THE CHALLENGE

Centro wanted to improve the information available on public transport in the West Midlands. It needed to improve security and flexibility but at the same time recognised that reduction in cost would also have to be a key factor.

THE SOLUTION

Vodafone, as Centro's long term partner for mobile communications, brought in specialist Mobius Networks who offer Private Mobile Networks. Mobius had already worked with the Real Time Information Group following open competition under European procurement rules and are Vodafone's preferred partner for M2M data SIMs.

- Private Mobile Network with no internet access
- Fixed IP over mobile for flexibility and control
- Framework pricing already in place

THE BENEFITS

By working in partnership Vodafone and Mobius are able to transition the airtime systems using two private networks in tandem, switching between the two without interruption to service. Using the RTIG framework pricing meant a significant reduction in costs.

- Better security both at SIM and network level
- No interruption in service
- Reduction in costs

Real Time Information Group (RTIG) improves its members' service and saves money

By working together over a period of three years RTIG, Centro, Vodafone and Mobius have put together a more robust, more secure Private Mobile Network to support Centro's real time passenger information system. But, as importantly, this has also significantly reduced costs.

Real Time Passenger Information is often cited as one of the key enablers for increasing the use of public transport in the years ahead. Passengers need the information to make the right choice before the journey begins as well as reassurance that they are in the right place at the right time as that journey progresses. Accuracy is vital in a Real Time system as wrong information quickly erodes any confidence on the part of the passengers.

Centro, the West Midlands Integrated Transport Authority, promotes and develops public transport across the region. The authority has the responsibility for promoting public transport in the seven District Councils within the West Midlands: Birmingham, Coventry, Dudley, Sandwell, Solihull, Walsall and Wolverhampton.

In 2009 Centro reviewed the data costs for all their Real Time Passenger Information (RTPI) on street displays, on-bus equipment and other hand held devices to see if cost reductions could be made whilst maintaining the excellent existing support from Vodafone.

Through its membership of the Real Time Information Group (RTIG) Centro has access to national framework contracts secured by RTIG following open competition under European procurement rules. Pricing through these contracts can represent a significant saving over standard voice and business rates when applied to RTPI applications.

Vodafone's preferred partner for Machine to Machine applications, Mobius Networks, also happens to be a specialist in both local government in general and RTPI in particular.

By working together Vodafone and Mobius have been able to transfer the West Midland RTPI system to a team dedicated to local government and public transport with improved billing granularity, greater security, and better technical support.

One of the biggest issues with a change in mobile service providers is the need to physically swap out the SIMs in the network. Changing these SIMs in a bus fleet can be completed with a limited degree of difficulty. But street furniture- bus stops, information points, kiosks, Automatic Number Plate Recognition cameras and Variable Message Signs are generally remote and the cost of visiting all of these sites outside of routine maintenance may more than negate any potential cost savings.

By giving Mobius unusual access to the Vodafone system, this change has been completed without switching out SIMs on the hundreds of street displays around the West Midlands. This means that the connections now run over a Private Mobile Network with no internet access, making each connection isolated and secure. In addition this will allow the introduction of fixed IP connections over mobile, supporting true bi-directional data flow from the centre to all of the remote signs and buses and back.

This will allow Centro to continue to improve its offering to its customers whilst Mobius will be able to provide a fixed IP over mobile solution. Once this improvement is over, Mobius and Vodafone will continue to support Centro as they move more of their data connections estate over, cutting costs by around 30%.

THE PROCESS

With fixed line cabling (phone, ISDN, DSL, broadband) the costs of installation are high and the lead-time on delivery can be long. Mobile can have a much lower installation cost and has an 'instant-on'. But the standard mobile network model is to push the packet data onto the internet assigning a random IP address for the session.

■ Mobile supports fast implementation to remote locations

Mobius and Vodafone use specific Access Point Names to channel the data through dedicated data pipes to Mobius-hosted servers. Each unit then handshakes with a unique username and password, is allocated a fixed IP address and then pushed through to the destination.

