Analyse to optimise

Operational research for supply-chain and performance improvement

For capital intensive industries such as Aerospace honing the supply chain and maximising use of assets makes a big difference to cost, performance and profit. However, these are often complex challenges requiring sophisticated techniques of analysis.

Staff and students from Southampton University have been researching and applying the analytical, modelling and optimisation techniques of Operational Research for many years to:

- Identify bottlenecks in production processes
- Better forecast demand for spares, so reducing stock holding while maintaining service
- Optimise aircraft trajectories to minimise noise and fuel burn around airports
- Minimise distribution costs through better logistics planning warehouse use and vehicle routing;
- Sequence aircraft landing to maximise runway utilisation
- Reduce waste of expensive materials through optimal cutting patterns for parts and components

Respected capability

The Southampton Centre for Operational Research, Management Sciences and Information Systems (CORMSIS) is the largest and most comprehensive such group in the UK with around 30 staff, and 60 PhD and 80 Masters students. Our researchers are leaders across the range of OR/MS tools and techniques:

Current and recent partners in aerospace and defence include Boeing Defence UK, ESA, NATS and Dstl. More widely we partner with leading organisations such Ford, RNLI, Tesco, Expedia, the AA, JP Morgan, F1 teams and various NHS Trusts.

Collaboration opportunity

Each year around 60 of our MSc students in OR, business analytics and management sciences undertake a business project as the basis of their dissertation. The project provides sponsor organisations with an opportunity to use a motivated masters student, supported by a leading researcher, to an important business issue of your choice. It is an excellent way to kick-off a relationship with the University In some cases it is also a route to recruitment.

If you would like to know more please contact Dr Ian Rowley
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