

## ROUTE OPTIMISATION - YOUR ROADMAP TO GREATER PRODUCTIVITY

Is it escalating fuel prices, greater competition, government regulation, occupational health and safety, customer service or reducing your carbon footprint?

If you have a workforce that drives vehicles to provide a service or distribute a product and you want to get a better return on investment you can take your pick about which factor is the most important.

This week you might have to pay your sales staff a bigger car allowance because fuel prices are rising. Your business may be feeling the pain as your vehicle lease costs increase. A new competitor is targeting and visiting all your key clients – more frequently than your staff. Can your reps visit more clients in a week? How big should a sales territory be? Are you now legally responsible for how far and how well your truck drivers drive?

Given the dynamism of the economy the factors you choose today might be different next week.

However, there is one constant that any business must confront, whether it is simply to survive or to grow.

That constant is to gain a competitive edge through greater productivity, either by reducing costs or getting more from your people and your vehicles.

The key to doing that is through route optimisation.

### **More efficient delivery of products or services for greater productivity**

Route optimisation helps businesses with mobile workforces deliver their products or services more efficiently. Combining the visual tools of a geographic information system and sophisticated computer modeling, businesses can determine best drive routes with estimated travel times. The outcome is easy-to-follow directions that reduce drive times and distances. The result can be to lower costs or to do more business. Either way, route optimisation aims for a greater return on investment from staff and vehicles.

Users of route optimisation range from the smallest providers of products and services, utilities and public transport organisations through to large trucking companies operating statewide or nationally in the logistics business.

As such route optimisation can vary in the technologies it uses and the functions it performs. Small enterprises making modest investments stand to gain benefits equal to or exceeding those achieved by the big end of town.

Armed with a drive plan from a best-of-breed route optimisation solution, a sales force of two can make significant savings. At the other end of the scale route optimisation may combine in a complex suite of logistics applications with real-time tracking of multi-vehicle fleets across a city, a state or the country.

Route optimisation is not to be confused with such practices as finding the shortest distance between two locations or simple instructions about which roads to take. Rail lines, rivers and bridges all add complexity to driving the right path.

***Route optimisation balances resources and costs  
for any business in the delivery or services sectors.***

## Who is keeping an eye on the road ahead?

If you are in the business of managing labour and mobile assets – whether you're a scheduler, operations manager, transport manager, sales manager or someone with a keen interest in reducing cost, you will want to plan daily activities in advance.

Maps, pins and intuition are outdated tools. If you're lucky a spreadsheet might help, though this approach lacks sophistication and limits business benefits.

The challenge of doing it right is a big one: the result of getting it wrong continues to be costly.

## Many ways to travel for better returns

Whatever your industry, route optimisation is the answer to achieving any one of a number of return on investment goals.

It will ensure improved profitability, enhanced staff morale, foster better customer relations and help your company meet occupational health and safety guidelines.

At its simplest route optimisation can increase the number of sales, service or delivery calls a driver might make in a day.

That may mean generating more business or just reducing the need to pay overtime. With a daily call roster completed and time to spare a sales representative might explore new business opportunities.

Route optimisation will assist in ensuring you have the right number of staff in each sales or service territory.

If getting new business isn't an immediate focus, then route optimisation can still help by reducing how far a vehicle has to travel, therefore reducing fuel and other running costs. In other words, you can extend the life of the vehicle without increasing the total cost of ownership.

Congested roads and time pressures to meet schedules have focused the attention of industry bodies, government agencies and legislators on the health and wellbeing of those who drive professionally.

Whether it's a fatigue-induced accident, exceeding speed or load limits or obstructing other traffic through poor route selection, the responsibility for driver behaviour increasingly comes back to the employer complying with a duty of care. Through the provision of accurate, timely and clear information, route optimisation can help prevent such disruptive, costly or even tragic mistakes.

## Starting your engine

As with any performance improvement, the first steps towards a route optimisation solution are to understand the business environment and objectives, then produce a requirements brief.

