

“Where will our knowledge take you?”

S-CAPE

Safety and Risk Assessed Quickly and Accurately

Background

The safety of passengers and crew is a critical factor to consider when designing the layout of sea going vessels. Naval architects and engineers are tasked to incorporate these factors near the beginning of a design or re-fit project, and rely on escape and evacuation data to design the safest and most efficient layout.

Challenge

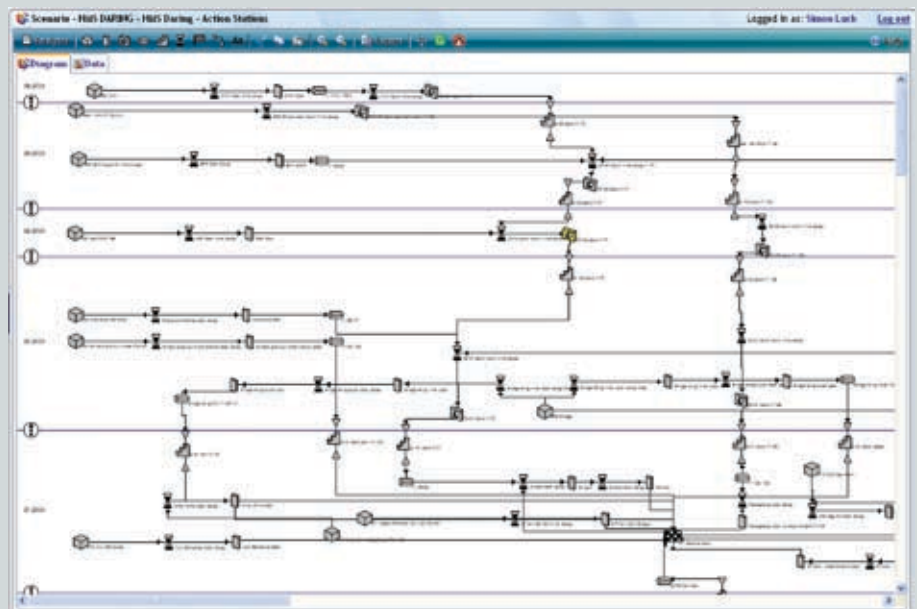
The challenge to the designers of these vessels is to assess this safety data quickly before spending large amounts of time in the design phase. The project teams tasked to carry out designs for the vessels came from different organisations but needed access to a common set of data.

Spreadsheets were initially used to manage the complex routing of vessels which were passed between teams. This led to inconsistent designs being analysed, and there was a general lack of control over the data being investigated.

Analysis

BMT worked with the customer to define the requirements for a system that could exist on the Restricted LAN Interconnect (RLI) that would act as a central repository for the teams looking at vessel design.

BMT suggested that by using a workflow style approach, teams would be able to streamline the data entry process, producing a visual design of the routes and work more effectively.



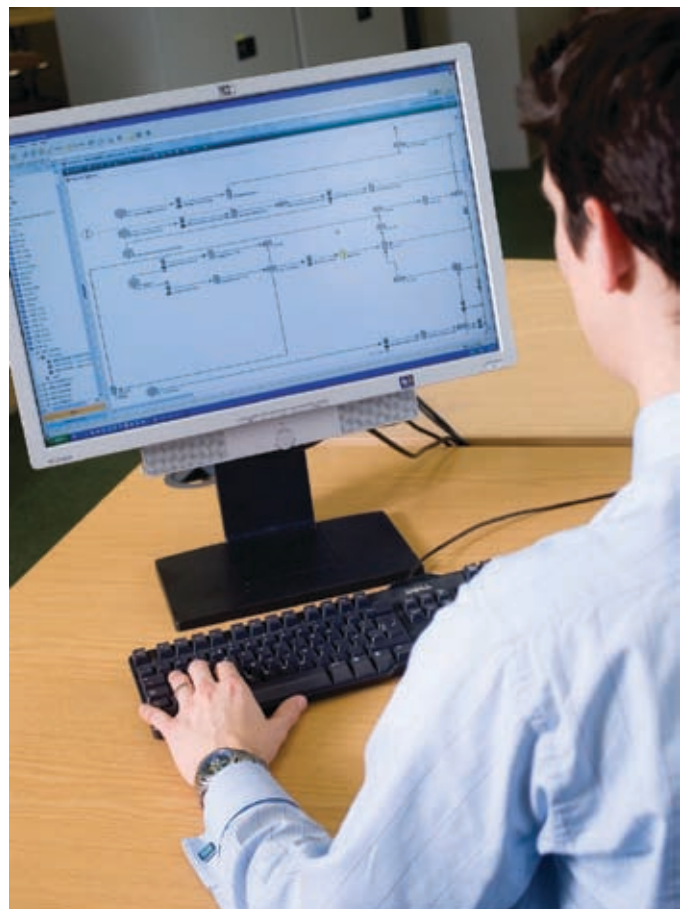
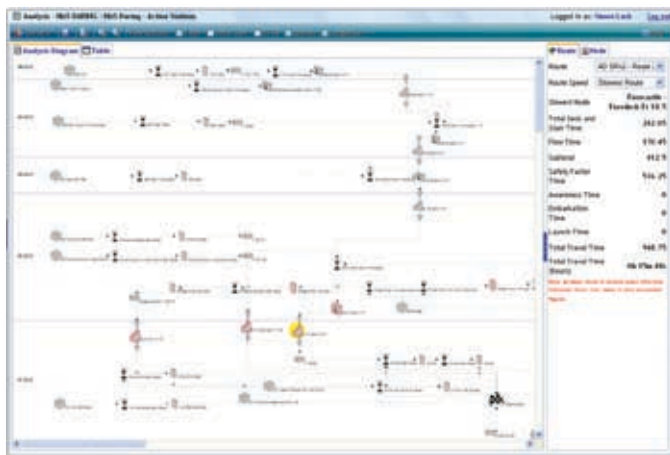
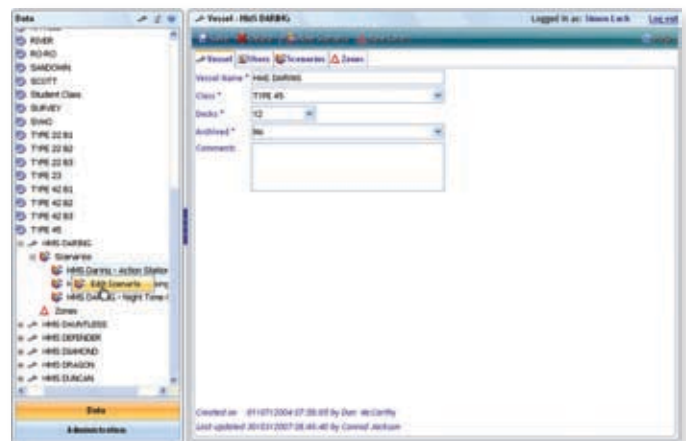
Simplified Conceptual Analysis of Personnel Evacuation

Product

S-CAPE is now a rich graphical web application where users can plot, calculate and analyse escape time and distance from a vessel, during the concept and preliminary design stages.

A model of the vessel can be created using a visual flow chart style interface, incorporating key elements of the design, such as rooms, doors, corridors, stairs etc. Each of these elements can be customised to allow for flow modelling based on dimensions and evacuation flow rates.

Real time analysis calculates all routes, and allows users to view controllable levels of information on each route in graphical and tabular views. Scenarios can be created for each vessel to enable analysis to be carried out based on different load levels and circumstances i.e. introduce time delays due to smoke filled corridors.



Innovative software solutions through powerful business analysis