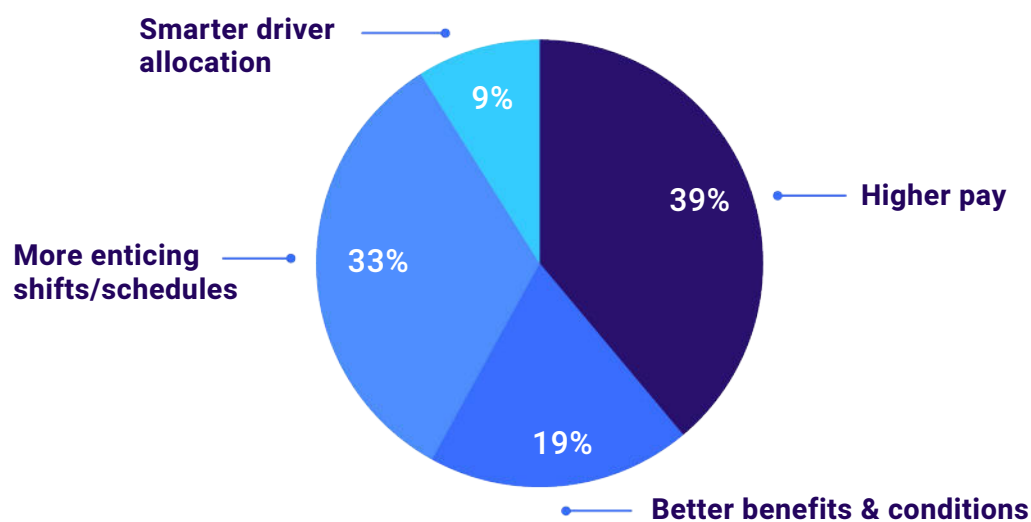
Source<sup>8</sup>:

<https://www.smartcitiesdive.com/news/transit-workers-face-growing-rate-of-assaults-theres-not-much-we-can-do/594959/>

# How can we change the current paradigm?

At the end of the day, drivers want the same things as everyone else – a comfortable, steady income, good working conditions, flexible schedules, and a proper work-life balance.

In a recent poll, we surveyed transportation industry professionals across multiple regions to see what they thought could help improve the driver shortage the most, and the results were as follows:



Aside from higher pay, better benefits and working conditions, scheduling, rostering, and driver allocation can certainly help improve drivers' quality of life – which will inherently reduce the number of workers calling out sick, burning out, quitting, striking, and otherwise.

So how can operators and agencies achieve this? A good place to start is by incorporating drivers' feedback throughout the scheduling and rostering process. This means listening, understanding, and designing schedules that truly meet their unique needs and preferences.

You need to know the types of shifts they prefer, their availability and lifestyle needs, the routes they enjoy, and so on to truly build schedules that go beyond meeting the service requirements of the agency and account for the needs of the person representing them behind the wheel.

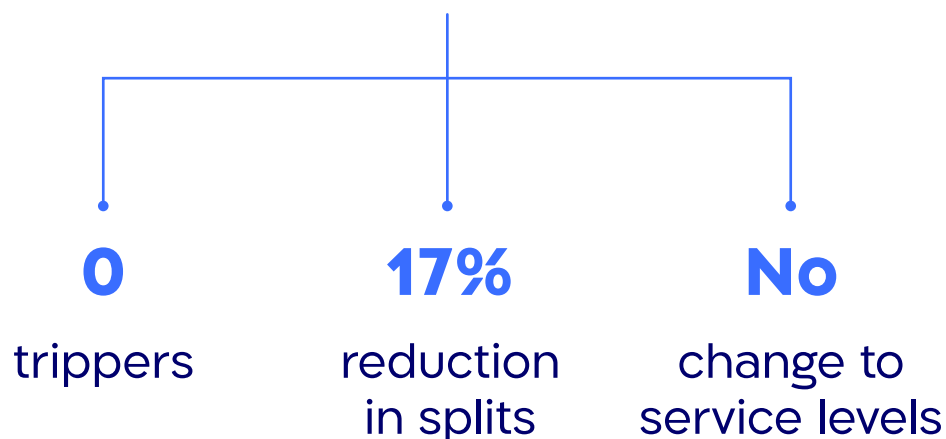
Community feedback is an important part of network redesign, so why not take that same approach to ensure a satisfying work environment?

