
MAIOR

TRANSIT
SCHEDULING
SUITE



37.000 vehicles

managed by MAIOR around the world.



30+ years of experience

Transit scheduling is all we do.



Modern

Web-based platform: on-premises or cloud-based.



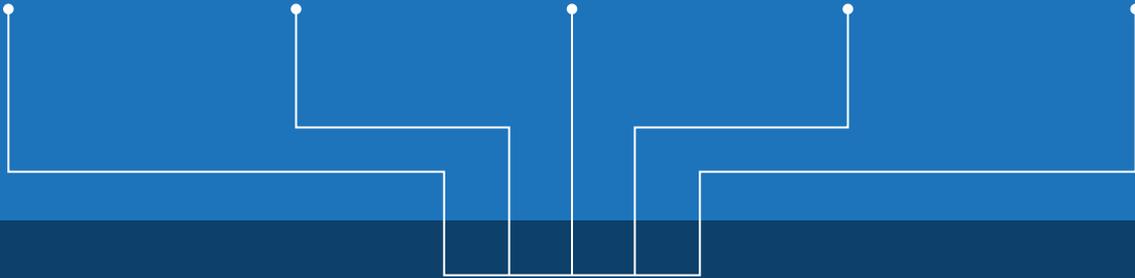
Flexible

Tailored to your specific business needs and goals.



Modular

Choose the complete suite or only the functionalities you need.



Introducing the

MAIOR TRANSIT SCHEDULING SUITE

The **MAIOR Transit Scheduling Suite** is a powerful and integrated software solution that simplifies and optimizes your planning and scheduling process to ensure that you are creating reliable service in the most economical manner possible.

Simplify

planning and timetable design.

Deliver

efficient, reliable service to your riders.

Control

costs and performance.

Create

optimized vehicle and crew scheduling.

Address

real-time service changes and react in real-time.

Ensure

adherence to union rules and regulations.



Route planning

Design your network



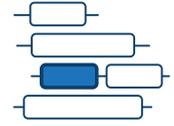
Timetable design

Plan your trips



Run time analysis

Improve planning accuracy and on-time performance



Resource optimization

Create your blocks, runs and optimized rosters

Our offering

Our modular solution has eight distinct functional areas.
Implement the complete solution or choose the modules that work for your agency.



