



HASTUS

# THE SOFTWARE SUITE TO OPTIMIZE PUBLIC TRANSPORT

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An integrated solution  
to plan and manage fixed-route  
and on-demand services

GIRO



PLAN  
SCHEDULE  
OPERATE

# THE HASTUS SUITE

HASTUS is a complete software solution for public transport services by road and rail, trusted by authorities and operators around the globe to meet their real-world challenges in planning, scheduling and daily operations.

### The main HASTUS modules

Configure your HASTUS solution to meet your unique challenges. Choose from **six main modules**, and others as needed, all offering state-of-the-art features and sharing the same database to ensure maximum optimization as you plan, schedule and operate your services.

#### PLAN

From network adjustments all the way up to reimagining your network, our planning modules give you the right tools to plan the high-quality service that your customers deserve.

NET PLAN <sup>⊕</sup>

Add Modules <sup>⊕</sup> +4

#### SCHEDULE

Our scheduling modules' powerful optimizers ensure efficient vehicle and crew schedules that unlock significant savings in time and money, while maintaining your staff's work-life balance.

VEHICLE <sup>⊕</sup>

Add Modules <sup>⊕</sup> +6

CREW <sup>⊕</sup>

Add Modules <sup>⊕</sup> +2

#### OPERATE

Whatever the day of operations holds in store, our operations modules put you in complete control to manage changes to planned service and assignments quickly and efficiently.

DAILY VEHICLE <sup>⊕</sup>

Add Modules <sup>⊕</sup> +2

DAILY CREW <sup>⊕</sup>

Add Modules <sup>⊕</sup> +5

ON DEMAND

Add Modules <sup>⊕</sup> +2





## HASTUS MODULES

Cover all your bases with your own selection of additional features and modules to put the full power of HASTUS to work for you.

### NET PLAN<sup>Ⓜ</sup>

Complementary modules:

- RIDER<sup>Ⓜ</sup>
- CHECKER ASSISTANT<sup>Ⓜ</sup>
- ATP<sup>Ⓜ</sup>
- GEO<sup>Ⓜ</sup>

### VEHICLE<sup>Ⓜ</sup>

Complementary modules:

- MIN BUS<sup>Ⓜ</sup>
- TRAIN OPT<sup>Ⓜ</sup>
- ATP<sup>Ⓜ</sup>
- GEO<sup>Ⓜ</sup>
- TIMETABLE OPT<sup>Ⓜ</sup> COMING SOON

Customer info:

- HASTOP<sup>Ⓜ</sup>
- HAST INFO<sup>Ⓜ</sup>

### CREW<sup>Ⓜ</sup>

Complementary modules:

- CREW OPT<sup>Ⓜ</sup>
- ROSTER<sup>Ⓜ</sup>

### DAILY VEHICLE<sup>Ⓜ</sup>

Complementary modules:

- PLAN BUS<sup>Ⓜ</sup>
- PLAN MAINT<sup>Ⓜ</sup>

### DAILY CREW<sup>Ⓜ</sup>

Complementary modules:

- PLAN CREW<sup>Ⓜ</sup>
- EPM<sup>Ⓜ</sup>
- SELF SERVICE<sup>Ⓜ</sup>
- BID<sup>Ⓜ</sup>
- BID WEB<sup>Ⓜ</sup>

Customer info:

- COMMENTS<sup>Ⓜ</sup>

### ON DEMAND<sup>Ⓜ</sup>

Complementary modules:

- SELF BOOKING<sup>Ⓜ</sup>

Customer info:

