

Transport Business Cost Model User Guide

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Disclaimer

This Guide and accompanying spreadsheet are supplied to Members in good faith by Transporting New Zealand Limited to support their business.

Transporting New Zealand Limited or any of its staff or agents accept no responsibility whatsoever for:

- The quality, including accuracy of the information you enter into the Cost Model spreadsheet, or
- Your interpretation of the Cost Model, or
- Any business decision you make based on the outputs presented in the Cost Model.

Transporting New Zealand reserves the right to update this guide and/or the accompanying spreadsheet at its discretion.

1.0 Introduction

The Transporting New Zealand Cost Model is designed for you, the road transport operator, using projected expenses and financial information from your own accounts.

This guide shows you how to use the Cost Model and explains the terms used in the model.

Please read this guide and understand its contents before using the model.

If you have any questions regarding the use of this model, please email Transporting New Zealand at info@transporting.nz

The model will:

- Allow you to determine both the hourly and per kilometre cost for vehicle(s) including combinations.
- Show you how each factor of the model combines to present a total picture of the financial performance of your business.
- Illustrates the effects when the data for one or more components is amended.
- Help you find those areas of your business that are not performing to your best advantage.
- Illustrate the impact of changes to your costs and operation.
- Identify areas where cost reductions could be made.

The model uses the data from your most recent **annual** Profit & Loss statement (P&L) and the most recent actual costs incurred when running your business. Actual costs should be updated at least quarterly so the information provided by the model is current and gives you a current and historical view of the financial performance of the road transport part of your business.

Only the income-generating road transport part of your business should be used when assessing the financial performance of your road transport operation. If your business includes supplying services that are not directly related to the performance of the road transport function, such as your workshop carrying out maintenance for third parties, then the revenue and costs from these services should be apportioned relative to their use.

When using the spreadsheet note:

- Some cost descriptions have a red triangle in the top right-hand corner. Hovering above these triangles will open a ‘notes’ box that will assist you with completing the relevant costs for this line.

- Enter data into the green cells only.

- All cells in the tab are locked except the green ones to avoid entering data where it could interrupt the way in which the spreadsheet works.



1.1 Understanding the Hourly and Kilometre rates

When looking at the Summary on the Vehicle tab you will see two charge-out rates - Hourly & Kilometre. The hourly rate is based on the fixed costs of your business, while the per kilometre rate is based on the vehicle’s variable (operating) costs.

1.1.1 Hourly rate

The hourly rate is based on the fixed costs of your business (wages, overheads, depreciation & interest and insurance). These are cost your business will accrue whether your vehicles are operating or not.

1.1.2 Kilometre rate

The per kilometre rate is based on the variable costs of individual vehicles (Road User Charges, Repairs & Maintenance, Tyres, Fuel), these costs are directly influenced by the number of kilometres travelled by your vehicles.

1.2 Trip-Job Calculation - Estimating a job

Having calculated your operating costs as both an hourly and a kilometre rate you can now estimate the cost of a job. For example; you have a job that has an on-road component of 434km and that will take 9.5 hrs including loading and unloading. The cost for this job can be calculated below (figures shown in the Cost Model are examples only, accurate calculations need figures inputted in to the Cost Model that reflect your business);
Hourly rate $92.83 x 9.5 hours = $881.88. PLUS Cost per Kilometre $2.55 x 434km = $1106.70, giving a total rate of $1988.58 + GST for the job. When quoting your client this can be expressed as a combined kilometre rate; $1988.58 ÷ 434 = $4.58/km or as a combined hourly rate; $1988.58 ÷ 9.5 = $209.32/hr). These rates can be expected to change with each new calculation.

An in-depth calculation example is in Section **5.3** Using the Trip-Job Calculation Tab.

Trip-Job Calculation

1.3 Your carbon footprint

In the orange box beside the Fuel section in the Vehicle tab there is a measure of your 'Carbon Footprint'. This is the CO_2 that is emitted by the powered vehicle(s) you operate. Your CO_2 emissions are directly related to your fuel burn with 2.68kg of CO_2 created for every litre of diesel fuel you use.