■ A Mobile Private Network keeps mobile devices off open internet access
■ Mobile fixed IP supports true bi-directional data

This means that all of the mobile units then become part of a Wide Area Network (WAN) where data can flow securely and easily, forming an integral part of a wider Urban Traffic Management System.
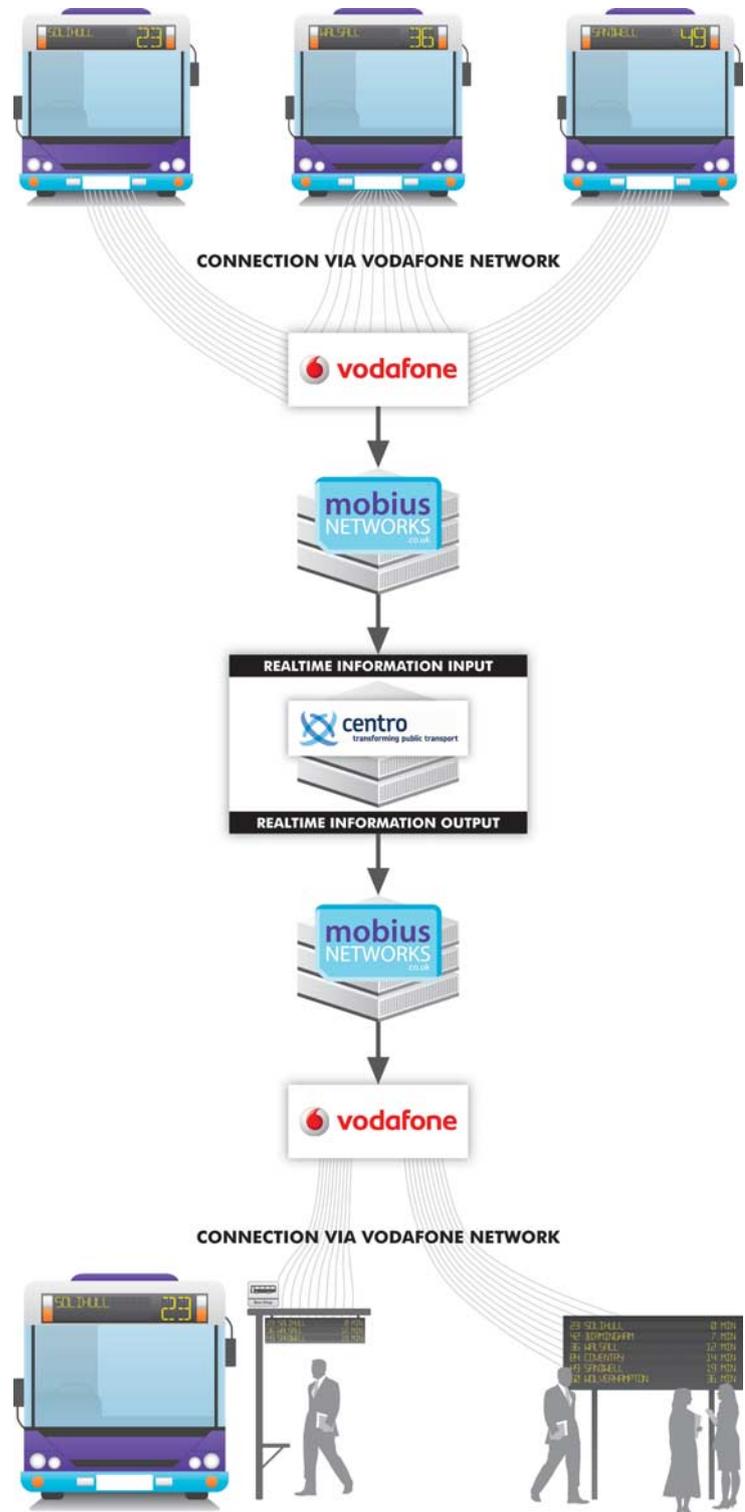
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More information about how Vodafone, Mobius and RTIG can cut costs and improve services

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