A comprehensive list of business objectives needs to be determined. Discussions between the client organisation and the provider of the route optimisation solution must encompass vehicles, labour/wages, customers, management overheads, offload time, drive speed and road conditions and a range of other performance factors.

Fixed and variable costs might include: the number, type and capacity of vans or trucks in the fleet, frequency of deliveries or service calls, annualised figures including mileage and fleet costs and salary, wages or contract costs for employees or contractors. Other variables might be preferred customer service times, as well as access and loading issues.

A further and indeed critical factor is the importance of setting objectives for corporate performance improvement as a result of introducing route optimisation.

US route optimisation expert Dr Don Ratliff nominates the setting of quantifiable and measurable objectives as number 1 in a list of 10 rules for logistics optimisation. He says "a delivery operation might define the objective to minimize the sum of the daily fixed cost of assets, the daily cost of fuel and maintenance and the daily cost of labor. These costs are both quantified and reasonably easy to measure."

## **Economies of scale: a mini or a B-double**

Organisations can choose one of several types of route optimisation services, depending on the size and complexity of their operations. It goes without saying that expertise in digital road mapping and resource planning are decisive factors in the selection of any solution partner.

A bureau service provides a rapid and low cost first step towards achieving the benefits of true route optimisation. Organisations with appropriate staffing and expertise may choose to operate a system in-house or access it online from a solution partner. For bigger enterprises route optimisation may be a key module within a larger suite of logistics applications.

At its simplest route optimisation provides the mobile workforce with instructions about how to travel between various locations, including which roads to take and expected travel times. True route optimisation produces an optimal drive plan and visit sequence to achieve stated business objectives.

Consider this example of a solution to assist a retail sales representative. The information requirements on which the solution is based include the customer's name, address, post code, last visit, products carried and date when the customer would prefer to be visited.

Stored in a digital file format this data is regularly updated by the business and electronically transmitted to the service provider as the basis for the production of a simplified run sheet. Covering a week, a month or a particular sales cycle, clear instructions about who to visit, when and how to get there, make it easy for a seasoned rep or new employee to follow.

Rules can be applied to the solution to ensure both the quality and consistency of relationships with the retailer is maintained. These may include ensuring a specific time interval between visits, or, factoring in the need in a new sales cycle to see the oldest-visited customer first.

The design of any route optimisation solution is only limited by the business objectives set by senior management.

Fundamental to the success of any route optimisation solution, whoever it serves, is the quality and currency of the digital road maps which are used in computer modeling to create the optimum route. These must cover all road and geographical features in the region, state or country and include freeways and tollways, highways, main roads, streets, down to vehicular tracks, paths, sealed and unsealed roads and tracks, overpasses and tunnels. Data includes street names, average travelling speeds, route numbers and restrictions associated with turns, weight and height.

A route optimisation solution must also use a geocoding process to convert street and suburb address information into a latitude and longitude that describes a unique position on the Earth's surface, which is matched against a spatial database to identify trafficable infrastructure.

## **Who's taking the route to better productivity?**

Road-based route optimisation helps businesses that rely heavily on using cars, vans and trucks on our road network reduce the cost of their operations.

Most conspicuous of these are the delivery and service companies, large and small, who ensure the daily or weekly replenishment of retail outlets selling food or consumables, or those that conduct programmed maintenance.

Then there's the utilities installing new infrastructure or undertaking preventative maintenance activities across an ever expanding suburbia. Whether in public or private ownership their costs and performance are subject to increasing public scrutiny and the need to do more with less.

And while businesses with just one or two vehicles may not see themselves as having a mobile workforce, they face exactly the same cost pressures and likewise need to improve productivity.

Contractors trying to manage projects in multiple locations can reap the benefits of reduced costs and better productivity as can those providing services to homes and small business.

The list of those to benefit from true route optimisation grows daily as more and more businesses take to the road and engage with industry, commerce and everyman through a mobile workforce. Route optimisation will be a vital tool in their success.

**Route Optimisation – your roadmap to greater productivity.**

**If you would like further information, please fax, phone or email us on one of the following.**

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