trlsoftware.com

Junctions

Roundabout, Signals & Priority Junction Analysis

TRL Software

Get the most from your roundabouts & junctions

Junctions 10 is the latest version of TRL Software's industry-standard package for modelling roundabouts, priority junctions and simple signalised junctions. It is an integrated software package providing advanced roundabout, traffic signal and priority junctions modelling and analysis within a single graphical interface.

ARCADY	PICADY	OSCADY

Who uses Junctions?

Used across the globe by traffic engineers, traffic modellers, junction designers, students and tutors, working for local authorities; municipal, state and regional authorities; consultancies of all sizes from multi-nationals to the smallest businesses; universities; other educational establishments.

The integration of priority intersection, roundabout and signal modelling capability means you can switch a junction between priority and signalised options and compare the results within one package and you can also evaluate the impact of a signalled junction on an adjacent unsignalled junction and vice versa.

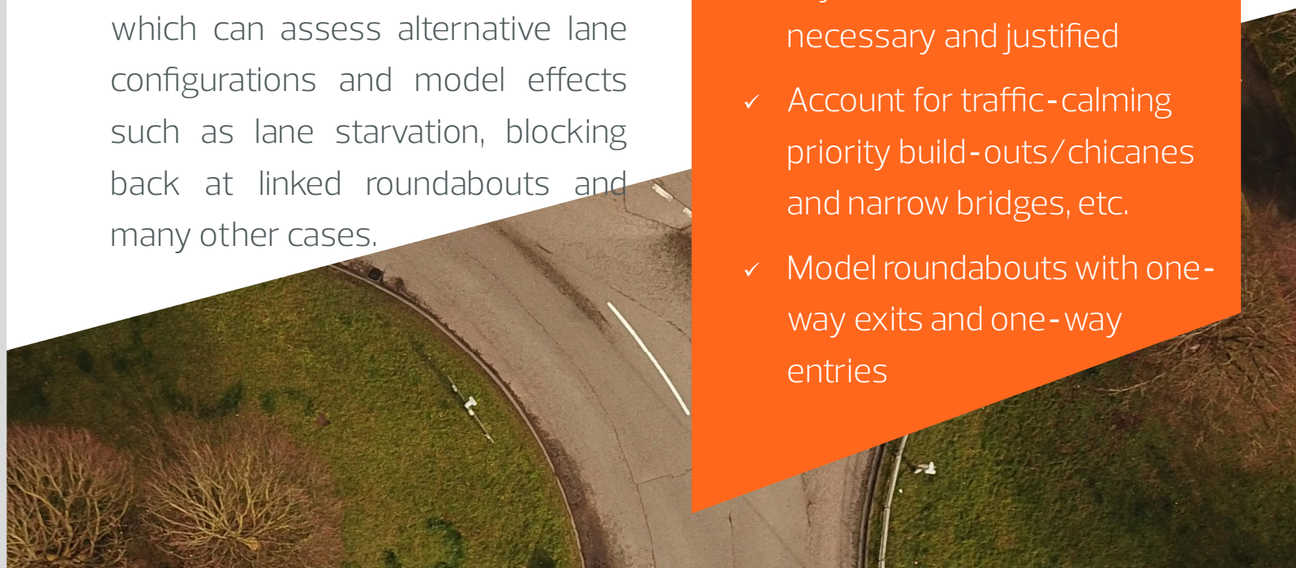
Upgrade your Roundabouts

The ARCADY module includes separate models for standard roundabouts, mini-roundabouts and large/grade-separated roundabouts, all based on UK empirical research.

These models predict capacity, queues and delays (queueing and geometric) and accident risk at roundabouts using an empirical framework which intrinsically links roundabout geometry to driver behaviour and in turn to predicted roundabout capacity. ARCADY 9 includes a Lane Simulation tool which can assess alternative lane configurations and model effects such as lane starvation, blocking back at linked roundabouts and many other cases.

