VICINITY™
SOLUTIONS

St John

System Improvements

Services summary

St John's dispatch system is a 24/7 mission critical application on which lives depend. For priority calls such as cardiac arrests or respiratory failure, literally every second counts. Vicinity Solutions have been improving the performance of the mapping engine in St John's dispatch system so that ambulances can be dispatched in the shortest possible time.

The Challenge
Making improvements to a real time emergency system.

Upgrading an emergency system in real time is not for the faint-hearted, as it involves making changes to a system that must remain operational throughout the entire process.

The benefits outweigh the risks, however, as faster response times, and the arrival of the right vehicles and equipment to the right locations saves lives and improves recovery outcomes.

An additional challenge was to ensure that the urban, rural and remote area designations could be easily updated to reflect demographic changes over time and meet the ongoing requirements of both St John and the Ministry of Health.

Project Solution
Faster maps, better routing, cleaner data.

Vicinity Solutions have identified key opportunities to improve the performance of St John's dispatch mapping. They have created a responsive mapping interface that only displays the data that is useful to call operators for their specific context at any given time. This fine-tuning of data access enables the system to function more efficiently, which in turn allows operators to perform vital tasks more quickly.

They have also remedied additional data issues that can impair operational performance. They put a system in place to reduce data anomalies, errors and inconsistencies, thereby increasing system speed, and again enhancing operators' ability to make timely operational decisions.

Under certain conditions, the dispatch system automatically selects the best vehicles to respond to an incident, which includes using the routing data in the system. For this method to work effectively, this routing data must be up-to-date and accurate.

Vicinity Solutions conducted geospatial analysis based on GPS readings from ambulances en route to call-outs in order to improve the routing data. This enhanced data has resulted in more reliable selections of available units, and more realistic calculations of the expected arrival time to the incident. The routing analysis has also been automated so that it can be easily and reliably repeated using the most current available data each time the system undergoes a routine upgrade.

Vicinity Solutions is familiar with the ITIL framework and implemented a sound testing regime to ensure that operators knew the system would work as expected even while changes were being made.

Project Solution, cont.

This robust testing procedure meant that the duration of system testing reduced significantly, giving operators increased confidence in the quality of the upgrade.

As Bryan Clarke of Vicinity Solutions says, "because St John is a vital system, operators need to have trust in your ability to make the changes in real time. Many organisations can take their databases down and their websites offline while they do essential maintenance. St John doesn't have that luxury. Not only must the system keep running at full speed while the changes are happening, but the data, routing and maps need to be updated while they are being used".

Bryan and his colleague Shelley Sutcliffe also understand how important it is to keep staff up-to-speed with any changes to the system. As Shelley notes, "training the operators is absolutely key to delivering genuine improvements, so good communications and selling the benefits of the changes is routinely coordinated with the regular training rolled out by St John to its staff".

"Vicinity were able to come alongside our own people and build an understanding of the criticality of our business. The specialist skills and experience they were able to bring have been invaluable in further enhancing our resiliency and user experience."

Colin Lawrence
ICT Operations Manager, St John

Business Benefit
Faster dispatch, continuous improvement.

Since the implementation of the St John dispatch system improvement, phone operators and dispatchers have noticed a reduction in the time required for mapping screen refreshes, from around eight seconds to less than one second. Since each call may have more than one refresh, the improvement to the dispatch time, and hence the survivability of a cardiac arrest and other time-sensitive conditions, is both significant and measurable.

And as Shelley adds, "the agile framework that we use to implement the system upgrades means that on-going improvements to the system will continue to occur". This method brings a robust and systematic approach to the implementation of regular scheduled upgrades.

About Vicinity Solutions
Experienced, agile, effective.

Managing the massive amounts of geotechnical data produced by new technologies is a major challenge for 21st century organisations that rely on geographic information.

Vicinity Solutions is a geospatial consulting firm that takes the complexity out of this task for its clients. Their extensive experience, broad knowledge of the major GIS platforms, policy and training advice, and well-tested problem-solving skills enable them to transform your data into a valuable and easy-to-use resource.

Visit the Vicinity Solutions website today to find out more about how they can help you make the most of your geographic data.

Contact

Vicinity Solutions
PO Box 31086
Christchurch 8444
New Zealand

Ph +64 (3) 341 6844
enquiries@vicinitysolutions.co.nz

vicinitysolutions.co.nz