Transcript of Better Value Rail Opex tool quick start guide video

Hello and welcome to the Better Value Railway OPEX tool's Quick Start Guide.

Today we will cover, what is the Better Value Railway OPEX tool, what are the operating costs incurred in running a new train service, how to use this tool to forecast the likely range of opex costs for your scheme, and how OPEX should be treated in a business case.

The Tool is intended to aid promoters, at an early stage, in understanding the likely order of magnitude operating costs of their new passenger service scheme.
Promoters are then encouraged to use the tool to build a range of options, scenarios, and sensitivity tests in their business case.
Please be aware these costs are high level, and should not prevent promoters from identifying possible risks/opportunities and reflecting on the whole life costs of the scheme.
If you are unsure about what this might be, please speak with your DfT or Network Rail representative.

You might be wondering, what are Operating Costs?

There are Track access charges such as VTAC, Variable Track Access Charge, which is the payment train operators pay to Network Rail for upkeep and maintenance of the railway system.

Vehicle Maintenance Costs, these include wear and tear costs train operators incur to maintain the vehicles.

Energy costs, either for diesel fuel or electric power.

Vehicle leasing costs, annual payments from the train operators to rolling stock operating companies for the lease of the vehicles and heavy maintenance activities.

Train staffing costs for drivers and guards, and finally station staff costs for the cleaning and maintenance of new stations.

Before using the tool, Promoters need to know three things about the proposed service: the end-to-end journey time, the train frequency and what rolling stock type is likely to operate.
This tool estimates costs for 4 types of rolling stock: Diesel Short or Medium distance and Electric Short and Medium distance.
Promoters should select a rolling stock type to match line characteristics of their scheme.

Here are two cost graphs for Short distance and medium distance diesel rolling stock.
Say for example you wanted to understand the likely cost for a new 1 train per hour short distance diesel shuttle service. With an end to end journey time of 32 minutes.
First, we'd find 32 minutes on the X axis, and then we'd read off the Total annual OPEX cost from the y axis, approximately £1.9M
An upper and lower forecast is also shown to represent the cost variability observed across the country, for the stock type in question.
In the graphs you'll notice points at which the total costs rise sharply.
Area 1 demonstrates this at the 24 minute mark. This represents the approximate point at which an additional train, plus accompanying drivers and guards, could be required to help deliver a consistent service in the timetable.

The exact number of minutes which triggers the requirement for an additional train is dependent on the characteristics of the rail line.
Promoters at this stage are not expected to know this is detail, but should be aware of the possible financial impact on the operational costs of the scheme, in this instance represented by a higher upper range in the OPEX graphs.

But what if you don't yet know the expected end to end journey time of your scheme?
Let's do an example for a short distance 3 station branch line.
We first start with calculating the travel time between station 1 and station 2. Assuming an average speed of 28mph it would take around 6 minutes to travel the 3 mile section.
Then we will calculate the next section's travel time to be 11 minutes.
Next we add an extra 2 minutes for passengers at station 2 to board and alight, and finally, we total the times to arrive at 19 minutes

Let's do another example, this time for a medium distance branch line with 5 stations.
We're going to use exactly the same methodology as before, except assuming a higher average speed between stations of 40mph, this is because we are assuming less of stop start service which is able to reach higher top speeds.
So we calculate the travel times between stations and station dwell times to arrive at a total end to end time of 51 minutes.

Regarding use of these costs in business case project appraisals, practitioners should be aware that the costs **do not include** Optimism bias.
For guidance on how to treat OPEX costs in appraisal please refer to DfT's Transport Appraisal guidance.

And that's it, thank you for watching this quick start guide to the Better Value Rail OPEX Tool.
For further information on how to use this tool and the assumptions behind it please refer to the additional guidance on the Better Value Rail website.