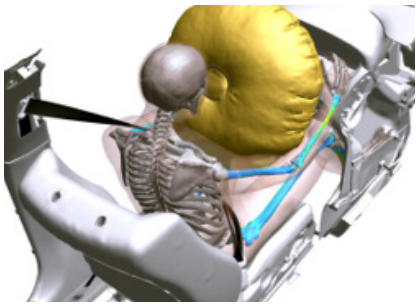
Specialist Structural and Mechanical Engineering Analysis

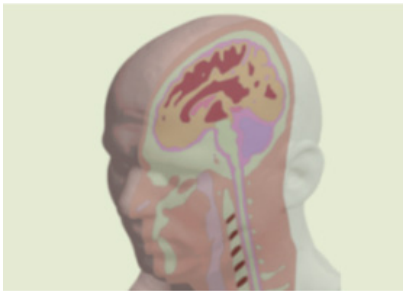
Arup combines advanced computer simulation techniques, and experience in the bio-medical and healthcare sectors to develop better solutions for clients.



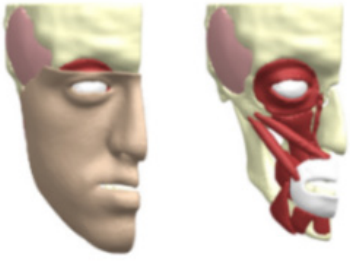
Bio-fidelic models
Bio-fidelic models of the human body, such as the Toyato THUMS model, allow us to predict injuries to human in car crashes – helping to design safer and more comfortable vehicles.

Explore the interactive model

Medical technology
Ever increasing demands are placed on medical technology. Engineering analysis allows us to predict the response of many materials and how they interact with the environment. For example optimising the design of spinal inserts.



Advanced simulation
Advanced simulation of dynamic events using engineering computer modelling allows pressure gradients and energy absorption in organs to be predicted under extreme loads such as head trauma.



Simulating muscle response
Engineering analysis simulating muscle response has been used to make predictions on the outcome of maxillofacial surgery – A useful tool in planning surgery.