Your Carbon Footprint is becoming more and more important to both legislators and clients who will both be asking you to reduce your impact on the environment. This figure in the Cost Model is important to give you both a baseline to introduce and measure improvements and to know what level of mitigation you need to introduce to achieve carbon neutrality where that is required.

2.0 Glossary

Terms used in the context of the Transporting New Zealand Transport Operator Cost Model

Term	Means
CoF	Certificate of Fitness.
Depreciation & Interest	The cost to your business caused by the depreciation of your transport vehicle assets and the interest you pay on the loans used to finance those assets
DG	Dangerous Goods.
Fixed costs	The unavoidable expenses incurred operating the transport business. Also known as Operational Expenses.
Fuel	Fuel (Diesel only) and required additives (such as AdBlue).
GTI	Grant Thornton Index, a generic cost comparison model for transport operators who are members of Transporting New Zealand.
IT	Information Technology.
MPI	Ministry of Primary Industries.
Overheads	Fixed costs associated with the management and operation of the transport task.
P&L	Operator's Profit and Loss statement.
PI Insurance	Professional Indemnity Insurance, (included in overheads).
PL Insurance	Public Liability Insurance (included in overheads).
PPE	Personal Protective Equipment supplied to drivers or others directly employed in the transport task, such as gloves and face masks.
Repairs and Maintenance (R&M)	The cost of repair and maintenance of vehicles used in the transport task, except tyres. Includes specialist certification costs and the cost of hire or short term leased vehicles used to cover downtime.
Road User Charges (RUC)	Road User Charges for vehicles directly involved in the transport task.
Variable Costs	The variable costs incurred to operate a transport business such as Fuel, RUC, R&M and other expenses that may vary dependant on the volume and nature of work carried out. Variable costs are also known as Running costs.
Salaries	Payments made to the Manager, proprietor or other persons in control of the business. Includes Director's fees, salary or drawings including Provisional Tax.
Tyres	Tyre and tyre-related costs, including wheel alignment and other tyre-related costs such as a tyre maintenance contract.
VCA	Vehicle Condition Assessment, an assessment of a vehicle carried out by a suitably qualified person to determine whether the vehicle is compliant and

	what, if any, repairs are required to make it compliant. A VCA and any repairs should be carried out shortly prior to the required periodic safety inspection (CoF).
Vehicle Insurance	The cost of vehicle insurance for vehicles used directly in the road transport task.
Wages	The direct cost of wages paid for the operation of the transport task including related costs such as KiwiSaver.

3.0 Description of Terms used in the Cost Model (Directly comparable to the GTI)

Content of line items in the Cost Model [costs relate to the revenue, income, earning part of your transport operation].

The titles of each item are consistent with those in the Grant Thornton Index, allowing you to make a direct comparison with the costs of your business with those reported in the GTI.