Crew assignment

Manage your driver's work



Daily management

Manage the unpredictable changes that occur every day



Performance monitoring

Control your service quality and make better decisions



Data sharing

Integrate with other ITS systems

Today and tomorrow

Public Transport Authorities and Operators are facing

ONGOING CHALLENGES

Improving passenger satisfaction

Managing a rapidly change of ridership and demand

Allocate resources cost-effectively

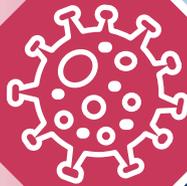
Today's challenges forced by

COVID-19 PANDEMIC

Ridership and demand fast changes

Social distancing

New normal



TRENDS

New vehicle technologies

On-demand services

Mobility as a service

Micromobility integration

M.A.I.O.R.
A CLEVER DEVICES COMPANY

A powerful, modern and modular toolbox

SERVICE PLANNING

RESOURCE PLANNING

OPERATION MANAGEMENT

ANALYSIS & INTEGRATION

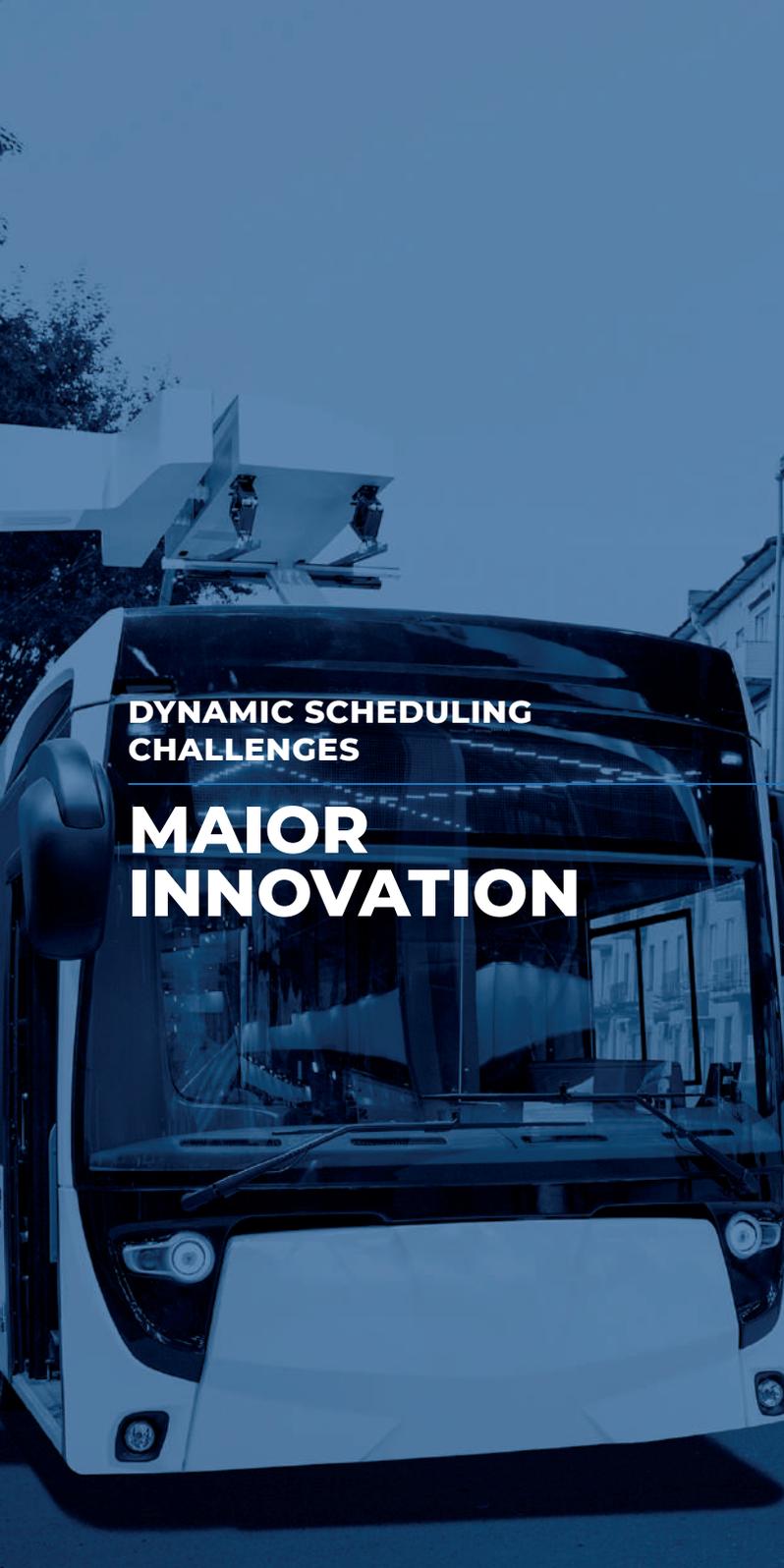


COVID-19 EMERGENCY

MAIOR AID

Around the world, thousands of public transportation companies are facing a new challenge: **managing quick service planning and communicating thousands of changes** to deal with the coronavirus pandemic. MAIOR customers have been able to count on the flexibility and completeness of our solutions to overcome this challenge without difficulty.

Scenario analysis, ease of service re-scheduling, speed in optimizing resources, rapidity in communication with drivers, and timely information to passengers are the most appreciated features of MAIOR solutions in the management of the emergency.



**DYNAMIC SCHEDULING
CHALLENGES**

**MAIOR
INNOVATION**

The ability to adapt the transportation service to unforeseen events in real-time, like network congestion or variations in mobility demand, is one of the most challenging topics in the field of public transport optimization.

The **MAIOR disruption management algorithms** are innovative support decision tools to **manage service irregularities, react to unexpected increase or drop in demand, and address network changes.**

MAIOR solutions always help improve service quality, increase the reliability and attractiveness of the service, and reduce operational costs.



ON-DEMAND
FIXED-ROUTE SERVICES

MAIOR NEXT

Pure on-demand transport services, with origin-destination and timetable choice by users, require substantial investments to be implemented.

Reservation-based transport services can represent an effective response to the need to rationalize and **optimize suburban and regional transport operators' resources.**

This hybrid business model is based on **trips planned by the transport operators but activated only based on users' booking requests.**

MAIOR can support the transition from pure fixed-route service to new hybrid models with ad-hoc solutions ready for implementation.



SCENARIO
MODELLING TOOL

MAIOR KEY FEATURE

Our unique built-in **scenario modelling tool** provides you with the ability to see the impact that changes have on **your service and your costs**.

The tool makes it **easy for you to manage different variables** and better plan for what may lie ahead by changing precise parameters.

From route planning and timetable design, to blocking and run-cutting optimization, the tool provides you with what amounts to be a “virtual sandbox” where you can **compare “what-if” scenarios** to address new challenges or to evaluate costs for new tenders.

