Capita

Transport Route Optimisation – Implementation Package

Professional Services

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Introduction

Route Optimisation provides a crucial tool in achieving Transport efficiency savings. Utilising vehicles to their maximum benefit, saving money, time and administration.

Capita have complied a range of service days to support you through the key aspects of the implementation process. These will help you achieve the maximum benefit from your Route Optimisation software and ensure you get the best out of the functionality available.

Route Optimisation links with Transport v4 to provide a seamless transition.

There are two separate products to assist your Transport Team achieve maximum benefit:-

- **Route And Vehicle Allocation (RAVA)**
  For mainstream pupil Transport administration.

- **Special Educational Needs Vehicle Management (SEN VM)**
  For SEN pupils or those with special transport needs. To help you achieve maximum optimisation of vehicles.

This Service Pack contains details of the services available to set-up both products as one project.

Benefits

The key benefits of implementing the Transport Route Optimisation tools are:-

- Provides dynamic solutions to route optimisation offering cost and efficiency savings.

- Enables best utilisation of vehicles and takes into consideration specific needs of pupils and passenger assistant requirements.

Route And Vehicle Allocation. (RAVA)

This application is for school transport and other pick-up drop-off problems.

RAVA calculates how many vehicles are needed and the routes to be taken to get students from a series of bus stops to their allocated school.

- Import students from one or more school

- Allocate students to nearest bus stop (walking route)

- Define a vehicle fleet to work with

- Define calculation parameters

- Shortest / fastest route

- Maximum onboard time

- Define feeder routes

- Network can be any coordinate system (geographic / projected)

- Create networks directly from TAB, TABx, SHP and GML files

- Mapping source from WMS, TMS or OSM

- Export routes to GIS (TAB, SHP or GML)

- Links Capita ONE and data from SEEMIS via CSV files

Special Educational Needs Vehicle Management (SEN VM).

SENVM will allow the user to create taxi and mini bus routes from the child's home to their allocated school taking into account any special needs the student may have.

- Easy to use

- Proven Savings

- Requires MapInfo Professional 9.5 or above.

- Import students for one or more schools

- Display a need for each student (e.g wheelchair)

- Define a vehicle type to work with

- Define calculation parameters

- Shortest / fastest routes

- Check route time and review route

- Allocate passenger assistant if available

- Save amended route or create new routes

- Network can be any coordinate system (geographic / projected)

- Create networks directly from TAB, SHP and GML files

- Links Capita ONE and CSV files

Pre-requisites

Customers wishing to implement Transport Route Optimisation should have the following pre-requisites:-

- Transport V4 module is live within the LA

- GIS V4 module is live within the LA

- Bases V4 is live within the LA

- Mapinfo Professional 9.5 or above

Additional Service Packages can be purchased to meet these pre-requisites if not currently available.

Service Overview

The Implementation package is described in the table below.

A pre-implementation planning session should be undertaken before commitment to the full service, to enable discussion on the following:-

- Identification of pre-requisites for each system (road speed data, licensing, road network)

- Discussion on how the product(s) and services will benefit the Local Authority.

- Confirm suitability of the Implementation package

- Discussion on the pre-requisites for the implementation

- Identify any additional Professional services or support that may be required.

Element	Days	Description
Installation and Configuration of RAVA in TEST environment.	1	Installation of the RAVA and Fleet Engine Software and configuration of system files. Set-up of road speed configuration as part of the road network (road speeds affect the route optimisation process)
SEN Vehicle Management Set-up in TEST environment.	1	Installation of SEN VM and Fleet Engine software and configuration of system files.
Web Mapping Service and background maps.	Included as part of above sessions.	Establish access to background mapping for both RAVA and SEN VM. A Web Mapping Service (WMS) may be already available via the LA's corporate GIS function.
RAVA Training	1	Your Knowledge Specialist will provide training on how to use RAVA including:- RAVA configuration How the optimisation process works. How to analyse the optimised routes. How RAVA interacts with ONE Transport v4

Element	Days	Description
SEN VM Training	1	Your Knowledge Specialist will provide training on SEN VM including:- Basic MapInfo skills required to run SEN VM. An understanding of MapInfo's redistricting function and how it is used in SEN VM. Using SEN VM to determine where the data comes from, how to compare existing and theoretical routes. Users will work through an allocation using TEST data from the LA's own data source. How to update ONE Transport v4 both manually and from SEN VM
User Acceptance Testing and Practical Application of RAVA and SEN VM.	1	Users will use LA data within the TEST environment to:- See how RAVA conducts route optimisation See how SEN VM conducts management of routes for special needs children
TEST to LIVE switchover	1	Your Knowledge Specialist will provide assistance in the establishment of the route optimisation tools within the LIVE environment.

