

# Logistics Modelling



EVALUATE ALTERNATIVE LOGISTICS SCENARIOS AND MEASURE HOW EFFICIENT THEY COULD BE – AND DETERMINE ACCURATE PROJECTED COST REDUCTIONS

PDMC have built a tried and tested methodology for providing accurate and reliable logistics modelling services for companies assessing or considering alternative methods for delivering their products to customers.

Often referred to as “what if” evaluations, such models require careful set up and accurate configuration of data, but enable dependable assessments of alternative ways of fulfilling the same customer requirements by making comparisons to the current business model in place.

A key factor in determining if an alternative model should be implemented is the extent of cost reductions – identifying for example a 5 to 10% reduction in costs would tend to indicate that the model should be considered.

Our software enables us to model multiple scenarios based on your requirements and to provide projected cost savings for each scenario - or indeed extra costs should you adopt an alternative logistics strategy / model.

For example you may be considering changing fleet size and profile, or alternative new depot locations and vehicle allocations based on depot capacity and or bring your deliveries in house rather than using a 3pl.

You may be considering changing customer delivery time windows to remain competitive – for example offering am and pm deliveries as opposed to all day and or be considering servicing priority customers first or early on a route.

You may be considering changing the frequency you visit customers – do you need to increase servicing certain customers from twice to three times per week or vice-versa.

If your operation is constrained by geography and or historical route zoning you maybe be considering using new geographical boundaries or merging route zones to reduce costs or allocating customers to depots on a more optimal basis.

Other considerations may be given to multi tripping vehicles for local work, using two shifts instead of one with the same vehicles, extending routes to two or three days, using 1 and 2 man deliveries according to item sizes being delivered.

Most strategic route modelling exercises require considerable expertise and system familiarity and the challenge may be that you are constrained by resources and do not have the time to carry out such modelling work.



## Software Tools



Using leading edge route planning software, highly accurate digital road networks and customer site location, peak and off peak travel times and multiple business rules including driver breaks and maximum route time.



PDMC can undertake this work for you. All we ask is that you provide accurate data and agree on a set of “what if” routing scenarios.

For a relatively small outlay, we can provide dependable and accurate models with associated costs for you to assess the most optimal way to conduct your delivery, collections and or services. Using accurate and dependable modelling tools enables us to help remove much of the risk associated with adopting change without putting your plans to the test and positively support your decision making processes.

Our modelling strategy is founded on the following mechanism.

- Capture “as done” routes for a sample period of time – usually 1 weeks’ routes separated by day of the week. E.g. 50 routes per day Monday to Friday. This is typically referred to as a “baseline”.
- Validate “as done” routes and check travel and service (delivery) times are accurate and all business rules configured. Identify any routes that exceed limits.
- Build alternative optimised routes according to specified business requirements, for example identify if it possible to reduce the number of routes per day for each day of the week.
- Prepare and present reports showing KPI’s for the baseline routes and all specified additional scenarios including number of routes, drive and delivery time per route, distance per route, number of stops per route and associated daily totals per depot or region.
- Show actual and % savings of preferred optimised scenarios over baseline and identify any scenarios in which costs increase and may therefore be inadvisable.
- Present all statistics as an Executive Summary to show savings at a glance to include projected annualised savings of scenarios identified as being more efficient and profitable.
- Provide detailed KPI reports for all scenarios for further analysis and validation.
- Identify key profitable strategies with recommendations for best approaches for introduction of strategies – for example as a phased process to ensure the business is able to adopt change with minimal disruption.