- HAST INFO<sup>Ⓜ</sup>

## FITS YOUR SPECIFIC REALITY

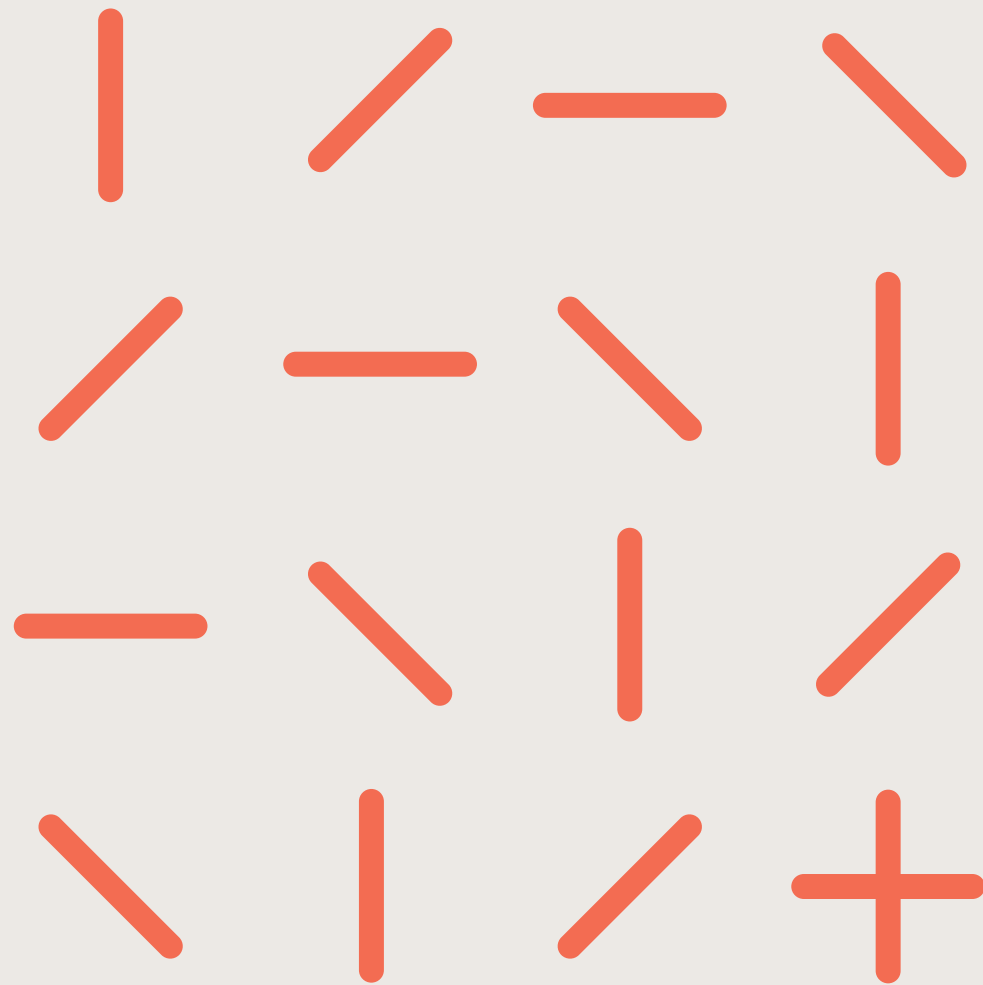
Our HASTUS solution is designed for what makes you unique. From different market practices to distinctive operating procedures and diverse collective bargaining agreements, HASTUS adapts to your reality.

Seamless integration

CONNECT<sup>Ⓜ</sup>

Get the most out of your data

ANALYTICS<sup>Ⓜ</sup>



## UNPARALLELED OPTIMIZATION

Comparative tests consistently place HASTUS first against competing solutions. You can trust our powerful algorithms to optimize your planning, scheduling and daily operations and bring you significant efficiencies and savings while boosting employee satisfaction.

## MODULE DESCRIPTIONS

### PLANNING

#### NET PLAN<sup>®</sup>

Helps you establish new or revised service levels on major routes or route segments, taking into account ridership data. *NetPlan* also helps you create base timetables that maximize the quality of the timetable from a customer perspective while minimizing vehicle requirements.

#### RIDER<sup>®</sup>

Allows you to store ridership data from load and ride checks and to summarize this information on a route-by-route and time-period basis.

#### CHECKER ASSISTANT<sup>®</sup>

This Android™ tablet-based application allows you to collect data for ride or point checks.

### SCHEDULING

#### VEHICLE<sup>®</sup>

A graphical scheduler designed to help you build efficient timetables and vehicle schedules for bus, rail and other fixed-route services. Multiple scenarios can be stored for different periods of the year or days of the week.

#### GEO<sup>®</sup>

Provides a geographic database, tools, and map display options that are seamlessly integrated with other HASTUS modules. More and more, public transport authorities worldwide are using geographic databases to support planning, operations, and public information. Typical capabilities include route planning, distance calculations, customer information, itinerary calculations, and interfacing with external systems and applications.

#### MIN BUS<sup>®</sup>

Complements the *Vehicle* module with advanced optimization tools for vehicle scheduling.

#### TIMETABLE OPT<sup>®</sup> COMING SOON

Complements the *Vehicle* module with an algorithm that generates optimized timetables based on available resources, service guidelines and expected ridership when available.

#### TRAIN OPT<sup>®</sup>

Complements the *Vehicle* module with advanced optimization tools for rolling stock scheduling.

#### ATP<sup>®</sup>

Helps you build run times by analyzing observed values and comparing them with current planned values. The observed times can be imported from other systems such as handheld computers, automatic vehicle location systems, and train control systems.

Customer info:

#### HAST INFO<sup>®</sup>

Provides schedule and trip-planning information to customers through your corporate Web site and call-handling facility, mobile devices, and other media.

#### HASTOP<sup>®</sup>

Designed to produce stop schedules for posting at each bus stop. Passing times are calculated based on vehicle schedules and stop-to-stop distances.

## SCHEDULING

### CREW<sup>Ⓢ</sup>

Lets you build efficient operator duties to cover vehicle schedules. Automated and interactive procedures make it easy to cut vehicle blocks and combine pieces of work into valid duties while respecting hard and soft rules.

### CREW OPT<sup>Ⓢ</sup>

Complements the *Crew* and *Vehicle* modules with advanced optimization capabilities for enhanced integrated vehicle and crew scheduling.

