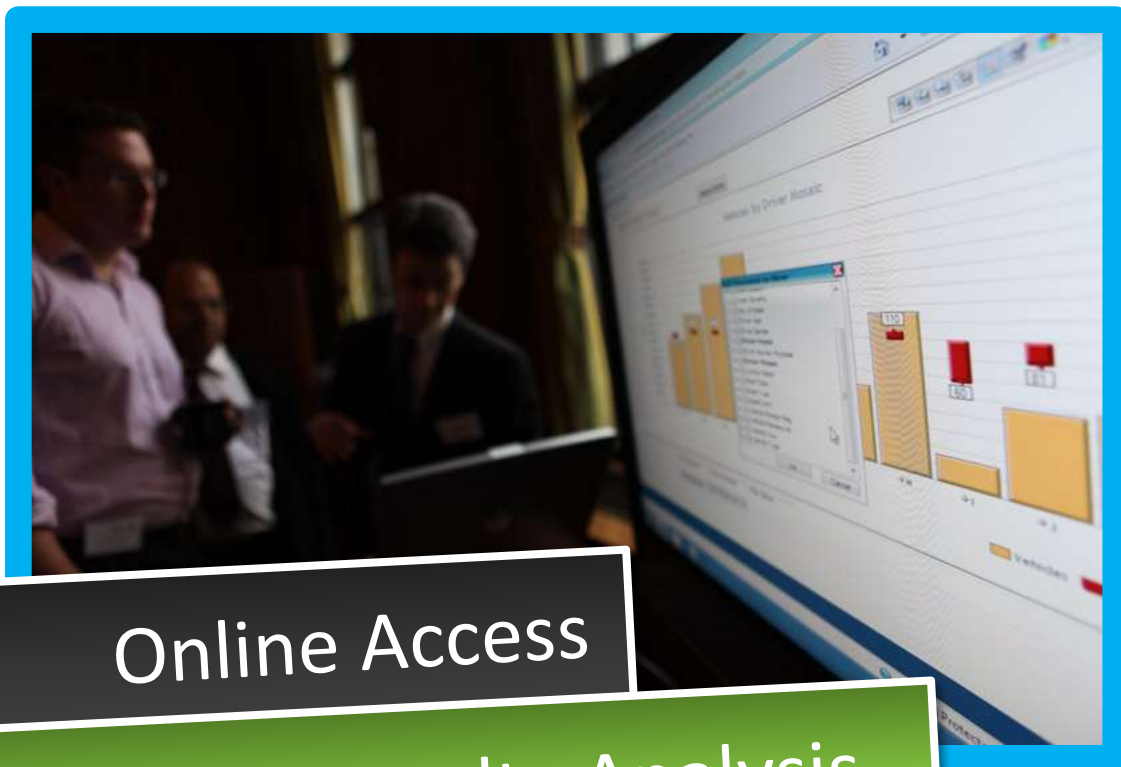


CIHT AWARDS

MAST Online
Road Safety Award

/2011



Online Access

National Casualty Analysis

Customer Insight

/2011

The CIHT awards

Award Category: **Road Safety Award**
Project Title: **MAST Online**



Summary

Less than 18 months since the release of the initial development version, MAST Online has become a leading analysis tool for the road safety profession nationwide. Starting as a £0.25m grant-funded partnership project, MAST now provides an extremely high quality data portal and market-leading customer insight to furnish road safety practitioners across the country with:

- Access to national STATS19 data for the first time on an easy to use online analysis platform
- A global innovation which integrates national road casualty data with detailed marketing insight information to improve scoping and delivery of education and enforcement interventions
- The ability to perform cross-border analysis, regional and national comparisons with immediate cross-referencing to local authorities with a similar demographic profile
- Integrated analysis of resident risk, available with national scope for the first time
- The country's first road casualty analysis tool which distinguishes strategic roads from those in local authority control and provides for the first time the ability to assess risk on trunk roads on a link-by-link basis



"One of the key tools that road safety professionals have."

Paul O'Sullivan
Head of Road User Licensing, Insurance & Safety
Department for Transport

Delivered using the latest online technologies MAST combines a friendly user interface and powerful database engine to bring all this functionality to the highways & road safety communities for the first time. MAST was fully launched in May 2010, following the initial development phase funded by the Department for Transport & delivered by Thames Valley Safer Roads Partnership (TVSRP). MAST is now used by around 140 subscribing organisations from all 3 sectors to support road safety research, intervention planning and design.



Background, Research & Objectives

With years of collective experience in road casualty analysis, social marketing and working in a large multi-agency partnership, the project team had identified several significant barriers to effective collaboration and intervention design:

- Lack of insight into citizen needs & lifestyles
- Inconsistency of data provision and skills to access vital casualty trend data
- Absence of integration between collision data analysts and ETP specialists
- Limited understanding of cross border issues

Prior to the development of MAST, the project team proved the concept of a data tool that was accessible to analysts, practitioners and managers working in the field of road safety. The '*Headline Data*' tool was the first time that any road safety organisation had fully integrated a socio-demographic classification element into road casualty data; transforming analysis of a particular road user group or behaviour into something which was almost instantly transferable into the development of education or social marketing campaigns.

The success of this small pilot project formed the basis of MAST, demonstrating that a new approach and the latest technologies could deliver high quality analysis, more quickly and with better insight; the challenge with MAST was to make that accessible to the road safety community nationwide.

Project Delivery – Stakeholder Engagement, Dissemination & Training

MAST began with a widespread consultation involving organisations from every government office region in the country, which considered the best ways to deliver a national solution. Important considerations included the levels of geography required and what functionality would assist the various disciplines that would utilise the tool.

