SCOTTISH TRANSPORT AWARDS 2013

SUBMISSION BY ABERDEENSHIRE COUNCIL UNDER CATEGORY 12

Excellence in Technology and Innovation

SMART PHONES, SMART TIMETABLING

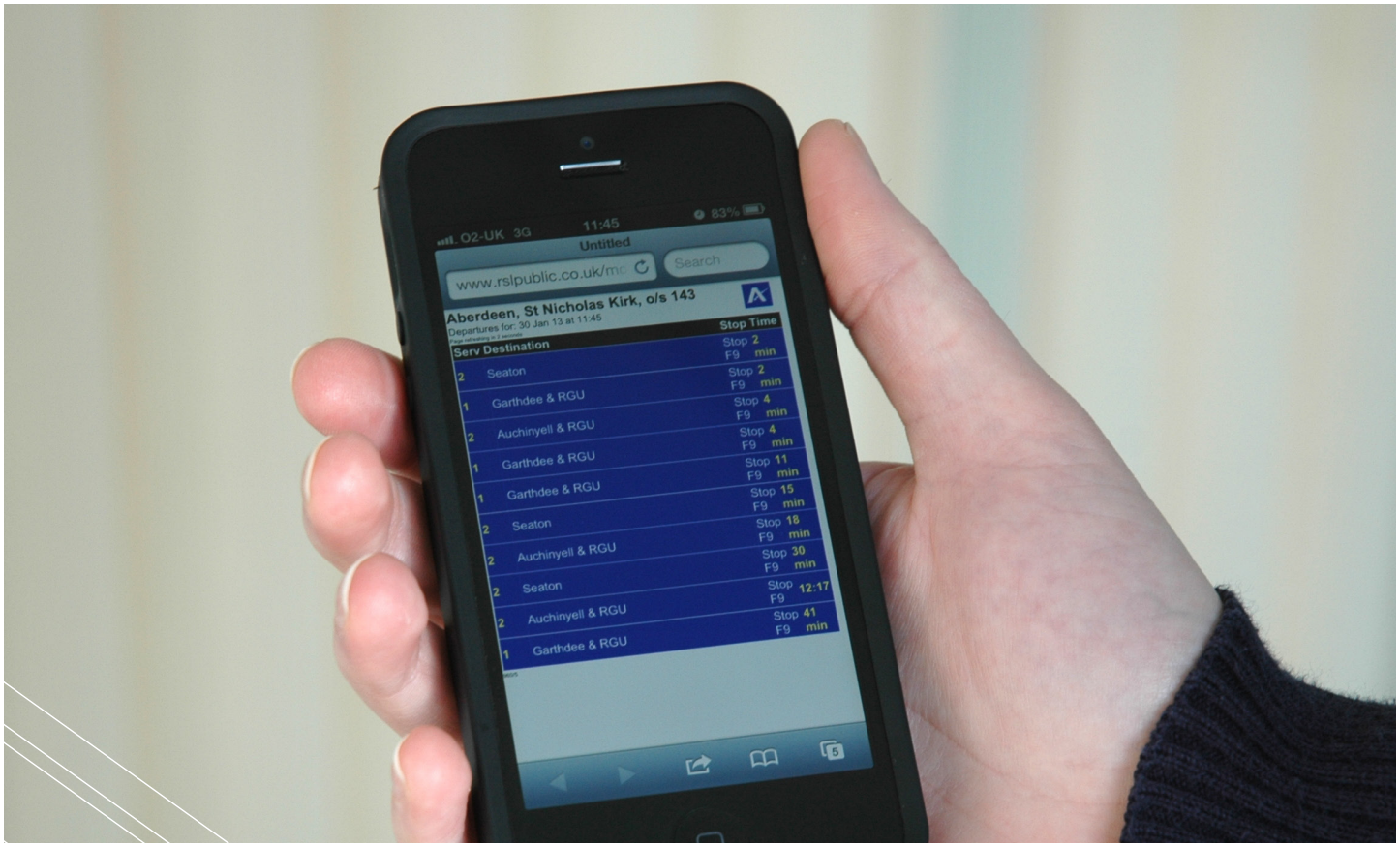
Background

The Aberdeenshire Council area covers 6,313 square kilometres and has a population currently estimated at 245,780.