Capita believe in a strong emphasis on a proactive partnership with the customer. This implementation approach involves a Capita Project Lead who will work closely with the customer's appointed Project Lead.

The Capita Project Lead can respond authoritatively to the needs of the project and will actively and continually monitor progress on all risks, actions, issues, and decisions to ensure successful delivery.

A Knowledge Specialist will be assigned to this project. They will attend on-site to assist and guide customers through every stage of the implementation process. Making recommendations on any service improvements that may be considered relevant.
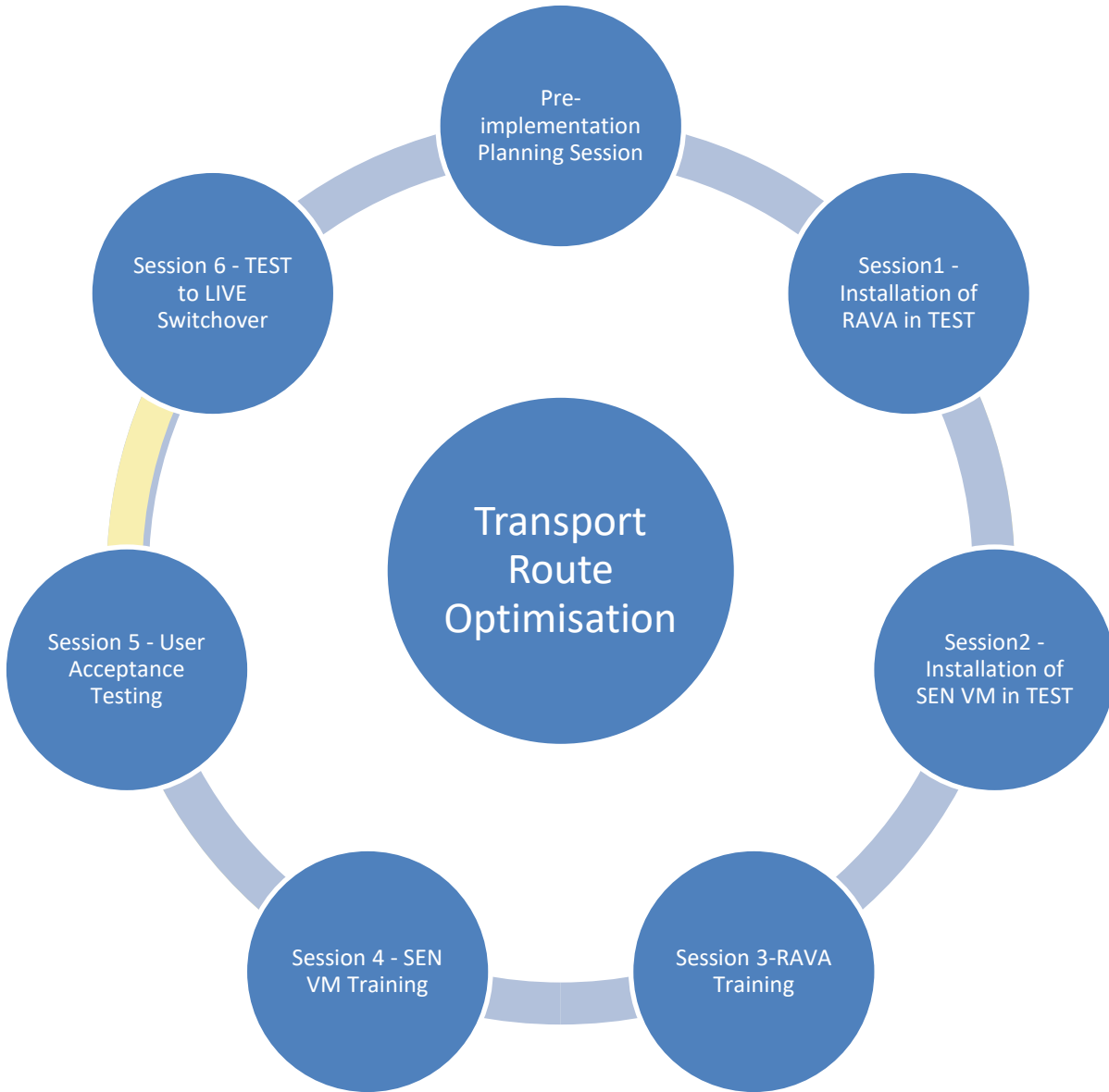
Service Details

