



One Route Optimisation - SEN Vehicle Management

Benefits summary

- £240k saved between September 08 and March 09 (annual savings are estimated to be approximately £400k on a total budget of £3.2million).
- Significantly reduced carbon emissions - routes reduced by 1,200 miles per day.
- Children spend less time in transit - the average journey is down from 14 miles to 12 miles.
- Less congestion on school sites as 40 fewer vehicles are required.
- Shorter contract planning time – it is estimated that this will be halved from four months to two months.

The requirements

Cardiff Council needed a system to enable it to manage the complex home-to- school transport of pupils with a statement of special educational needs and/or special transport needs more efficiently. As costs were increasing year on year and the Council has a duty to promote the use of sustainable travel and transport, it wanted to find a way to reduce carbon emissions, transport costs and management time.

Cardiff Council is responsible for an area covering approximately 120 square miles with 140 schools. The School Transport Team manages the transportation of 3,500 mainstream pupils and 840 with a statement of special education needs or with special transport needs.

“It is very easy to use and its intuitive menu system means that you don’t have to know the whole system in detail to be able to use it effectively. It’s very user-friendly.”

Stephen Gerrard, School Transport Team Leader, Cardiff Council

The solution

The SEN Vehicle Management tool developed by Higher Mapping Solutions (part of **One** Route Optimisation) enabled Cardiff Council to manage the transport for pupils with special transport needs and/or a statement of SEN as a whole, ensuring that these needs were met as cost-effectively as possible. SEN Vehicle Management connects directly with the **One** database to obtain the relevant data on routes, vehicles, stops and pupils. Once the data is gathered, it displays it on two adjacent maps - one showing needs and one showing the existing routes allocated.

Planners can then group pupils together based on their needs and/or location, it then adjusts the routes to determine the new journey time and cost. When a range of options have been considered, the preferred routes can be saved to the **One** database along with the relevant pupil data.

CASE STUDY

One Route Optimisation

Benefits to the Council

Stephen Gerrard, School Transport Team Leader at Cardiff Council explains some of the benefits of SEN Vehicle Management: "It's a very visual system as everything is displayed on maps, so you can see exactly what impact any changes have. Using colour coding, it's crystal clear which pupils are on which routes and you can log routes for each school – it's much easier to understand than our old system."

"You can easily try out different groupings of pupils just by clicking on an individual and moving them to a new group. As everything is shown on the screen you have instant visual feedback and you can try out different combinations before deciding on one. When the routes are chosen, SEN Vehicle Management transfers all the data from the map into the pupil records, which is a huge benefit. Previously we had to update pupil records individually, which was very time-consuming."

Cost savings

Stephen Gerrard continues: "From September 2008 to March 2009, we have saved £240k on SEN transport costs by reducing the number of routes and the average journey length. Due to a change in regulations we have also moved from non-licensed to licensed vehicles, such as people carriers, which can accommodate more children. SEN Vehicle Management has given us the ability to work out how to do this in the most cost-effective way. We estimate that the total annual saving will be around £400k."

More effective tendering

"We have switched from a route by route tendering system to a mileage based system," adds Stephen. "It is much easier to administer and puts us in a stronger position. SEN Vehicle Management calculates all the route distances so that we can send them to the contractors who quote on a price per mile basis depending on the type of vehicle used. This method is much more transparent and gives us greater control – the power was with the contractors before. Also, whenever our requirements changed, due to pupils moving or their needs changing, the routes would need to be adjusted. When this happened the prices tended to go up, they never went down! Now we know the mileage for each individual route so they are priced accordingly."

Time saving

Cardiff Council estimates that the time taken to plan the SEN transport contracts for 2009/10 will be halved from 4 months to 2 months, allowing the Transport Team more time to monitor the quality of the contracts and ensure pupils' needs are being met.

In addition, due to its user-friendly format and ability to retrieve and update pupil data directly, there are daily time-saving benefits when requirements change or amendments need to be made.

"SEN Vehicle Management is having a major impact on how we manage transport needs. It is so easy to use and has enabled us to realise significant cost savings."

Stephen Gerrard, School Transport Team Leader, Cardiff Council

Benefits to pupils and schools

"We have reduced the average distance travelled per journey from 14 miles to 12," says Stephen, "so pupils spend less time travelling and arrive at school more ready to learn. SEN Vehicle Management also works out the route stop orders more accurately. Not only does it save us a lot of time in administration, it also enables us to inform the schools and parents of more accurate stop times, so pupils don't have to wait as long to be picked up."

"In addition, I have visited the schools to plan the routes with them using SEN Vehicle Management. We can see everything clearly on the screen so it allows us to work out the routes together. It has improved communication and enabled us to have a much better understanding of each others' needs."

Ty Gwyn Special School

Ty Gwyn Special School in Cardiff has 106 pupils aged from 3 to 19. Deputy Head, Helen Glover, and Administrator, Cozette Griffiths, met with Stephen Gerrard at Cardiff Council to plan the school transport routes.

Cozette explains: "The needs of the children are complex and diverse, with some of them having profound difficulties. As we get to know the children very well, we understand which combinations of children are suitable and which ones just won't work. Using the system to work through the routes with Stephen was a great help. The colour coding on the SEN Vehicle Management system was really good – we could see instantly if different routes were going down the same street and could easily move children from one route to another. We also managed to reduce some of the journey times, which was in many of the children's best interests."

Cozette adds: "I found the experience very enlightening, and using the system has really helped us to understand the other side of the job and just how complex it is."