### ROSTER<sup>Ⓢ</sup>

Helps you prepare efficient weekly or periodic crew assignments. Daily work and days off are combined into roster positions according to the practices of your company. Based on duties from *Crew*, *Roster* supports the building of 5-day rosters, 4-day rosters, or part-time rosters. It is also possible to manage rotations over multiple roster positions to allow the creation of more complex work patterns.

## OPERATIONS

### DAILY VEHICLE<sup>Ⓢ</sup>

Typically used in combination with *DailyCrew* to modify or add trip-level information and manage vehicle assignment.

### PLAN BUS<sup>Ⓢ</sup>

An algorithm, available with *DailyVehicle*, to optimize the day-to-day assignment of vehicles to blocks. *PlanBus* can also schedule light maintenance activities based on maintenance capacity at each garage. This powerful optimizer efficiently generates the highest-quality solution at the lowest cost, in accordance with company objectives and criteria. It also takes into account vehicle availability and characteristics, as well as maintenance activity requests.

### PLAN MAINT<sup>Ⓢ</sup>

Optimizes preventive maintenance of the bus fleet, scheduling the various maintenance operations for each bus to ensure that maintenance resources are utilized equally. Mileage targets are established for each vehicle's maintenance operations. *PlanMaint* can be used over a horizon ranging from several years, to help prepare yearly maintenance budgets, down to an operational horizon of a few weeks, to manage the maintenance schedule. When used in conjunction with *PlanBus*, daily vehicle assignment takes vehicles' maintenance mileage targets into account to ensure that maintenance is performed on schedule.

### PLAN CREW<sup>Ⓢ</sup>

A tool for optimizing the assignment of work to drivers/operators. It uses an advanced algorithm that assigns work automatically, taking into account employee preferences, working-time counters, satisfaction counters, work rules, and many other factors. *PlanCrew* offers a rules engine to define constraints for each assignment. The assignment of work can be done over periods ranging from a single day to several weeks, allowing the proposed solution to be reviewed carefully prior to posting.

### DAILY CREW<sup>Ⓢ</sup>

Allows you to manage weekly and daily changes to planned rosters and provides effective tools for day-to-day operations management. In seconds, dispatchers can enter employee absences and assign replacement workers to cover them. quickly and accurately, *DailyCrew* provides up-to-date information on hours worked, vacation, sick leave, reserve lists, and other important information for efficient operations. Typically, detailed timekeeping of work performed is exported to a payroll system for final pay calculations.

## OPERATIONS

### EPM<sup>Ⓢ</sup>

Allows you to manage disciplinary measures and awards for employees based on rules configured in accordance with collective agreements. This module requires *DailyCrew*, with which it is fully integrated.

### SELF SERVICE<sup>Ⓢ</sup>

A Web-based application, used in conjunction with other operations modules, that allows employees to access various functionalities through specialized screens. A mobile version for smartphones is also available.

### BID<sup>Ⓢ</sup>

Used with *Roster* and especially beneficial for transit companies that assign duties and vacation based on employee seniority, as is generally the case in North America. With *Bid*, supervisors and clerks can manage the "pick" or "bid" process while keeping track of the duties still available and the choices made by each employee.

### ON DEMAND<sup>Ⓢ</sup>

An integrated solution for scheduling and managing on-demand transport services, from customer eligibility and registration to trip booking and service delivery. The trip-scheduling optimizer produces itineraries for the most efficient use of vehicles, including eligible subcontracted carriers. The solution also features comprehensive control functions.

### BID WEB<sup>Ⓢ</sup>

A Web-based module that allows employees to provide choices and preferences for all typical North American bid types, including vacation bids, work bids, etc.

Customer info:

### COMMENTS<sup>Ⓢ</sup>

Allows you to register, follow up, and manage situations or events reported by customers and/or employees. Once the data is captured, configurable lists help you manage the information (e.g., list all comments regarding a specific employee or from a specific customer). This module can be configured to comply with or attain specific service-support standards, such as ITIL.

### SELF BOOKING<sup>Ⓢ</sup>

A Web-based and mobile application that allows riders to manage multi-leg trips with conventional and paratransit/on-demand services, ensuring compliance with service policies while respecting customer limitations and preferences.

## INTEGRATION TOOLS

### CONNECT<sup>Ⓢ</sup>

A suite of software integration tools that facilitates static and dynamic data exchange and interoperability between HASTUS and other applications and systems.

### ANALYTICS<sup>Ⓢ</sup>

Lets you configure and manage your data in schemas that are BI-ready for analysis with your existing dashboard tools. It provides rich, structured data that can be integrated into your current BI environment.



# WHAT WE CARE ABOUT

All day, every day, our passion drives us to help public transport and postal/parcel organizations make clear gains in efficiency

GIRO's HASTUS and GeoRoute solutions combine unequalled optimization and adaptability to each client's specific reality. In everything we do, in every team and on every project, we're committed to the highest standards of excellence and sense of shared purpose as we contribute to our clients' efficiency gains.

This passion has driven us for more than 40 years. From planning to scheduling and operations, we know our clients' business.

Every step of the way, we are *Driven by Efficiency*.

DRIVEN  
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EFFICIENCY

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