

Pharmaceutical company looking to forecast product lifecycle

NAG helped a pharmaceutical company deliver a new analysis tool. The solution allowed them to forecast and run scenario analysis on complete product lifecycles. They chose NAG because they needed robust and well tested methods.

A business team who are responsible for a line of chronic illness products, within a multinational pharmaceutical company, needed to consider a range of possible product lifecycle scenarios in order to plan investment returns and to avoid riskier financial strategies.

The team already had an Excel based solution and had started to develop new business based modelling approaches. These models needed to take into account both incremental growth and decline as well as allow for more sudden changes, such as delays in type approvals, loss of patents through legal dispute and unexpected epidemiological results.

They were looking for a partner who could provide guidance for the existing mathematical models and one who they could rely on as the business grew and modelling needs became more sophisticated.

NAG advised on the numerical detail of how best to incorporate the various data sets into the initial overall model and then to design and build new algorithms combined with existing NAG solvers.

The initial model worked successfully and there have been further iterations to refine and extend the techniques implemented, whilst maintaining the original user interface.

NAG routines were used to solve systems of nonlinear equations, to provide probability distributions and to perform optimization.