Pre-implementation: Demo and Planning Session

Objectives

- To provide a demonstration and overview of the Transport Route Optimisation Tools
- To establish the pre-requisites for each system (road speeds, licensing, road network).
- Confirm suitability of the implementation package.
- Identify any additional professional services or support that may be required

Audience

- One Co-ordinator and current Transport team members and budget holders responsible for ensuring route efficiency and contract tendering.

Standard Agenda

- Introductions
- Purpose of today and expectations
- Review and discussion around current working practices
- Demonstration of Transport Route Optimisation tools.
- Discussion and questions around implementation approach and timescales for the project
- Discussion around pre-set and additional question configuration.
- Any further questions
- Conclusion and summarise next steps.

Outcomes

- Users will understand how the Transport Route Optimisation will assist them in achieving route efficiency savings in cost and time.
- The LA will appreciate how the Route Optimisation tools will be installed and configured within their environments.
- The Knowledge Specialist will have the information to establish the environments and to set-up the configuration to best suit the LA.
- Everyone understands timescales and project implementation approach.

Session 1: Installation and Configuration of RAVA in a TEST Environment

Key Prerequisites (full list provided in RAID log)	• Transport V4 is Live within the LA • Bases V4 is Live within the LA • GIS V4 is Live with the LA • Mapinfo Professional 9.5 or above • Access to the TEST database. • Internal I.T. on hand to assist with any issues.
Objectives	• Installation of RAVA and Fleet Engine Software and configuration of the system files. • Set-up road speeds as part of the road network. • Establish access to background mapping for RAVA.
Audience	• One Co-ordinator. • LA Officer responsible for electronically maintaining road networks and background mapping. • Transport Team Lead Officer responsible for route planning / scheduling within the LA. • Internal I.T. pn hand for any configuration issues.
Standard Agenda	• Introductions • Outline of the day. • Establish the correct configuration for RAVA • Installation of software and system files • Se-up road speeds • Establish access to background mapping. • Test and confirm access and correct installation • Questions and anything else.

	• Review and conclusions
Outcomes	• RAVA and associated files / road speeds are configured and a working TEST environment is available.
	• Access to background maps is available and working with RAVA.

Session 2: Installation and Configuration of SEN VM in a TEST Environment

Key Prerequisites (full list provided in RAID log)	- Mapinfo professional 9.5 or above - Transport V4 is available in a LIVE environment - GIS V4 is available in a LIVE environment - Bases V4 is available in a LIVE environment - Access to the TEST database.
Objectives	- Installation of SEN VM and Fleet Engine Software. - Configuration of the system files - Establish access to background mapping for SEN VM.
Audience	- One Co-ordinator - LA Officer responsible for electronically maintaining road networks and background mapping. - Transport Team Lead Officer responsible for route planning / scheduling (particularly for SEN Transport) - Internal IT services on hand for any configuration issues.
Standard Agenda	- Introductions - Outline of the day - Configure system ready for installation - Install SEN VM and Fleet Engine Software - Configuration of the system files - Establish access to background mapping for SEN VM - Test and confirm connection and configuration - Questions and anything else - Review and conclusions

Outcomes	- SEN VM and associated files are configured and a working TEST environment is available. - Access to background mapping for Sen VM has been established.

Session 3: Training on the RAVA Software

Key Prerequisites (full list provided in RAID log)	- Transport V4 is LIVE within the LA - Bases V4 is LIVE within the LA - GIS V4 is LIVE within the LA - RAVA and associated files have all been correctly established within the TEST environment.
Objectives	Introduce Officers to RAVA and explain how to configure scenarios.
Audience	- One Co-ordinator - Transport Team members / LA Officers responsible for route scheduling and allocation and associated budgetary responsibility.
Standard Agenda	- Introductions and outline for the day. - Explain the optimisation process and how RAVA works and links in with Transport V4. - Generate optimised scenarios - How to work with multiple scenarios for a base - Analysis of optimised data with real world data - Explain how to update ONE, either from RAVA or manually - Questions and queries - Conclusion and review
Outcomes	Users will have a good understanding of how RAVA works how to optimise scenarios and how this interacts with ONE Transport.