Features:

- ✓ Interactive geometry measurement tool
- ✓ Model roundabouts linked to other junctions (signalled and unsignalled)
- ✓ Modelling of partially signalised roundabouts Model American roundabouts using alternative HCM 2016 roundabout model
- ✓ Apply site-specific capacity adjustments whenever necessary and justified
- ✓ Account for traffic-calming priority build-outs/chicanes and narrow bridges, etc.
- ✓ Model roundabouts with one-way exits and one-way entries



Priority-controlled Junctions

The **PICADY** module provides an extensive toolset for modelling priority-controlled junctions such a s crossroads and T-junctions.

- ✓ 3 or 4-arm priority-controlled junctions including T-junctions, crossroads and staggers
- ✓ Model one way or two-way roads (Version 10 only)
- ✓ Model American TWSC/AWSC junctions using alternative HCM models
- ✓ Model major roads with single, flared and two-lane approaches
- ✓ Site-specific capacity adjustments available for all scenarios (Version 10 only)
- ✓ Take account of split approaches
- ✓ Account for traffic-calming priority build outs/chicanes and narrow bridges, etc.

Signalised Junctions

The **OSCADY** module calculates capacities, queues and delays for isolated (uncoordinated) traffic signal controlled junctions. It can evaluate a set of known signal timings, and optionally can optimise stage lengths and/or cycle time to minimise delay. OSCADY also has the ability to model basic adaptive signal-controlled junctions within its lane simulation mode. OSCADY is intended to be used at relatively simple signalised junctions where the emphasis is on setting up model runs quickly and easily, but can model junctions with features such as flared approaches and opposed right turns.

Stages and stage sequences can be generated automatically, based on phase allocations and an Intergreen matrix. Basic junction structure and signals data can be exported to TRANSYT, so that files started in OSCADY can be easily worked on in TRANSYT if more advanced functionality is required. Data input such as traffic demand OD matrices takes the same form as that used by ARCADY and PICADY. Other tools such as; reports, analyser tools, junction diagrams and file handling will also be very familiar to users of ARCADY and PICADY. Furthermore, the signal data will be familiar to TRANSYT users.

Additional product features

Model multiple geometric layouts, traffic flows and years within a single file

Interactive diagram and multiple data-entry methods

Choice of units and terminology for all input and output data

Read traffic flows from Excel spreadsheets

Calculation of TEMPRO growth factors*1

US terminology option

'Follow-me' user-licensing: Install the software and login on your new device anywhere

Local administration of your user licences to account for staff changes*2

Audit trail

Sensitivity analysis through graphs, charts and optimiser mode

Import files from previous versions

Comprehensive Glossary and User Guide

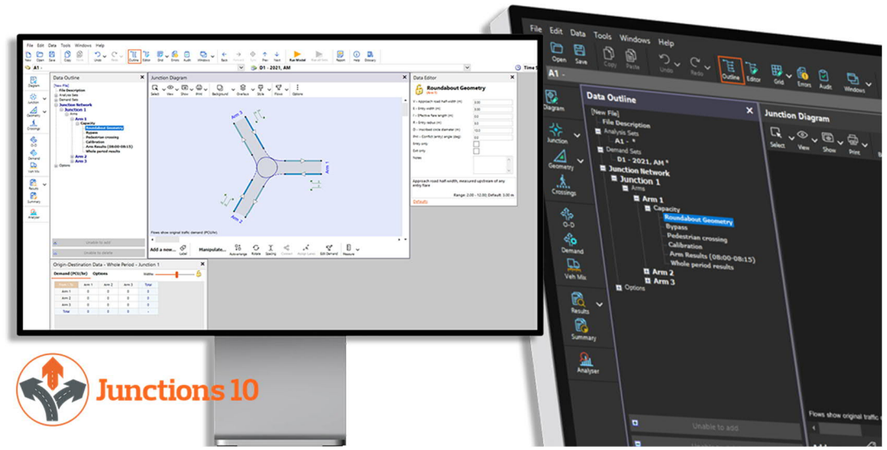
Customisable HTML, PDF and Word reports

File comparison system

Model left-hand and right-hand drive scenarios

Access to the 'TRL Software Portal' – Store files in the cloud, and collaborate with colleagues and outside agencies*2