# Case study: Reducing split schedules and runs

In a driver shortage, every run that is customized to driver preferences counts. It's the difference between nabbing that new hire (or not) and a driver calling out (or not). And in between, the power to reduce runs, even if it is just one or two, can mean the difference between regular services or no services at all.

Maintaining peak services while minimizing splits, for example, and shaving off runs is a sweet spot that is possible – with the capability to run multiple scenarios quickly and find the trade-off that satisfies both drivers and riders.

This year, amid the driver shortage, [Western Reserve Transit Authority \(WRTA\)](#) – an American transit agency in the greater Youngstown, Ohio area with 30 scheduled bus routes and over one million passengers – used Multiple Scenario Creation from [Optibus](#) to create a valid weekday run cut with 0 part-time runs (trippers), a 17% reduction in average split duration, and nearly identical service levels.





# Case study: Reducing split schedules and runs

Maximizing operational efficiency during periods of low employment creates room for even more jobs once the driver shortage subsides, and the realized cost savings can be spent on hiring and expansion.

According to Judy Rodriguez, WRTA's Director of Transportation:



**Judy Rodriguez**  
Director of Transportation  
[WRTA](#)

“Our overtime costs have increased due to the driver shortage, but that cost is more than offset by the savings we’ve realized through Optibus.”

Over the course of half a year, WRTA reduced runs by 12% and completely eliminated the need for part-time runs.

By improving the quality of Saturday runs, they also saw fewer call-outs and complaints, resulting in improved driver relationships, which is key during a shortage.

The goal is always to offer service as frequently and extensively as possible. As more drivers join the workforce and service returns, Optibus customers have the flexibility and scenario analysis capability to create the best schedules possible — schedules that keep drivers satisfied, because happy drivers deliver a better ridership experience.

# How to create lifestyle rosters that attract and retain drivers

Creating a lifestyle roster requires incorporating preferences (such as rest times, consecutive days off, and more) into a rostering optimization platform and defining different roster groups according to drivers' lifestyles and preferences.

For example, roster categories may include: carer, safe route driver, semi-retired, or otherwise. You should then generate a variety of rosters to fit those lifestyles, including morning rosters, evening rosters, carer rosters, and so on.

A key requirement for generating lifestyle rosters is for the operating company to continuously analyze their workforce and run multiple scenarios. But this shouldn't be too difficult. Once the duty types have been created and optimized, creating a lifestyle roster becomes rather simple.

Consider an “average roster,” as pictured below. These duties can pose a challenge for drivers with personal obligations. This is because some of them are very long (up to 11 hours in length), which is not ideal for the majority of people. Many of the early duties do not finish early enough for parents to be able to pick up their children from school.



### Example of an average roster

# How to create lifestyle rosters that attract and retain drivers

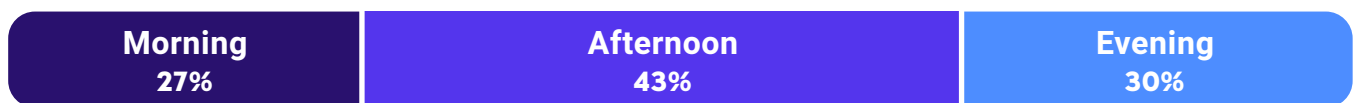
The lifestyle roster below features the same trips, but with a lifestyle variation. There are a variety of duty types, including shorter duties ideal for semi-retired drivers, early duties that allow caretakers and parents to have the afternoon and evening off, and late duties which allow drivers to have the morning off.

The lifestyle roster also includes homogenous duties (duties that consist of one route) which would be considered “safe duties.”

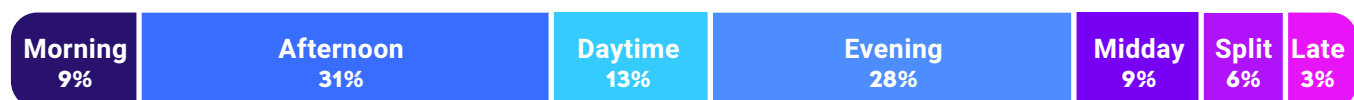


Example of a lifestyle roster that's been better tailored to drivers' needs.