Reference	Item	Type	Includes
3.1	Road User Charges (RUC)	Variable	Actual Road User Charges paid, plus related transaction costs
3.2	Fuel	Variable	Fuel Diesel Fuel Additive such as AdBlue
3.3	Wages	Fixed	Drivers' wages KiwiSaver contribution Performance Bonus Relief driver costs
3.4	Tyres	Variable	Tyres - Replacement charges Tyre servicing (servicing contract) Wheel alignment
3.5	Repairs & Maintenance (R&M)	Variable	Direct costs incurred in repairs & maintenance of the transport fleet. If you have an 'in house' workshop, costs will include mechanics' wages, cost of maintaining the workshop, and spares inventory. Downtime (*lost business/cost of short-term lease/rental*) CoF and other certification including HV Specialist Certification. Truck washing
3.6	Depreciation & Interest (vehicles)	Fixed	Cost of finance Depreciation of transport and proportion of transport-related assets [*See depreciation calculation].* Cost of long-term lease vehicles *[used instead of owned vehicles]* Opportunity cost (*capital cost – finance amount x %)*
3.7	Salaries	Fixed	Manager/proprietor's salary or drawings [*note, includes provisional tax payments*].
3.8	Overheads	Fixed	Administration costs for operating the transport business, including staff (dispatch, cleaning etc) *[only the direct, transport operation component of the total administration cost].* Operation of non-revenue earning company vehicles (*registration, RUC, Fuel, R&M, Finance*) Garaging Office (*rent, Security, computer equipment, IT, Eroad, cell phones and other communication equipment*). Workshop (*rent, capital equipment etc){See repairs and maintenance above}.* Business insurance (*includes, Company vehicles, contents, PI & PL etc).* ACC PPE Advertising and marketing including sponsorships.
3.9	Insurance (vehicles)	Fixed	Insurance paid on vehicles directly involved with the freight task.

4.0 Your costs (expenses)

4.1 Road User Charges

RUC costs are those taken from your current P&L statement and actual expenditure and / or from the New Zealand Transport Agency RUC tables; RUC rates and transaction fees | Waka Kotahi NZ Transport Agency (nzta.govt.nz).

4.2 Fuel

The cost of diesel fuel and required additives such as AdBlue.

4.3 Wages

The total cost of wages paid to staff engaged in the revenue-earning side of your business, essentially the direct cost of your drivers wages, bonuses or variable allowances.

The costs of relief drivers should also be included here.

The cost of manual logbooks should be included with stationery costs in Overheads. The cost of electronic logbooks should be included as a telecommunications cost in Overheads.

4.4 Tyres

Includes all new and/or replacement tyres.

4.5 Repairs and Maintenance

If an external service provider is used, the direct charges paid by you to that service provider are used.

Where there is an ‘in house’ workshop, all direct costs including wages, the cost of maintaining the workshop, rent, cost of spares inventory etc must be included. Where the workshop charges out work to third parties, costs must be apportioned appropriately.

Other direct R&M costs include Vehicle Condition Assessment, Certificate of Fitness, Heavy Vehicle Specialist Certification fees and tyre servicing costs, including wheel alignment.

Downtime or loss of business costs due to vehicles being unavailable or having to be replaced by rental or short term leased vehicles is also a function of R&M.

4.6 Depreciation and Interest

Depreciation is the calculated loss in value of the revenue-earning vehicles over time.

Interest is the cost of access to the capital you borrow to finance the purchase of your vehicle(s).

Where vehicles are leased rather than owned, the lease costs must be included.

Also included is the ‘opportunity cost’, the amount the capital invested would have earned if invested elsewhere.

4.7 Salaries

This includes the Manager or Proprietor’s salary or drawings including any KiwiSaver and/or provisional tax payments as well as any other direct payments such as bonuses, allowances or Director’s fees.

4.8 Overheads

Overhead costs include but are not limited to:

- Rent
- ACC payments
- Accountancy & legal fees.
- Business insurance (PI & PL)
- Compliance certification, including annual licencing (registration) fees such as MPI or DG Certification.
- Administration costs, including support staff wages, premises, power and utilities including IT services, electronic log books, phones and internet, stationery (including paper logbooks) and staff support services.
- Other costs include indirect company vehicles, PPE, training and vehicle garaging.

4.9 Insurance (vehicles)

Cost of insurance for vehicles used directly in the revenue-generating transport task.

4.10 Apportioning costs (Expenses)

Where an operator's business includes the provision of services that are not directly related to the revenue expected from transporting road freight, then the relevant costs must be apportioned relative to use.

5.0 Completing the cost model

When you open the spreadsheet you will see four coloured tabs.

These tabs are:



5.1 Vehicle



This allows you to calculate both the hourly and kilometre rates for vehicle(s) operating in your business and, when printed, is two A4 pages.