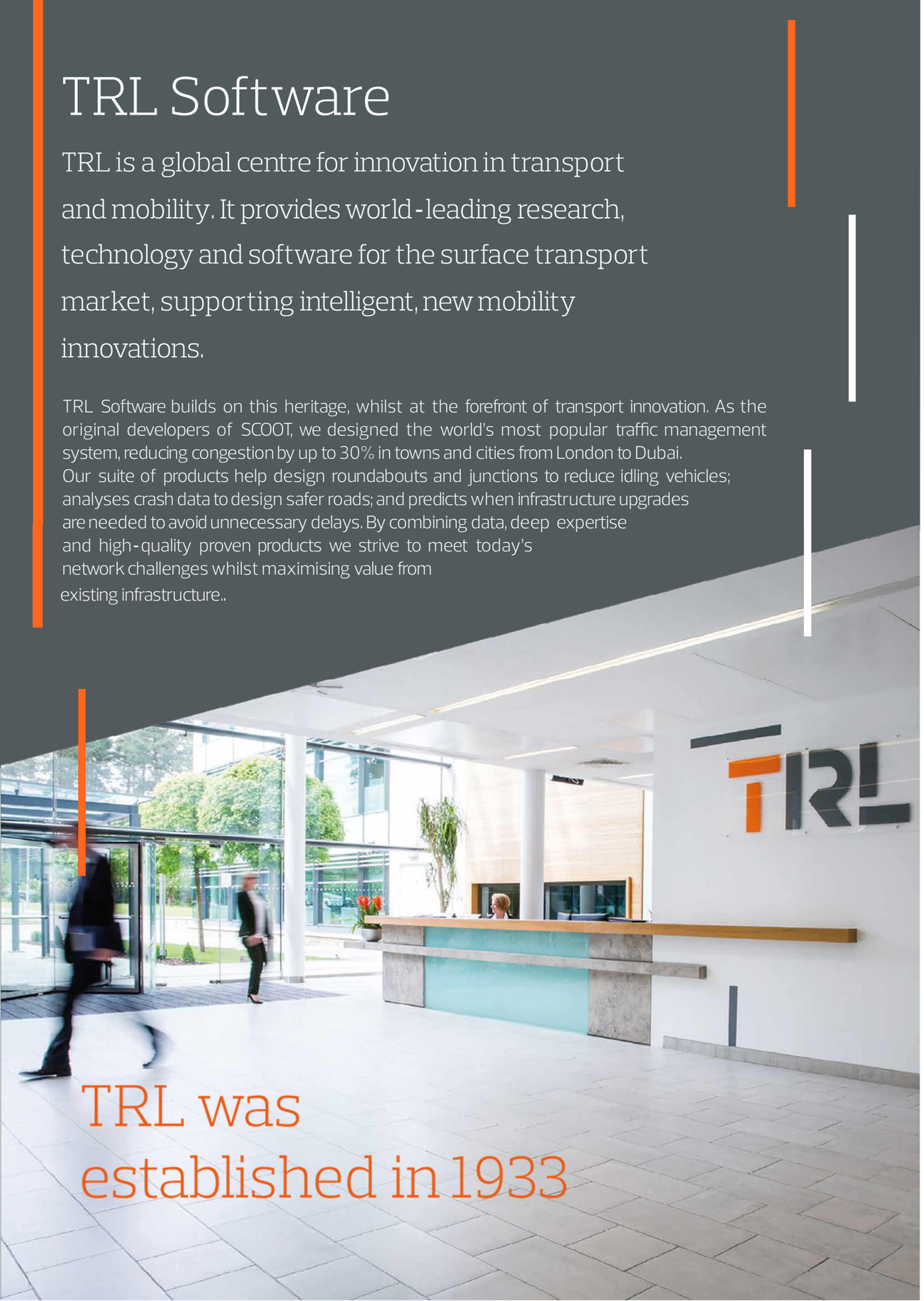
*1 subject to having an active maintenance contract
*2 requires download of TEMPRO datasets



TRL Software

TRL is a global centre for innovation in transport and mobility. It provides world-leading research, technology and software for the surface transport market, supporting intelligent, new mobility innovations.

