



KEY BENEFITS

- Optimised blank canvas site configurations
- Identified opportunities for hub and spoke systems
- Outlined potential site capacity requirements
- Outputs informed a Business Case



Identifying opportunities for site reconfiguration to centralise services and maximise performance

KEY FACTS

Population = 5.4 million
Area Covered = 51,800 km²
Incidents = 2,500 per day
Vehicles = 500+

ABOUT SWAST

South Western Ambulance Service NHS Foundation Trust (SWASFT) provides emergency ambulance response across the south west of England. SWASFT operates from two Emergency Operations Centres (EOCs) and over 90 ambulance stations, and has the largest number of operational sites of any English NHS Ambulance Trust¹.

THE CHALLENGE

SWASFT needed to understand the opportunities for rationalising the frontline operational estate, taking into account conditions surveys and the potential to introduce make ready systems. This was in the context of understanding future demand levels and the requirement to meet national response performance standards.

ORH'S APPROACH

ORH has provided ongoing analytical and modelling support to SWASFT since 2015 and keeps its models up-to-date in order to answer questions promptly. This project involved three modelling stages, supported by consultancy.

OGRE, ORH's optimisation software, was input with the geographical distribution of demand in SWASFT. 'Blank canvas' questions were posed to identify the optimal site locations for a number of different scenarios.

The Demand Coverage Model (DCM) was then used to interrogate the different configurations. ORH and SWASFT discussed assumptions for travel times and capacities, leading to the classification of sites as hubs, spokes, book-on locations and traditional stations.

Finally, ORH used its ambulance simulation model, AmbSim, to quantify the response performance and staffing outcomes for different scenarios with projected future demand.

RESULTS

The detailed mapping and analysis identified where the number of vehicles was sufficient to centralise services and locate make ready systems. Compared to the existing site configuration, SWASFT response performance could be improved while operating from fewer sites in total. Using sites that are more dynamic would lead to greater flexibility in procuring additional sites to reflect future growth areas and changing demand patterns.



Following the publication of Lord Carter's report, the Trust wanted to produce a business case to rationalise the amount of traditional ambulance stations and introduce a make ready system. Working with ORH made it possible to achieve both these aims whilst also improving Trust performance. I would recommend the process we used with ORH to other Ambulance Trusts.

Neil Le Chevalier,
Director of Operational Services



**Emergency
Service Planning
Case Study**

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¹ 'Operational productivity and performance in English NHS Ambulance Trusts: Unwarranted variations' (NHS Improvement, 2018).

About ORH

PLAN. PREPARE. PERFORM.

ORH helps emergency services around the world to optimise resource use and respond in the most effective and efficient way.



We have set the benchmark for emergency service planning, with a proven approach combining rigorous scientific analysis with experienced, insightful consultancy. Our expert team uses sophisticated modelling techniques to identify opportunities for improvement and uncover hidden capacity. Simulating future scenarios ensures that solutions are objective, evidence-based and quantified.

Every organisation faces a unique set of challenges, so remaining independent and flexible allows us to deliver an appropriate solution every time. The outputs of our work enable clients to make robust, data-driven decisions and explain them clearly to stakeholders.

ORH's approach is always tailored to the needs of the client. Above all, we are committed to getting it right, for the good of our clients and the people who rely on their services.

ORH WORKS WITH AMBULANCE SERVICES TO:

- Quantify the impact of changes to response standards
- Optimise response locations
- Evaluate call handling, triage and dispatch arrangements
- Improve response times
- Devise optimal deployments by staff skill and vehicle type
- Identify operational efficiencies

For control rooms, ORH provides its DCT software to support dynamic decision making and enable effective and efficient resource use.



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