Using data analytics to streamline healthcare costs

The STFC Hartree Centre has helped Albatross Financial Solutions optimise the patient cost benchmarking service it provides to NHS Trusts, helping them to validate and predict costs more accurately and establish best practices.

Challenge
Most of us will contract an illness, disease or injury at some point in our lives and require a medical procedure to resolve it. Diagnosis, consultancy, treatment, aftercare – all of these activities have an associated cost. For most patients, the National Health Service (NHS) foots the bill, but how do they standardise and predict costs in order to allocate their resources efficiently and accurately?

Albatross Financial Solutions has 15 years experience working with over 80 NHS Trusts across England and Wales. Albatross provides a Patient Cost Benchmarking (PCB) service that compares and validates detailed cost and activity information from different organisations. This enables NHS Trusts to identify areas for improvement and adjust processes to maximise on resources. Albatross wanted to develop the service to provide more advanced insights, which meant finding the means to undertake a more detailed analysis, exploration and interpretation of vast quantities of data.

Solution
Albatross approached the Hartree Centre to build a model that would explore the relationship between the different costing techniques. Combining the ability to process and analyse large quantities of complex healthcare data with the visualisation facilities required for detailed exploration and interpretation, the Hartree Centre was the ideal partner to help Albatross develop its new benchmarking data analytics platform.

Benefits
The new data analytics model will provide advanced exploration and discovery capabilities on a consolidated platform, enabling NHS Trusts to benchmark costing criteria more accurately. Short term, this service should help to identify areas where healthcare organisations could make cost savings. Long term, the solution should provide a capability that enhances decision-making and provides insight to streamline healthcare processes, saving time and money. The results of this project have been well received by the PCB group, which suggests that Albatross will also benefit from an augmented product that is set to be a significant commercial success.

“Whilst Albatross can deliver detailed individual analysis for our customers, analysing the entire national dataset is far more complex and time consuming. We gave the Hartree Centre two clear objectives during the project’s proof of concept phase and I am pleased to say that they delivered detailed insights into the entire dataset quickly and effectively. We’ve no doubt that our results will go on to benefit the NHS in future.”

– Michael Hamilton, Director, Albatross Financial Solutions

Work with us
We collaborate with industrial clients and research partners on projects that create insights and value using high performance computing, big data analytics, simulation and modelling.

By combining our world-class facilities with access to our specialists and computational scientists, we can enable your organisation to produce better outcomes, products and services more quickly and cost-effectively than through conventional R&D workflows.

With our partners we are developing the next generation of supercomputing architectures and software, combining existing best practice with innovation to deliver faster, cooler and more sustainable solutions capable of meeting the challenges of data intensive computing.

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