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Fire Service Cadcorp Workload Modeller

With the increasing drive for efficiency and cost savings within Fire Services, the need for a set of tools to help understand what resources are required to meet actual or predicted levels of demand has become essential.

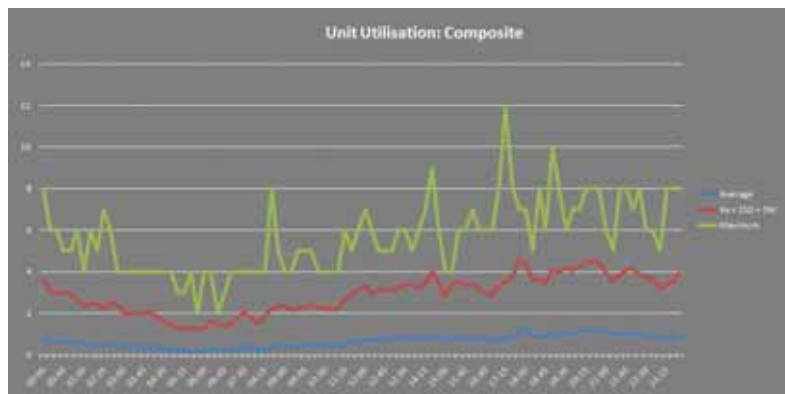
Cadcorp's Fire Service Workload Modeller application provides transparent and flexible methods to model current resource workload against historic incident databases. This allows the service to monitor levels of efficiency whilst also providing the ability to model potential effectiveness against scenarios designed to improve resource usage, or to plan for 'what if' situations.

The Workload Modeller application is underpinned by the Cadcorp SIS - Spatial Information System which provides the user with powerful standards based GIS and analytical tools, and the ability to read multiple CAD, GIS and Raster data formats. The combination of a powerful GIS and Workload Modelling offers the user deeper insight to the data being analysed.