Session 4: Training on the SEN VM Software

Key Prerequisites (full list provided in RAID log)	• Transport V4 is LIVE within the LA • Bases V4 is LIVE within the LA • GIS V4 is LIVE within the LA • SEN VM and associated files have all been correctly established within the TEST environment.
Objectives	• Introduce Officers to SEN VM and provide practical training on the skills required to run SEN VM.
Audience	• One Co-ordinator • Transport Team members / LA Officers responsible for route scheduling, allocation and vehicle management plus associated budgetary responsibility for children with Special Transport Needs.
Standard Agenda	• Introductions and outline for the day. • Explain the optimisation process and how SEN VM works and links in with Transport V4. • Training on the basic MapInfo skills to run SEN VM • An understanding of MapInfo's redistricting function and how it is employed in SEN VM • Understanding where the data comes from when using SEN VM • Understanding how to compare existing and theoretical routes. • Officers will work through an allocation process using their own data. • Explain how to update ONE, either from SEN VM or manually • Questions and queries • Conclusion and review
Outcomes	• Users will have a good understanding of how SEN VM works how the data is manipulated with Sen VM and how this interacts with ONE Transport.

Session 5: Practical Application and User Acceptance Testing of RAVA and SEN VM

Key Prerequisites (full list provided in RAID log)	• Transport V4 is LIVE within the LA • Bases V4 is LIVE within the LA • GIS V4 is LIVE within the LA • RAVA and SEN VM and associated files have all been correctly established within the TEST environment. •
Objectives	• LA Officers will have the opportunity to conduct extensive UAT of RAVA and SEN VM to satisfy themselves how the products will provide efficiency savings. •
Audience	• One Co-ordinator • Transport Team members / LA Officers responsible for route scheduling, allocation and vehicle management plus associated budgetary responsibility for both mainsteam pupils (RAVA) and children with Special Transport Needs (SEN VM). •
Standard Agenda	• Understanding how the product(s) work for the LA • Processing of "real life" scenarios to ensure the product(s) will provide the required efficiency savings. • Thorough and rigorous testing of the product(s) to ensure "fit for purpose" • Analysis and conclusions •
Outcomes	• Users will be confident in moving forward the product(s) within a LIVE environment. • Any outstanding queries will be resolved. •

Session 6(: TEST to LIVE Switchover

Key Prerequisites (full list provided in RAID log)	• Transport V4 is LIVE within the LA • Bases V4 is LIVE within the LA • GIS V4 is LIVE within the LA • RAVA and SEN VM and associated files have all been correctly established within the TEST environment. • MapInfo Professional 9.5 or above
Objectives	• RAVA and SEN VM will be established successfully within the LA's LIVE environment. • All configuration, fleet engine software and associated system files will be correctly established.
Audience	• One Co-ordinator • Transport Team members / LA Officers responsible for route scheduling, allocation and vehicle management plus associated budgetary responsibility for both mainstream pupils (RAVA) and children with Special Transport Needs (SEN VM). • LA Officer responsible for electronically maintaining road networks and background mapping. • Internal IT services on hand for any configuration issues.
Standard Agenda	• Set-up and configure appropriate files for RAVA and SEN VM • Establish RAVA and SEN VM within the LIVE environment • Test and confirm correct operation • Analysis and conclusions
Outcomes	• LA will have RAVA and SEN VM fully operational within the LIVE environment and have the confidence that the product(s) will achieve the required efficiency savings.

Additional Service Options

The following service packages are also available from our Professional Services team, please speak to your Business Development Manager for further information and pricing:

Optional Element	Number of Sessions	Description
GIS Implementation Service	1	If you do not already have GIS v4 set up in Capita ONE then you would need to purchase this Service Package and a GIS v4 License before implementation of RAVA / SEN VM. Please discuss with your Account Manager.
Bus Stop Importing	As required	Capita ONE can cover the functionality that enables Bus Stops to be imported into ONE and demonstrate this on a TEST system.
Road Network Maintenance	1	Training on how to maintain your road networks for use in ONE
Web Mapping Service (WMS) Setup	As required	Capita ONE can assist with setting up WMS as required.