- The Vehicle Cost Model is based on two pages in a single tab in the Cost Model spreadsheet.
- The Vehicle Cost Model is designed to enable you to calculate an hourly rate for the fixed cost component of your transport operation and a per kilometre rate based on the variable, vehicle related, costs of your transport business. Combining these two rates will enable you to cost your work accurately.
- The information in this tab comes from the data you enter, it does not take data from your P&L tab.
- Data is to be entered in the green shaded cells only.
- All cells in the tab are locked except the green ones to avoid entering data where it could interrupt the way in which the spreadsheet works.
- Some descriptions have a red triangle in the top right-hand corner. Hovering over these triangles will open a ‘notes’ box that will help you complete the relevant costs for this line.
- There are also references to sections of this guide that will give you further assistance.
- Page 1 allows you to calculate your hourly rate using the fixed costs of your business; Wages, Depreciation and Interest, Salaries and Overheads etc.
- Wages is the remuneration paid to your revenue-generating staff (drivers), staff directly involved in generating revenue for your Road Transport operation.
- If you have more than one driver you can include the average wage you pay or you can calculate the average hourly rate you pay by adding your total wages bill for a pay period and dividing that by the total hours worked by those staff in that pay period.
- You can use the depreciation calculator in the calculation section on this tab of the spreadsheet or you can take the depreciation from your most recent Profit and Loss statement.
- Similarly, interest and opportunity costs can be calculated using the Opportunity Cost calculator in the same tab.
- Page 1 also includes calculators for depreciation, interest and opportunity costs.
- Overhead costs; these are your Road Transport operation’s portion of the unavoidable costs of running your business. These can include but are not limited to: (next page)

- Salaries of Managers and support staff and include Director's fees.
- Professional fees (accountancy, legal etc)
- Administration
- Advertising, marketing and associated costs (includes vehicle cleaning).
- PPE
- Training
- Vehicle parking/storage
- Telecommunications including phone, internet, GPS tracking etc.

- Page 2 allows you to calculate your per kilometre cost (made up of the variable costs), a cost and profit summary and your annual tonnes of CO_2 emitted for this vehicle/combination at your estimated annual distance travelled.

- You can average your kilometre rate over your fleet, however, you will get a more accurate cost if you calculate each vehicle or combination vehicle separately even if the vehicles are identical.

- You must identify your vehicle's RUC type from the NZTA RUC tables accessed through this link: RUC rates and transaction fees | Waka Kotahi NZ Transport Agency (nzta.govt.nz)

- Similarly, you must input the RUC charges from the tables. You will note that the RUC charges in the table are per 1000km and **include GST**. The vehicle cost model calculator automatically removes the GST and calculates the per kilometre rate.

- Repairs and Maintenance costs are the actual costs incurred to date for the individual vehicles while in your service. These costs are divided by the total kilometres travelled during the same period. These costs are incurred to ensure your vehicles remain safe and efficient and include but are not limited to:
  - Vehicle Condition Assessment (VCA)
  - Certificate of Fitness (CoF) inspections and certification
  - Heavy Vehicle Specialist Certification (LT400)
  - Scheduled (planned) maintenance and servicing
  - Repair
  - Unplanned maintenance

- The Tyres section of this tab enables you to input the tyre details across your vehicles to get a per kilometre cost of your tyres.

- In the fuel section you input the number kilometres you estimate you will travel and the estimated fuel consumption of the particular vehicle doing the type of work that you anticipate it will undertake. This will give you the total fuel consumed in the distance travelled. You then input your current per litre cost of fuel to get your cost per kilometre. Again, this should be done for each vehicle or combination to get the most accurate result.

- The blue Analysis (less GST) box allows you to input your desired profit margin prior to the final calculation of both your hourly and per kilometre rate.

- Any changes to inputs (green boxes) will immediately change the outcomes.

