



Making roads work: no longer driving blind

Collaboration between Elgin and TomTom to make possible real-time and predictive analysis of the effect of roadworks on traffic could bring a transformation on the scale of Uber, says **Shane O'Neill**

Traffic volumes are set to increase by 43% by 2040. It is estimated that 100 million working days will be lost by that date in diminished productivity and time costs because of congestion. A major cause of congestion is roadworks – over 3 million annually with no sign of diminution.

Ministers, however, are determined that during the lifetime of this parliament something really practical will be done. The autumn statement announced billions in road improvement schemes and additional investment to reduce congestion; and significantly, in its wake there has been a succession of important policy initiatives which show that this time, real change may be on its way. Ministers have announced a major review of how statutory notices for roadworks are provided (or “noticed” in the office parlance), and Transport Secretary Chris Grayling has articulated that there will be an increased focus on how information, data and technology can help.

“With Uber planning a world of flexible public transport – with driverless multi-passenger vehicles assembling routes and collecting pas-

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sengers as they go – we should be doing the same: looking at how technology can improve transport, gathering real time information about demand and shaping services accordingly... The technology exists to give drivers vital information on their journeys – quickly, efficiently and safely,” he told the audience at the National Transport Awards last October.

By looking to the private information & technology sector to help provide solutions, the Government is aiming to square the circle of how to do more with less and to call on the new world of technology to usher out old-world ways of doing things.

The recent announcement of the collaboration between Elgin, provider of the national roadworks database at roadworks.org, and international satnav systems provider TomTom marks a groundbreaking change in roadworks communication. Elgin’s “Real-Time Roadworks” service combines data from both organisations, validating statutory roadworks information against unusual patterns of congestion, taking into account live and historic traffic flow and behaviour information. This identifies which roadworks are causing high levels of

congestion and which road closures are actually in force, resulting in a live “map dashboard” displaying only those works causing a significant impact on the road network. This then allows traffic managers to focus resources on managing those works that are having most impact on road users.

The significance of this is obvious. Unless traffic cameras are aligned to the exact position of roadworks and supported by expensive urban traffic management and control systems, huge areas of the network remain in an information blind spot, where the actual impact of individual roadworks on traffic flows remains inferred.

Now answers are possible to such questions as: what is the precise impact of this major work on actual traffic speed? How does this compare to the speed of normal traffic flows (at that location, time of day, time of year and benchmarked against historic traffic flow data?) What interventions can traffic managers take that will make a difference? Can we at least communicate this information more effectively and equally in real time?

But the potential impact does not stop there. How about being able to take a decision as you plan your roadworks in the light of the knowledge that if you begin your excavation next month instead of next week, you will have significantly less impact on traffic?

Elgin and its satnav partners are working on predictive roadworks algorithms which could, in the very near future, be embedded within new statutory notice systems – compelling the sort of coordination and planning that ministers have been demanding for a generation.

Further planned collaboration includes the integration of TomTom historic traffic data and Elgin roadworks archive data to make possible analysis of the cost of roadworks to road users and evaluation of the effectiveness of traffic management design and planning. Combined with the availability, for the first time, of years of national roadworks data, this is a major step for an industry which has been hitherto driving blind for the lack of national data analytics. It makes the possibility of data-informed policymaking and local decision-making a reality.

Five years ago, Uber did not exist, and yet it has utterly transformed taxicab journeys in major cities. The practical implementation of data and information technologies to the national roadworks sector can have an equally significant and positive impact on congestion, both locally and nationally.

Shane O'Neill is chairman of Elgin