

# Train Load Predictor™



**TLP INNOVATIONS**

TRAIN LOAD PREDICTOR

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Train Load Predictor™ measures the impact of a rail service plan on passenger experience. It puts critical performance data at your finger tips such as loadings by train, service interval by station, and fleet utilisation over the day. Easy to use, Train Load Predictor™ integrates seamlessly with industry standard rail simulation software. Train Load Predictor™ helps you make the right planning decisions.

## The answer to your critical planning questions

Train Load Predictor™ enables railway planners and operators to confidently answer critical planning questions such as:

- > How will passengers be impacted by a change in the timetable? Who will be the 'winners' and 'losers'?
- > If I were to implement this proposed timetable would some trains be overloaded? If yes, which trains?
- > Have I maintained an adequate level of service at each station throughout the day?
- > What is the economic impact of this timetable?
- > Can I provide the equivalent customer service levels with less rolling stock and infrastructure?

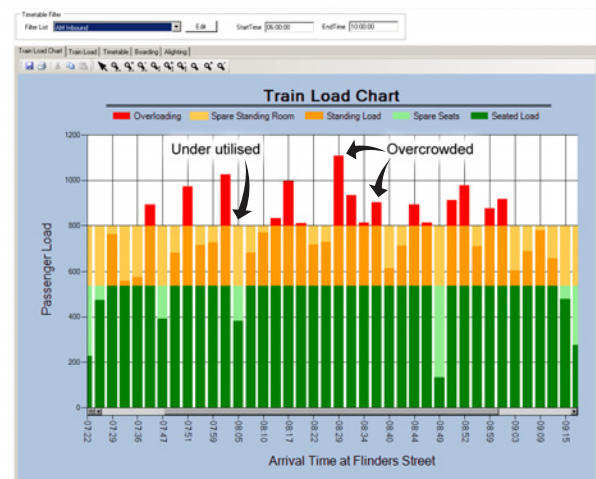
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## What is it?

Train Load Predictor™ is unique and innovative software that takes a timetable and station by station demand figures to produce an estimate of passenger loads and movements on and between individual services within a rail timetable.

It automatically generates a range of detailed Key Performance Indicators (KPIs) not readily available with other products to enable a rigorous evaluation of the passenger and operational impacts of different timetable options.

*Train Load Predictor quickly shows maximum loadings and under utilisation for peak inbound AM services*



## Why is it unique?

There are many tools in the market that estimate passenger travel, especially at the 'mode' level. However, there are few tools that predict passenger travel details at the 'preferred train' level.

Train Load Predictor™ is unique as it uses sophisticated mathematical techniques to allocate passengers to services on a station-by-station basis based on likely behaviour. Unlike other software, it considers a wide range of circumstances that drive passenger behaviour such as interchanges, connecting service times and overcrowding.

The outcome is a wealth of detailed and accurate performance information to guide decision making.

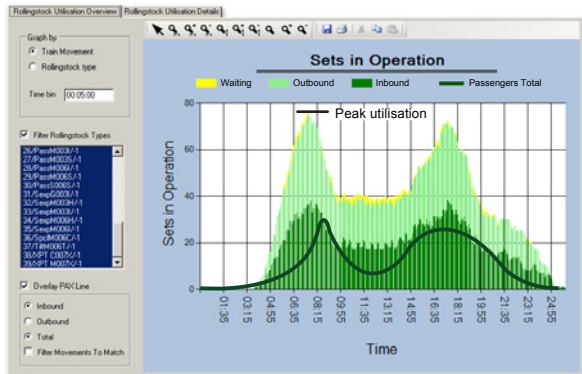
Importantly, output from Train Load Predictor™ is always calibrated against actual survey data and the average error is lower than other similar software.

## Why use it?

### Optimises asset utilisation

Train Load Predictor™ provides an overview of rollingstock utilisation across the day. This information, combined with the accurate prediction of passenger loadings, allows you to create timetables where each service is well utilised by passengers. This means the timetable will use less trains, less track and be cheaper to operate.

*The number of sets operating helps to check rolling stock requirements*



### Improves customer service

Train Load Predictor™ provides quick and easy access to all key service quality indicators. These include average travel time, standing time, interchange time and passenger crowding, to enable you to implement the best timetable for passengers.

*Train Load Predictor provides a number of key service quality metrics*

Station	Stopping Services	Min. Service Interval	Max. Service Interval	Avg. Service Interval
Hughesdale	8	00:02:59	00:20:01	00:07:59
Oakleigh	11	00:02:59	00:12:00	00:05:35
Huntingdale	10	00:02:43	00:19:43	00:06:13
Clayton	11	00:02:51	00:13:03	00:05:35
Westall	10	00:02:35	00:19:34	00:06:13
Springvale	11	00:02:44	00:14:00	00:05:35
Sandown Park	11	00:02:53	00:14:00	00:05:35
Noble Park	11	00:02:53	00:14:00	00:05:35
Yarraman	11	00:02:53	00:14:00	00:05:35
Dandenong	11	00:02:53	00:14:00	00:05:35
Merinda Park	2	00:02:53	00:24:18	00:05:35
Cranebourne	2	00:02:53	00:24:00	00:05:35
Hallam	7	00:02:53	00:13:03	00:05:35
Name Warren	7	00:02:53	00:13:03	00:05:35
Benvick	7	00:02:53	00:13:03	00:05:35
Beaconfield	4	00:13:48	00:19:05	00:16:27
Officer	4	00:13:48	00:19:05	00:16:27
Pakenham	7	00:05:00	00:15:00	00:09:40

### Improves station design

Train Load Predictor™ forecasts the number of passengers interchanging between platforms and waiting on platforms. This type of data identifies key crowding points on the network and provides a key input for more detailed pedestrian modelling and station design tools.

### Rapidly evaluates any timetable

Train Load Predictor™ enables you to undertake a rapid, automated assessment of any timetable. It allows the:

- > Strategic planner to compare the passenger loading and service quality impacts of broad policy options such as introduction of higher capacity rolling stock to the network
- > Timetabler to assess the passenger loading and rollingstock impacts of various timetable options, such as introducing short starters on some lines
- > Regulator to more confidently and easily assess the 'winners and losers' before a new timetable is implemented and thereby ensure passenger and stakeholder needs are met.

### Easy to use

Train Load Predictor™ has an easy to use interface and is designed in a simple tab format to step users through the workflow. It comes with a user guide and requires minimal training.

### Flexible outputs

Data and outputs from Train Load Predictor™ integrate seamlessly with standard office applications. Moving basic data or graphical outputs from Train Load Predictor™ is as simple as 'copy and paste', while a range of advanced export functions are provided to easily transfer large amounts of data to Microsoft Excel for further manipulation, analysis or reporting.

### Integrates with industry standard software

Train Load Predictor™ is designed to import timetable data directly from industry standard timetabling software such as RailSys (SIMU++) and RailTable. During service plan development, it provides a seamless flow to ensure key data outputs are available throughout the planning process. It also enables managers and strategic planners to review timetables avoiding the need to switch to timetabling software.



## Getting Started

Contact TLP Innovations for a demonstration and to learn more about how we have used Train Load Predictor™ to help clients optimise their service plans and make better strategic investment decisions.



## About Systemwide

Systemwide provides independent strategic advice to the railway industry. We combine extensive rail operations experience with a scientific approach to provide innovative and lasting solutions to the complex issues facing modern railways. Our services include strategic operations advice, network capacity assessment and planning, on-time reliability forecasting and improvement, and service plan development and optimisation.

For more information visit:

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