5.2 Your P&L

Your P&L

These are your most recent costs,

- This tab lets you enter the actual results from your most recent Annual Profit and Loss balance sheet.
- These results will carry through to the graph on the 'Fleet' tab to give a visual comparison to your estimated figures from the 'Vehicle' tab

5.3 Trip-Job Calculation

Trip-Job Calculation

This tab allows you to project the rate of a job by automatically taking the kilometre rate and the hourly rate calculated in the 'Vehicle' tab and multiplying/adding them to the estimated time taken and the kilometres travelled on the job to be rated. Two spreadsheets are on this tab:

The first spreadsheet simply allows for the input of the time taken (hours) and the kilometres travelled. An example is illustrated below:

Trip/Job Rate Quick Calculator		
		Rate
Enter estimated distance (km)	434	$1,106.70
Enter estimated hours	9.5	$881.88
	Total	$1,988.58

The second spreadsheet allows for the inputting of the various 'components' of the job such as, the time taken and kilometres to pick up, the time taken to load, the time and kilometres to delivery, the time taken to unload and then the time and kilometres taken to return to the depot. The spreadsheet also allows for multiple pick-ups and deliveries on the journey. An example is illustrated below:

Rate calculator						
From	To	Km (from google maps)	Km Cost	Hours	Hours Cost	Totals
Depot	Pick up	19	$ 48.45	0.3	$27.85	$ 76.30
Loading				1	$92.83	$ 92.83
Pick up	Drop off	404	$ 1,030.20	6	$556.98	$ 1,587.18
Unloading/Loading				2	$185.66	$ 185.66
Drop off	Depot	11	$ 28.05	0.2	$18.57	$ 46.62
Unloading/Loading					$0.00	$ -
Depot	Pick up		$ -		$0.00	$ -
Unloading/Loading					$0.00	$ -
Pick up	Drop off		$ -		$0.00	$ -
Unloading/Loading					$0.00	$ -
Drop off	Depot		$ -		$0.00	$ -
Totals		434	$ 1,106.70	9.5	$881.88	$ 1,988.58

Both spreadsheets have a total per kilometre and per hour rate calculation for reference below them.

Per Hour	$ 209.32
Per Klm	$ 4.58

5.4 Fleet

Fleet

With this tab you can input the actual expenses and income for each vehicle/unit in your fleet in a given period of time (weekly/monthly/annually) giving you an overall combined total and average of the profitability of your fleet and what each vehicle is contributing to that income, expense and profitability.

This model assumes that all income, fuel, wage, salaries and overheads are accrued by the powered vehicle. Costs of the powered and towing vehicles are added together to then be deducted from the overall income of the unit, showing the margin or loss left by the unit.

The distance (if known) travelled by the vehicle in this period can be entered and will give a revenue per kilometre and a profit per kilometre figure for each unit as well as an average of these figures on the right hand side of the spreadsheet.

The spreadsheet shows two units ‘expanded’ so that data can be entered in to the ‘green’ fields. This spreadsheet is protected but NOT password protected so to open further columns for data entry first you must do the following:

1. Unprotect the sheet by selecting **Review** from the top menu
2. Go to the **Protect** section and click **Unprotect Sheet**



3. Now you can expand and collapse the unit columns as required to enter further data by using the **+** and **–** squares above the column letters.
4. If you require ALL columns expanded and/or ALL columns collapsed, use the two number squares to the top left side of the spreadsheet.



5. Once your data is entered and you are satisfied it is correct you can then re-protect the sheet by going to **Review** and **Protect Sheet** as above. Click **OK** on the dialog box that appears (do not check/uncheck any ‘tick’ boxes). The sheet will now be protected again.

5.5 Saving the spreadsheet

The spreadsheet can be saved to your own server and adjustments made to the costs to allow you to keep your transport business cost model up to date.

5.6 Printing the spreadsheet

Once the data is entered you can print each tab for future reference if required.

All tabs including the Fleet tab (once collapsed) can be printed on an A4 size page. The Vehicle tab requires two pages.