

PIONEER Model Builder automatically calibrates asset failure rate and service risk models. PIONEER Model Builder is a software application within the PIONEER investment planning suite.

Once the results of the model calibration have been reviewed and approved by the user; the model parameters within PIONEER can be automatically updated.

Asset and failure data for the generation of the modelling dataset are taken from the data store in PIONEER, ensuring consistency between model calibration and application in PIONEER optimisations.

Model Builder uses attributes of the assets stored in PIONEER (age, material, size etc.) to develop predictive models.

Model parameters are calibrated against historical performance data also stored in PIONEER, in order to achieve the best model fit for robust forecasting. Where required, the recent performance history of each asset can also be used in the application of the models to influence the forecast failure rates.



With a statistical engine based on the flexible and powerful R language, Model Builder can calibrate a wide variety of models types with different structures, inputs and outputs.

Statistics are presented relating to the goodness of fit of the calibrated models and the significance of each asset attribute within the resulting model. Useful graphs are presented to aid the user in understanding the behaviour of models.