Over the development cycle this steering group, representing the views of local authority casualty analysts, highways agency intelligence officers, police enforcement data technicians, and road safety partnership communications managers, applied their collective experience and data needs to finalise the scope and development schedule for MAST Online.

To maximise awareness of the emergence of MAST as a new tool which would benefit the whole road safety community, the project team scheduled a dissemination plan that involved launch events in 3 major cities, presentations at over 20 road safety conferences and seminars, and a programme of training courses which provided introductory skills to over 200 users.



Project Delivery – Technical Innovation & Reliability

In order to make the data engine of MAST as efficient, secure and scalable as possible, SQL Server Analysis Services was identified as the most appropriate platform. Data cubes were designed containing comprehensive and detailed professional analyses of the full national data in a way never before available to road safety stakeholders. One example is the calculation of the distance from home at time of crashing for every single casualty and driver, providing hard information about which road safety issues are local and which are much broader in scope.



It was concluded that in order to ensure uniform access to and presentation of the data, online delivery would be a necessity. This also served to minimise the impact of constraints present in many public sector IT systems. To achieve this objective the project team employed cutting edge web technologies to ensure that MAST could deliver the degree of functionality demanded by users whilst retaining the usability that would make it accessible.

The front end for MAST Online had to meet a number of requirements: to be accessible to non-specialists; and to match the diverse user requirements identified by the project steering group; but also to provide sufficient flexibility for seasoned analysts to exploit the full potential of the data. The project team deployed a pioneering web data visualisation tool to provide ensure that the interface met the expectations of all users.

The final product is successfully being used across a wide range of users whose only technical requirement is access to standard internet technologies.

Road Safety Applications & Impact

The MAST approach is already being used to shape road safety interventions, of which the following are just some examples:

Successes to date

Child Casualties Report 2010 – all child casualties over a 5 year period were mapped using data exported from MAST and each local authority district was ranked based on risk to children resident in the area. The resulting report and evidence about heightened risks on the outskirts of provincial towns and cities was picked up by all the major UK news networks raising awareness of child road risk and has been used by some authorities as evidence for further funding.



Think! 'Tales of the Road' campaign – The Think! team at the Department for Transport used MAST to develop a segmentation approach to underpin their child pedestrian campaign. This formed the basis of an examination of media consumption by the target audience and focussed regional delivery on areas of elevated risk.

Older Drivers– Lincolnshire Road Safety Partnership used MAST analysis to highlight the geographic areas & socio-economic groups exhibiting highest levels of risk for older driver related collisions. They also benchmarked their casualty record against other local authorities to highlight potential collaborators for intervention design.

Motorcycle Campaigns – MAST has been used by numerous authorities to shape motorcycle initiatives. In Thames Valley this has led to a multi-channel campaign that is attracting over 8,000 page views a week on the Facebook site, and has produced a viral video with over 5 million views.

Daylight Saving Time– A joint publication with PACTS in 2010 used MAST to highlight the increased risk to road users related to the clocks being changed between BST and GMT. This included clear evidence on the regional variation which clock changes introduce.

Future successes

Following the first national MAST user conference (February 2011), there are new users still coming to MAST and existing users starting to implement some of the more detailed analyses that MAST supports. There are a range of interventions now emerging that are being established based on MAST analysis and associated social marketing techniques.



"We used MAST to build profile on mature drivers for each of our district councils... MAST disproved our assumptions. We benchmarked Lincolnshire & communicated with other similar local authorities looking for best practice."

Hannah Green
Lincolnshire Road Safety Partnership

New analytical dimensions are being continually added to MAST to assist professionals in going further with their analyses than has ever been possible before.

Evaluation & Outcomes

The evaluation measures for the MAST project do not include any measures for road casualty reduction directly; rather there was a clear focus on the adoption of the tool among road safety practitioners and its implementation as part of the intervention planning process. There are now a

growing number of local, regional and national road safety education schemes that are based on MAST analyses, and a substantial number of other outcomes identified through the project. These include:

- Several detailed market segmentation studies for high risk road user groups (West Midlands, Lincolnshire, Kent & Sussex, Humberside, Greater Manchester)
- Improved delivery to key market segments (Older Drivers, Motorcyclists, Young Drivers)
- A strategic review of road safety priorities in a partnership of 9 local authorities (Thames Valley)
- Award winning road safety education campaign developed based on MAST methodology ('Have a Kip' fatigue campaign)
- Increased awareness of social marketing techniques & application of data (Think! Child Pedestrian campaign)
- Improved data handling by police forces (South Yorkshire & Leicestershire)
- Improved cooperation across authority borders based on shared intelligence (Yorkshire & Humberside)
- Unique new analyses based on resident risk (Child Casualties Report, August 2010)



"MAST was very useful in allowing us to match socio-economic information to road casualty numbers... to give us more depth of understanding of the issues that we were looking to address."

Laura Durham
Deputy Head of Marketing
Department for Transport

Value for Money & Sustainability

Without further grant funding to ensure the sustainability of the MAST analysis platform, the project team demonstrated their commitment by forming a dedicated non-for-profit company to continue to support the product. Road Safety Analysis now administer, develop and support the MAST platform for the benefit of the user community at very low costs; the average organisational licence costing considerably less than £1,000 per annum.

Supporting Evidence

A selection of presentations from the first MAST user conference, February 2011 (PDF Document)
Letters of support

Dave Hammond, Lead, Speed Management, Department for Transport

Tanya Fosdick, Data Manager, Safer Roads Humber

New projects & examples of MAST analyses can be found by visiting www.roadsafetyanalysis.org