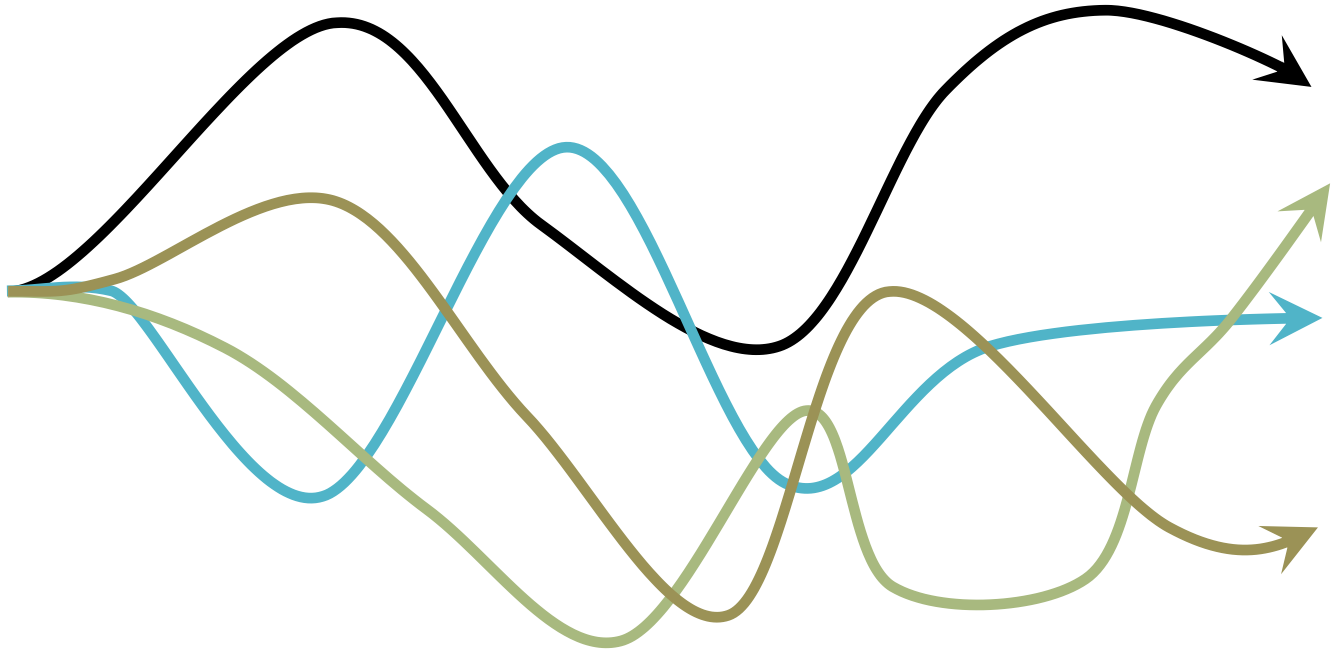
Complexity Assessment Tool

Better Value Rail



Complexity Assessment Tool

The purpose of this tool is to help understand the degree of complexity or novelty that a project might present and hence the degree of assessment, management, external advice etc. that might be required to support the work effectively. Depending on the scale, scope and novelty of a proposal different approaches will be needed to managing the work and the necessary support and advice. Complexity of a project can be estimated across many different measures but the table below focuses on a small number of indicators to help gauge this. Not all of these will apply to every project, and some projects might have other specific indicators to consider.

Any particular scheme will have a mix of aspects that are ‘low’, some ‘medium’, and some ‘high’, but when some or most of the indicators are toward the higher complexity measures, then more focus needs to be made on structured project planning and on competent commercial, technical and managerial support. It should also be considered that the greater the complexity of a project then the greater risks and uncertainties that come with it, and more consideration should be given to contingency planning and risk management, with advice taken from ‘critical friends’ on the scenarios that should be planned for. Looking for lessons to learn from similar projects is a sensible activity.

As a project progresses and develops, this assessment of complexity should be kept under review to reflect emerging issues. If necessary the project should be ready to change approach to reflect, and manage, any increased risk. Where there are indications from this basic tool of higher levels of project complexity then it is advised that a more formal review is undertaken using an established more thorough complexity analysis tool and actions taken on the findings.

	Low Complexity	Medium Complexity	High Complexity
Using established technology, or based on innovation?	All established	Some elements new, or new to rail	Prototype equipment
Estimated total cost	<£1m	£1m to £5m	>£5m
For a new line is the linear distance …?	<5km	5km to 15km	>15km
For a new station is the estimated annual usage …? [NB about 68% of UK rail stations have at least 100k passengers per year. Only about 35% have more than 500k per year]	<100k	100k to 500k	>500k
How many parties are involved in promoting the project?	2	5	Lots
Will there be interaction with the mainline railway?	None	Interchange	Part of it
Is the project on an established corridor or new route?	Mothballed line	Old formation	Greenfield
Are there SSSI/ancient monuments/AONB etc.?	None	Nearby	In the way
Does the route have geological issues, i.e. mining area, floodplain etc.	All solid ground	Some isolated areas of uncertainty	Large areas of floodplain or unknown geology
Is the transport project independent or part of a larger programme of development?	Independent	Complementary to other planned development	Necessary to permit other development
Are statutory permissions required?	Local planning consent only	Development Consent Order or Transport and Works Act Order	Hybrid Bill
How many people in total will be required to develop and construct?	<500	500 to 1,000	>1,000
Project may need to consider additional specific indicators relevant to their own circumstances.			