Why choose MAIOR?

5 powerful algorithms

1 Timetable Optimization

Generates trips that automatically satisfy your business goals, like the available vehicles, the desired headways, or the passenger demand.

2 Run Time Optimization

Calculates optimized run times by lines, by day type, and by time band, using historic data from ITS systems.

3 Blocking Optimization

Creates vehicle schedules that considers automatically all deadheads, recovery times, charging requirements, and interlining rules.

4 Run-Cutting Optimization

Cuts the vehicle blocks into the fewest driver duties needed to cover the service respecting all labor agreements and rules.

5 Driver Assignment Optimization

Balances the workload among drivers and minimize overtime and premiums to ensure drivers satisfaction and costs control.

We understand transit scheduling.
It's that simple.

SOPHISTICATED SCENARIO MODELING

Use our virtual “sandbox” to compare “what-if” scenarios and the impact they could have on your schedules.

MODERN PLATFORM

Our web-based platform can be hosted in the cloud or supported on-premises.

TAILOR MADE

Choose the complete solution or just the modules that you need.

SUPPORT FOR MULTIPLE MODES

From bus and streetcar, to metro and light rail, we put your plans into action.

Route planning

Plan your routes quickly and efficiently

An effective plan enables you to control costs, increase efficiencies and deliver the service that represents the needs of your riders. The MAIOR Route Planning module helps you accomplish all that and more.

Manage all the elements needed to define your network including:



ROUTES

PATTERNS



STOPS

**RELIEF
POINTS**



**GARAGE
LOCATIONS**

**TIME
POINTS**



DEADHEADS

MANAGE YOUR BASE MAP TO ENSURE IT'S ALWAYS UP TO DATE

Support for any commercial or open source vectorial **map**.

Edit cartographic data to add, delete, or modify roads, intersections and more.

Automatically update base map when new version is available.

CREATE VARIOUS SCENARIOS IN OUR MODELING TOOL

To understand the impact your proposed changes would have on your network **without impacting your production environment** until you're ready to do so.

Timetable design

Quickly create the most suitable timetable to deliver your service

Leverage on MAIOR's powerful trip building algorithm to automatically generate timetable that consider:

NUMBER OF VEHICLES



With flexible timetable views you can view your timetable in either a tabular or graphical view or toggle between both. In the graphical view you can work on multiple routes simultaneously, which allows you to link trips between routes as a preface to your full interlining.

PASSENGER COUNTS



Because your ridership changes by the day of the week and the time of the year, the MAIOR Timetable Design module lets you plan for those service exceptions according to operating day (weekend, weekday, holiday) or by the calendar to build your timetables in line with customer demand.

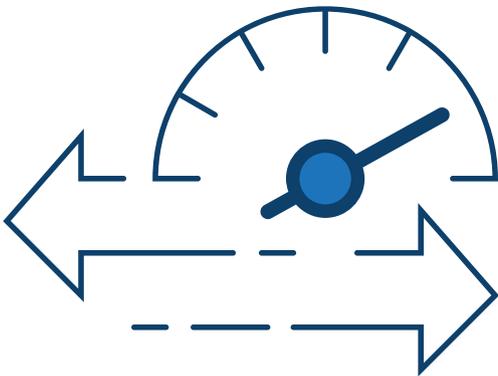
DESIRED HEADWAYS



Run time analysis

Take the guess work out of your planning by applying real-time data

Your best planning efforts are made even more accurate when you leverage your ITS data to calculate optimal run times to improve your on-time performance.



Compare your planned vs. actual performed run time data to monitor the reliability and punctuality of your service.

Use historic data from your ITS system to calculate optimized run time by line, by day type, and by time band.

Check the impact of newly calculated run times on your timetables, vehicle blocks and driver duties with one click. **Evaluate costs and benefits** before putting your new plan in motion.

Resource optimization

Lower your costs by reducing the number of vehicles and driver duties necessary to complete your service

Create vehicles blocks that maximize the time each of your vehicles are in revenue service and generating the fewest driver duties necessary to operate the planned services.

BLOCKING



Create your blocks with easy to use drag and drop features or use our powerful optimization tool to create blocks that consider deadheads, required recovery times and interlining rules.

Optimize the assignment of vehicles to garages while minimizing deadheads and idle times and considering time for maintenance, fueling, and charging.

RUN-CUTTING



Optimization algorithms let you cut your blocks into the fewest driver duties needed to cover your desired service while carefully taking all labor agreement and union rules into consideration.

