# Case Study

KORTICAL

Barbara Johnson

Blood products have a short shelf life; in fact, blood platelets only last only 7 days. Ensuring all hospitals have a supply of the different blood types, at all times, is a complex problem, which involves understanding supply, manufacturing, distribution, stock holding, logistics and hospital demand levels, and necessitates an amount of waste. Kortical is using their platform to build Artificial Intelligence (AI)/Machine Learning (ML) models to predict demand and supply levels, allowing for patient needs to be met more precisely, reducing ad-hoc transport costs and improving efficiencies across the board.

Kortical have built an AI-powered platform to predict supply and demand for platelets for all the hospitals in England, which also takes into account diverse data such as weather, bank holidays, and understands that different trusts require different types of blood products, given the large regional differences.
The AI predicts supply, which varies with who comes in, and which blood type and volume of platelets they donate, as well as demand, 1 to 7 days out, and finally the platform optimises for logistics. All this to ensure that there are the right levels in the right place and demand is met with a little contingency on top to keep the nation covered. Testing against historical data the AI platform is performing better than previous demand and supply forecasting methods by over 10% and in the first quarter of 2020 Kortical will be able to release the figures in production, demonstrating their ability to reduce cost and waste without compromising patient care.
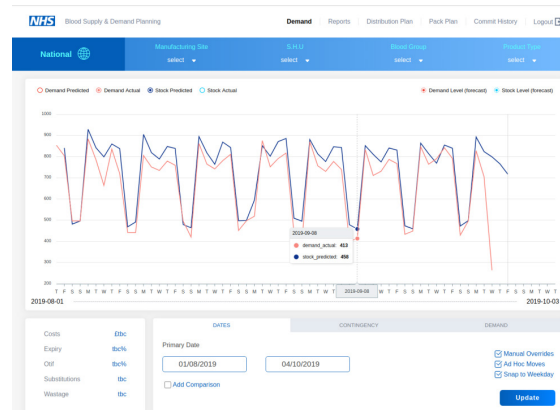
Using data to understanding the demand for blood products across England