**Helping transport planners make better and faster decisions – Highways England and O2 Smart Steps Trip Information System**

**The Challenge**

Traditional methods for gathering the data necessary for major transport scheme planning and appraisal involves significant disruption for road and public transport users. Road side interviews (RSIs) involve local police, capture limited sample sizes which are subject to biases, and have significant time and budget costs associated with collection to gather sufficient data.

This approach has led to a patchwork of methods and samples used across the country for transport projects. Add to this the different software and models used from one local authority area to another, and the result is no consistent dataset for the country. This presents a challenge for engineers working on schemes encompassing multiple areas, resulting in scheme design and major transport infrastructure decisions not being based on objective observed behaviour.

**The Solution**

In response to these challenges, Highways England commissioned the development of a national database, the [Trip Information System](http://www.tripinformationsystem.co.uk), to provide a consistent and robust dataset for UK transport planners and engineers. With a base of 3 billion trips, the web based tool provides users with the ability to extract origin-destination matrices and route matrices.

O2 and Jacobs launched the Trip Information System (TIS) with Highways England in September 2017, to support traffic modelling, transport planning and appraisal activities, covering the whole of mainland UK.

**How it works**

1. Contact O2 to discuss your project.
2. O2 will provide a user guide with instructions for extracting data, a data licence and the commercial terms for the cost of the data (for Highways England sponsored projects there is no cost and no data licence is necessary)
3. Once terms have been agreed, users can log in and register a project on the TIS website [www.tripinformationsystem.co.uk](http://www.tripinformationsystem.co.uk)
4. The data outputs are then provided to the end user following a 2-3 day quality assurance process.

**The Benefits**

Using TIS offers significant savings in terms of time and money over manual surveys and RSIs. TIS also provides a more robust data sample with which to base transport models on, typically capturing 30% of trips in an area and offering a significant improvement over traditional methods.

TIS has been through a rigorous 12 month validation exercise with Highways England and independent transport engineering consultancies; the results of which can be read in the TIS End User Guide. Regional transport planning can also benefit as TIS offers a nationally consistent dataset. Finally, users of TIS can expect to extract origin destination matrices for their projects in 3 days, dramatically reducing the waiting time for data collection.

Buckinghamshire County Council is one local authority who has seen the benefits of using the TIS. Working with Jacobs, they have used the data to inform their county transport model and to support transport planning around a number of specific schemes, including Aylesbury Town centre, working with Jacobs.

Mark Kemp, Director of Growth, Strategy & Highways, commented, *“Buckinghamshire is looking to apply innovative data solutions to reduce operational costs and use evidence based decision making at the heart of infrastructure maintenance and development. Using mobile data in Buckinghamshire’s County transport model was a straightforward decision given the benefits these new datasets offer over traditional methods of capture. We believe this dataset can also provide value beyond our transport team and support land use planning and environment colleagues. We believe that using this data will save money over traditional data capture methods and provide us with greater flexibility”*

**What’s Next?**

The O2 Data & Insights team is now supporting local and regional government with data discovery and data platform services. This is enabling the value of rich datasets which local authorities have to be realised, and enhanced when combined with other power large datasets such as O2’s movement and demographic data. The end result is a rich dataset that puts evidenced based decision making at the heart of local authority planning, operations and service provision.

For example, O2 is bringing together new datasets to support air quality monitoring, planning and development, traffic monitoring and operational transport use cases. A major innovation underway is the introduction of real time data feeds to support operational use cases where monitoring traffic flow and patterns is a priority. Introducing other datasets from sensors such as air quality and weather further extends the range of use cases responding to the complex challenges local governments face in service provision, place-making and stimulating local and sustainable economic growth. Better spatial granularity of data is also now being introduced via Internet of Things devices (IoT) and Wifi deployment in urban environments so the impact of development can be modelled and monitored effectively to inform place making. O2 digital has developed its products on open architecture to allow its authorities to easily share and access data and insights in a modular and scalable format.

**More Information**

Local authorities and transport consultants wishing to use TIS for their transport models and schemes should contact O2 for a demo – [alastair.mcmahon@o2.com](mailto:alastair.mcmahon@o2.com)