Built in flexibility lets you override the rules to account for exceptions when the situation requires you to do so.

ROSTERING

Optimization algorithm lets you easily create bid packages or rotation weeks that balance the workload among your drivers while considering all your various parameters including labor contracts and union rules as well as personnel categories such as full time, part time, extra board and even seniority.



Crew assignment

Create optimized and balanced work assignments

Balance the workload among drivers and minimize overtime and premium costs to ensure driver satisfaction while controlling costs.

From a mobile device or any computer, drivers can bid for their duties or vacation time based on seniority or priority at an assigned time.

The system automatically calculates the hours worked by your drivers and integrates with downstream systems such as payroll and timekeeping to reduce administration costs and ensure accuracy.

A web-based app can be used to help drivers manage their working life.



Swap duties

Advise management of a willingness to **work overtime**

View daily or weekly **work assignments** and **vacation balances**

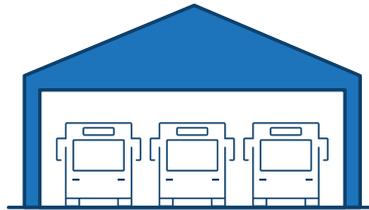
Request time off

All potential actions are checked against labor agreements and union rules before allowing any action to take place.

Daily management

Quickly react to unplanned changes to keep your service on track

Despite your best efforts to plan and assign your drivers efficiently, every day brings unanticipated challenges that must be addressed on a case by case basis.



Answer to real-time service changes to address driver absences or vehicle breakdowns.

Quickly **re-assign qualified drivers** to uncovered duties or **assign available vehicles** based on customized rules for each garage or depot.

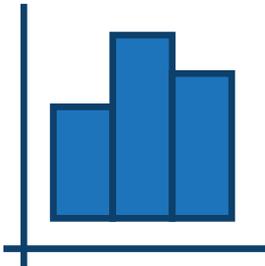
Integrated to your ITS system, so that the control center is automatically notified of last-minute changes in the planned service.

Split a scheduled duty or cancel work as the need arises.

Performance monitoring

Make better decisions in a single tool

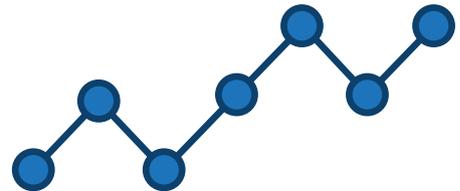
Evaluate your service using unlimited historical reports and easy-to-use web-based dashboards to help you make fact-based decisions about your service.



Work with **dynamic web-based dashboard** to effectively measure how well your agency is performing.

Leverage **Key Performance Indicators (KPIs)** to quickly monitor the quality of the service delivered to your riders.

Use **customized reports** to evaluate your past performance and make more informed decisions.



Data sharing

Ensure all your ITS systems are in sync

Open Web Services, Standard Exports and Customized Interfaces ensure that all your systems are sharing data and your entire ITS ecosystem is in sync.



Use the **GTFS standard export** to easily integrate with travel planner and publish up to date information to your riders.

Feed your CAD/AVL system with planned data and collect performed service data to **get insights to optimize service.**

Seamlessly **integrate with your payroll system** using custom or standard exports.

Overall management

Like all operating systems, the **MAIOR suite** has a set of functionalities across all main applications that ease the overall management of the service planning and scheduling, as well as of the business processes.

Transit companies can define users profiles and rules, tailor operational calendars, model the vehicle fleet, customize recovery and dwell times, optimize headways in urban corridors, find all changes made to the schedules, add notes to the planned services, and more.



CONTROL PANEL

Manage all your fundamental operational parameters, like vehicle types (trolley bus, 12m, or electric vehicles), holidays, rule sets, and measure system.



SIMULATIONS

Choose the right scheduling solution by comparing timetables, vehicle blocking or driver duties scheduling results with intuitive dashboards, summaries, and tables.



SCENARIOS

Create, modify, analyze, and evaluate any changes made to the service data, and verify their consistency and compliance before making them effective.



Worldwide references

More than 78.000 people and 37.000 vehicles managed in Europe, North America, Middle East, Oceania, Southamerica, and Asia.

We are proud of being the technological partner of **over 100 transportation companies** worldwide.

For small, medium and large public transportation companies

For bus, streetcar, metro, and tram

Tailored or out-of-the-box scheduling solutions

**A complete software solution for
your entire operations planning.**

SCHEDULE A DEMO TODAY

MAIOR

**T R A N S I T
S C H E D U L I N G
S U I T E**



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A CLEVER DEVICES COMPANY