In the average roster, 30 duties were distributed across three shift categories:



In the lifestyle roster, 32 duties were distributed across seven types – an addition of two additional rosters and four additional types:



# Optibus: Helping you create schedules that put drivers first

Drivers are a diverse group of individuals, each with unique lived experiences and their own set of needs.

To attract and retain a robust driving workforce, you must accommodate drivers' preferences throughout the scheduling and rostering process — and [Optibus](#) can help make the complicated process of doing so a whole lot easier.

With Optibus' cloud-native [scheduling](#) and [rostering](#) software and advanced optimization algorithms, in just a few clicks, you can quickly create rosters that incorporate more unique driver parameters than traditional planning scenarios offer.

Start by using union guideline compliance and contract rules as a baseline, and model from there, as per your drivers' specific input and suggestions.

You can also optimize for custom settings that minimize barriers to recruitment and retention — such as capping split shifts and overtime — to create rosters that specifically accommodate part-time runs for parents, students, those looking to take on another job part-time, and more.

By adding in custom settings based on drivers' feedback and preferences, you can create more ideal, flexible working conditions — and run a multitude of scenarios in minutes, instead of days or weeks.

All of this ultimately helps you attract and retain a broader range of drivers — and leads to more loyal, satisfied drivers.

# Conclusion

We hope you enjoyed reading this eBook on driver shortages, and that it provided you with some helpful information regarding how to mitigate driver shortages within your organization.

As noted throughout this eBook, [Optibus](#) is an end-to-end solution that can help you in tackling this challenge. The Optibus platform will enable you to create more desirable, flexible schedules – quickly and easily – in order to help attract and retain more drivers and create a more diverse, inclusive workforce.

We'll also assist you with implementing these best practices right away – and as your partner, you will have all of the support you need, so you can continue to adapt your strategy throughout the pandemic, while planning for the future.

Interested in learning more about Optibus and how our [Scheduling](#) and [Rostering](#) modules can help you mitigate driver scheduling issues? [Book a demo](#) with us for a one-on-one session with more in-depth information, and we'll provide answers to all your remaining questions.

**BOOK A DEMO**

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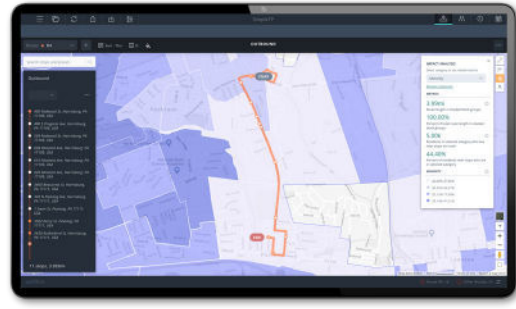


# Optibus Products



## Platform

One end-to-end solution for all your planning, scheduling, rostering, and operational needs



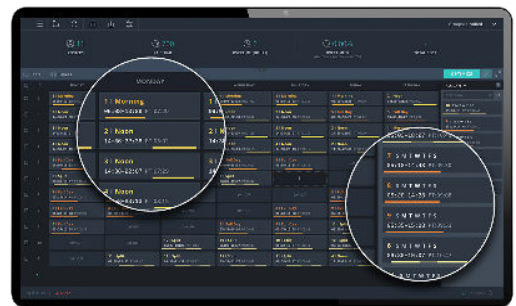
## Planning

Quickly create and visualize efficient routes, timetables, and running times



## Scheduling

Optimize vehicle and crew schedules for better operations and lower costs



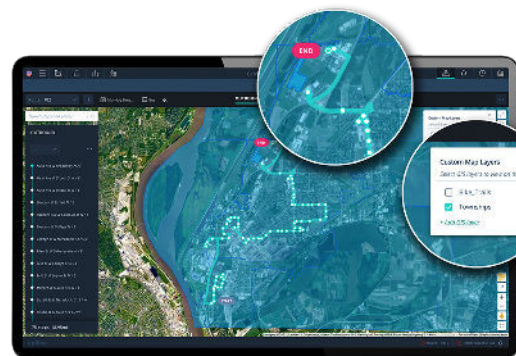
## Rostering

Improve drivers' shifts and workloads to increase retention and satisfaction



## Electric vehicles (EVs)

Automated EV scheduling to help future-proof your operations



## Geospatial Suite

Visualize custom map layers to improve planning and transportation equity