The transport challenges faced by Aberdeenshire Council are numerous and varied. However, through clear strategies supported across political lines the Council is rising to these challenges and delivering high quality services to the residents and businesses of Aberdeenshire.

One strategy is using technology innovatively to disseminate public transport information, with the aim being to encourage greater use of the public transport network and stimulate modal shift whilst also ensuring that those customers reliant on public transport can easily access information.

Traditionally the principal form of publicising the bus network has been through roadside timetables at bus stops, of which Aberdeenshire currently has 1,200 (representing 80% of bus stops in the area). The number of these has steadily increased year on year and the quality and accuracy of the information provided has remained at a very high level despite the increasing infra-structure portfolio.



Smart Phones, Smart Timetabling

Aberdeenshire Council is in the process of implementing a Real Time Passenger Information (RTPI) system and one of the challenges of this project is determining the most efficient and customer friendly method of disseminating the information. Traditionally RTPI information has been displayed on electronic screens at bus stops, however given the rural nature of the authority, this is not a cost effective way to provide the service and simply not sustainable in the long term. There is also a desire to be able to provide more detailed information at the bus stop, however display space is usually limited.

Aberdeenshire Council has also noted the increase in the ownership of smart phones and how these devices are being used by customers. Ofcom's publication "The Communications Market 2012" (July 2012) shows that 40% of UK Adults own a smartphone, up from 25% when compared to the results in the report from the previous year.

QR (Quick Response) codes were already in use across Aberdeenshire's 23 on-street journey planning kiosks to allow users to scan the code and take information away with them. This solution was developed to allow roll out to all 1,200 bus stops in Aberdeenshire that have printed timetables displayed. During the development of this solution our Electronic Passenger Information (EPI) supplier suggested the use of NFC (Near Field Communication) tags as an additional function at the stop. NFC works in a very similar method to QR, however the process of interaction is much more streamlined and customer friendly.

The process of rolling out the introduction to NFC and QR was carried out in phases, with the first phase of introducing the NFC and QR to the key interchange points. This allowed for a period of controlled testing in order to ensure that the methods used to produce the NFC and QR displays are both robust and durable.

The starting point for the full roll out was an update to our publicity software that removes all manual interventions required to include the QR and NFC to the printed publicity. With this update in place, there is no additional staff time required to produce the display with QR/NFC when compared to when the display did not have this additional information.

Customers can now interact with the information displays at locations throughout Aberdeenshire by simply scanning a QR code or 'tapping' their NFC enabled smart phone on the timetable display. This

then directs the customer's smart phone to a stop-specific webpage displaying a departure board with the next few bus departures from the stop they are interacting with.

At present the information provided is the scheduled departures in chronological order. When Aberdeenshire's Real Time Passenger Information (RTPI) system is operational, estimated actual departure times will also be provided where this information is available. Further improvements that are due to be delivered in a phased approach are the ability for customers to 'share' the information provided via social media and the ability to provide further, more detailed information such as fares.

Aberdeenshire Council is the first local authority to use QR and NFC together for this purpose and on this scale in the public transport industry in Scotland. The Council regards this as a key technological innovation, which integrates with Aberdeenshire Council's investment in on-line timetabling, journey planning kiosks and RTPI.

The low initial cost of a fully configured and secure NFC is a fraction of the cost of a RTPI display (£0.89 compared to £2,500 on average) and the on going revenue support costs of the full EPI software is similar to the costs of a RTPI display system making this solution both cost effective and sustainable.

The system is easily replicated and Aberdeenshire Council will roll out QR and NFC to bus stop displays in Aberdeen City as part of an existing Service Level Agreement to provide roadside bus timetable information in that Authority.

Conclusion

The provision of up to date and accurate information is crucial in operating a public transport system effectively for its users. The development of QR/NFC is an innovative and cost efficient method of public transport information dissemination, particularly when it is linked with the future development of a Real Time Information System.

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