Trapeze™

Scheduling
for Rail

Easily generate optimized timetables and duty plans and manage changes with confidence.

Maximizing the efficiency of your rail operations is a daily challenge. More so in the post-pandemic era, when restoring confidence in rail travel means adapting service to new realities – social distancing, dynamic schedules, the need for up-to-date ridership data to inform service frequency. To do all this, your rail scheduling needs to be accurate, flexible and fast.

Trapeze rail scheduling solutions, such as TrainPlan and ResourcePlan (for commuter rail) and FX with Blockbuster (for light rail), ensure quick and reliable train schedules and optimal allocation of crews and vehicles so you can deliver the service your passengers need while maximizing safety and reducing costs.

Construct timetables across single or multiple lines, proactively detect conflicts and resolve them before they become a safety issue. Deploy resources effectively and efficiently, try out multiple scenarios, and adjust timetables to account for engineering work and disruptions to service. Provide schedule information and changes once finalized to downstream systems.

21.2K
miles of Amtrak routes
scheduled with Trapeze

270M
combined annual
unlinked passenger trips
(NJT, Metrolinx, SEPTA, Metro North)

AGENCY BENEFITS

Plan conflict-free schedules, maximize limited resources, and manage schedule disruptions quickly.

Optimize Rail Resources

Efficiently and effectively allocate your crew and rolling stock to the required work, matching resources to needs and reducing costly errors while maximizing safety outcomes.

Control Costs

Realize cost reductions through effective planning and simulation, which optimize the efficiency of limited resources and quickly identify potentially costly problems (e.g. changes to infrastructure). Reduce the cost of staff management and optimize paid working hours.

Improve Safety

Identify conflicts well ahead of time and effectively coordinate resource deployment during disruptions. Increase network visibility by presenting multiple views of consistent data, enabling dispatchers to react positively to incidents.

Reduce Manual Processes

Save time by simplifying and streamlining the generation of duty plans, daily employee allocation, and personnel administration. Automatically locate available capacity or "white space" during network changes. Reduce data errors that create operational problems.

PASSENGER BENEFITS

Make each rail journey safe, punctual, and comfortable for your passengers.

Reduce Wait and Travel Times

Get riders to their destinations quickly and on time with optimized service timetables and run times.

Increase Passenger Safety

Increase safety for the riding public by ensuring all duty plans follow labor rules-restrictions due to staff knowledge and certification, staff working hours, any technical limitations due to the sectional compatibility of the vehicles. Provide adequate capacity to observe social distancing and public health protocols

Improve Service

Optimize the efficiency of your limited resources and manage problems and disruptions effectively, reducing delays that annoy passengers and diminish the rider experience.

Manage Scheduling Problems Quickly and Efficiently

Whether you're a small or large rail system, Trapeze's scheduling solutions enable you to address disruptions immediately to ensure a smoothly running network. An intuitive design enables you to utilize data fully to optimize your limited resources, reduce costs and make better decisions for today and tomorrow. Users focus on relevant information by simply changing the view on the display screens, and that view can be as simple, or as complex, as required. Data is accurately presented in an easy-to-use format that helps users to understand how tasks relate to one another.

PRODUCT FEATURES

Timetable Planning

Enable quick and reliable train scheduling using a robust, geographical database and sectional running times for all train types in operation. Optimize your timetables for long-term, short-term, and on-the-day plan changes. Validate train planning activities, create tested timetables and apply powerful predictive analysis.

Roster Planning

Efficiently and effectively allocate crew and vehicles to schedules. Suggest suitable options to duty plans to provide coverage for any gaps that may exist. Roster templates simplify the configuration process and can be generated, edited, and adjusted to meet changing needs.

Conflict Detection and Resolution

Identify conflicts and blockages, which are clearly displayed in Time-Distance graphs. Query the system to identify all affected trains. Rearrange service and organize resources through manual, or where possible, automated, resolution.

Powerful Graphic Interface

Display several information windows across multiple screens. Provide easy to visualize time-distance line diagrams, platform occupation diagrams, corridor graphs, and timetable books. Drag and drop to manipulate displays.

Possession Planning

Create schedules optimally planned around maintenance and construction work. Store details of scheduled track possessions, which are then shown on graphic displays to easily visualize them and manipulate the affected trains.

"Whatever the reason your passengers are on board, they and their experience needs to be at the forefront of your thoughts."

Marcelo Bravo, Director, Rail Business Development, Trapeze Americas

Short- and Long-term Planning

Manage and maintain several independent timetables within the system, for planning of new timetables or for short-term planning. Easily manage service disruptions/unforeseen events.

Optimization

Automatically create "cost-effective" crew and vehicle diagrams for strategic, long-term, and short-term planning. Quickly generate solutions when time is short. Continually monitor progress and pull out samples of the output at any time.

Simulation

Develop multiple "what-if" scenarios quickly and choose one that best meets your goals. Check if your timetable conforms to the relevant planning rules. Simulate multiple days of a timetable's operation by applying either pre-planned or random delays and identify locations and trains susceptible to delay. Analyze plans against historical performance.

Reporting and Analytics

Leverage real-time data across your rail system to accurately report and predict scheduling performance, fully inform key stakeholders and increase proactive, data-driven decision-making to optimize service and create more efficiencies.

Trapeze Enterprise Integration

Seamlessly share data with Trapeze applications to support all aspects of rail operations – Workforce Management (staff rostering), Enterprise Asset Management (rolling stock allocation and consist management) and Traveler Experience (real-time passenger information).

Blog

The Ultimate Reason to Improve Rail Scheduling
https://www.trapezegroup.com/ultimate-reason

EXTEND YOUR RAIL SCHEDULING CAPABILITIES

Empower rail planners and schedulers with next-generation tools:

Workforce Management (OPS) for Rail – Automate and track crew assignment validation, Hours of Service compliance, and pay calculation.

Enterprise Asset Management for Rail – Check rolling stock maintenance status upon assignment.

Reach out to our Rail, Scheduling and Planning experts for a demo.