TRL Software builds on this heritage, whilst at the forefront of transport innovation. As the original developers of SCOOT, we designed the world's most popular traffic management system, reducing congestion by up to 30% in towns and cities from London to Dubai. Our suite of products help design roundabouts and junctions to reduce idling vehicles; analyses crash data to design safer roads; and predicts when infrastructure upgrades are needed to avoid unnecessary delays. By combining data, deep expertise and high-quality proven products we strive to meet today's network challenges whilst maximising value from existing infrastructure..



TRL was established in 1933

World class traffic & transportation solutions

Today, TRL supports more than 1,000 clients across 145 countries, driving positive societal and economic benefits.

Our core areas of expertise include: road safety, vehicle safety, crash investigation, human factors & behavioural research, asset management & technologies; intelligent transport systems & traffic operations; sustainability & healthy mobility; major incident investigations.

Our innovative and evidence lead software solutions support the design, management and implementation of safe and reliable transport networks, with products being used worldwide by hundreds of Local Authorities, consultants and engineers.

UTC SCOOT
to coordinate signalled junctions in a network

ARCADY
for assessment of roundabouts

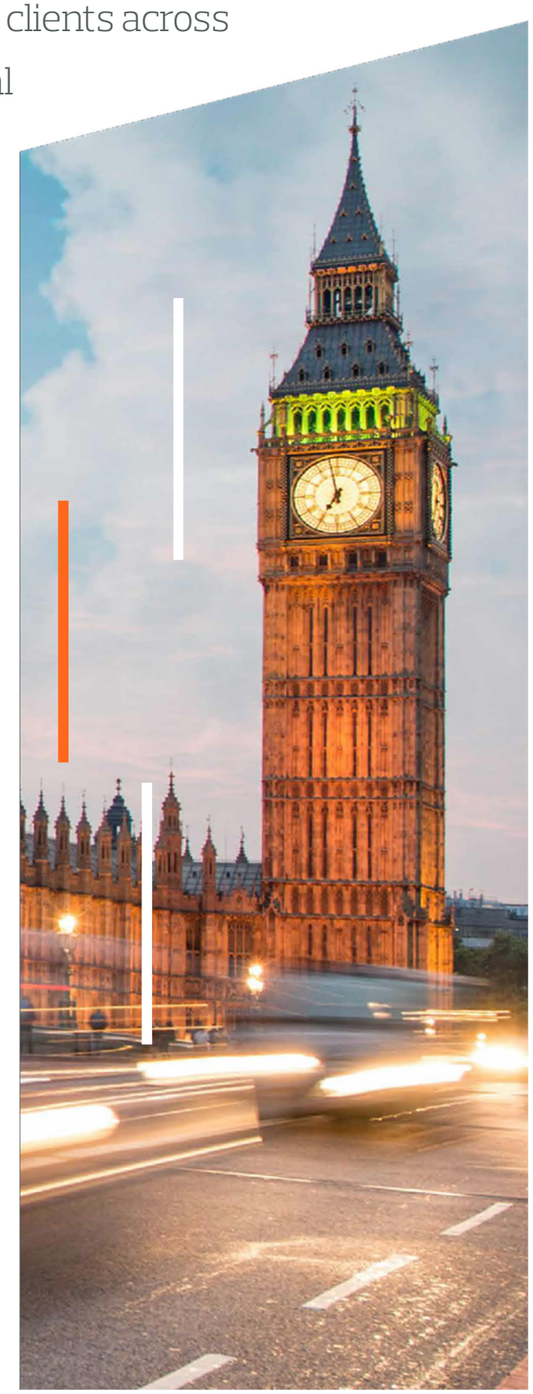
PICADY
for junction design

OSCADY
for evaluation and optimisation of isolated junctions

iROADS
for road asset management

iMAAP
for detailed crash data recording and analysis

MOVA
to regulate traffic flow at isolated signalled junctions



Why TRL Software?

We develop powerful software that is based on solid proven research, trusted by hundreds of local authorities, consultants and engineers around the world.

Our industry experts have extensive experience partnering and collaborating with professionals across the globe, having successfully implemented systems in over 20 countries.

More information on TRL Software's UTC can be found on trlsoftware.com/utc

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