Historic Analysis – Understanding Service Performance

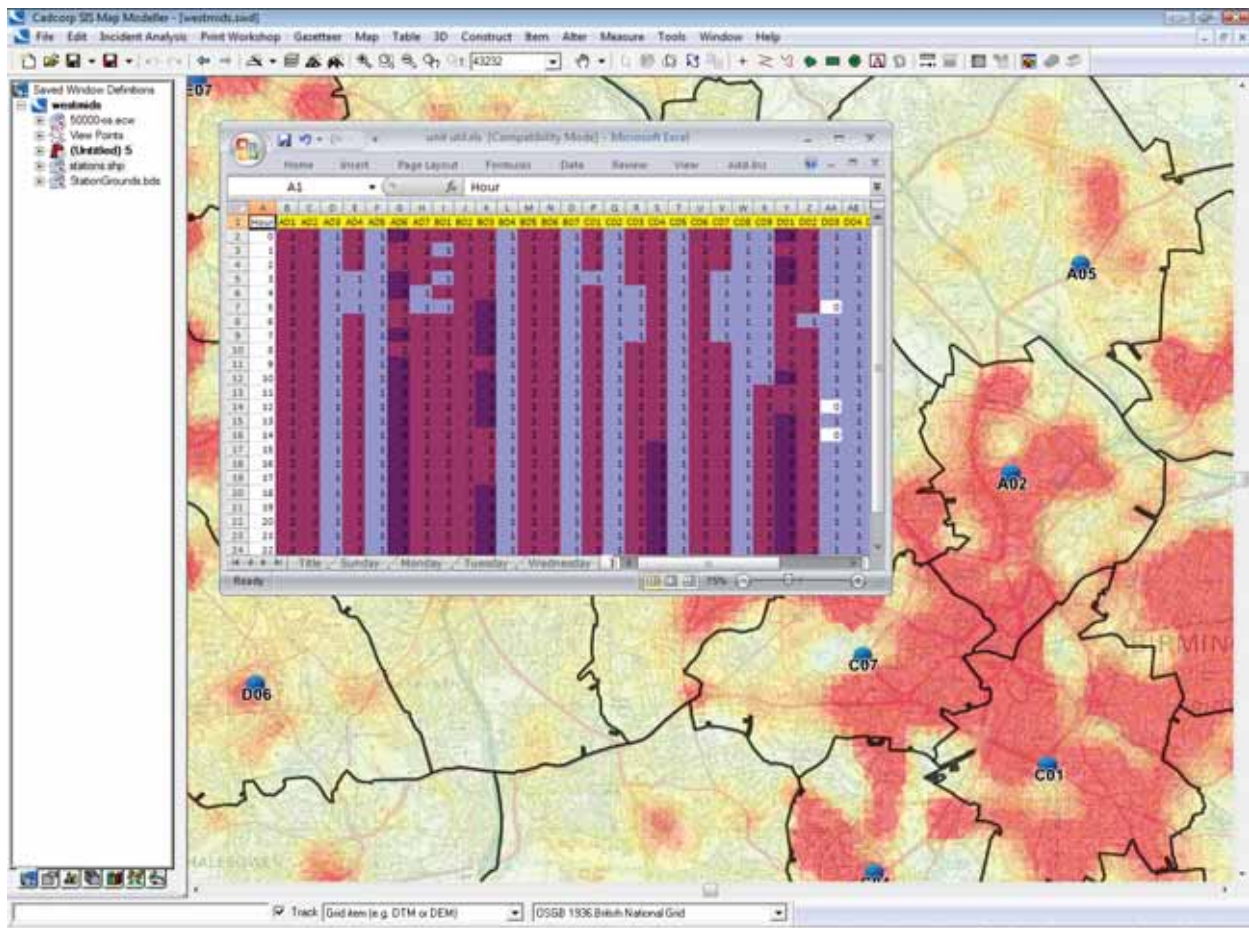
The Cadcorp Fire Service Workload Modeller application analyses the management of past incidents against existing levels of resources, enabling fire services to identify patterns of resource usage over a period of time. This is achieved through a variety of methods including:

- Monitoring and displaying attendance times for 1st and 2nd appliances to mobilise in order to identify performance against a set target.



- Monitoring allocation of callouts per station to identify how many incidents were allocated to each station and the number of appliances required.
- Monitoring unit utilisation by time, date and station, to allow better understanding of how each type of unit is employed during each hour of the day.

These powerful methods of analysis, combined with fully customisable filters, can be applied to incident data to provide fire services with the ability to better identify the demand placed on resources and to ensure that they are put to the best possible use.



Scenario Modelling and Prediction – Planning for the future

The scenario modelling and prediction features of the Workload Modeller application build on the Historic Analysis tools by allowing the fire service to create hypothetical situations such as station closures, removal of resources or increased activity for a particular reason. They allow the service to model response under these new conditions and provide a greater understanding of existing resilience.

Such analyses can significantly benefit emergency planning and additionally allow for greater efficiencies to be made. Models can be built to analyse:

- Changes in Demand – Identifying how the service would respond under increased activity
- Testing possible service wide efficiencies - Removal or relocation of stations
- Variable resource levels - Limited, increased or relocated resources
- Disaster Scenarios – ‘what-if’ situations
- Staffing levels - Changing shift patterns

- Response times based on road networks – Accurate modelling of travel times
- Resource dispersion - Station resource allocation
- Introduction of new vehicle types – What is the best location for these to achieve maximum impact

Benefits

- Provide benchmark comparison with local or national targets.
- Provision of workload analysis over time to allow for easy analysis of seasonal variations and to model the balance of workload across resources.
- Future workload planning including ‘what if’ type analysis
- Evaluation of the impact on workload of implementing specific programmes
- Ability to evaluate options for actively managing future workload through:
 - Shifting workload within the service
 - Providing additional or reducing resources within a station
 - Achieve improved service resilience



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