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## Industry

State  
Government

## Business Issue

Growing demands around data meant further training was required for the Asset and Network Information branch.

## Solution

SAS® Analytics  
SAS Education and Training

## Benefits

Improved knowledge and skills, especially around statistics, has enabled the branch to conduct more in-depth analyses and present findings to non-statistical staff.

# SAS® training builds expertise at Main Roads WA

It's easy to take the conditions of the roads we drive on for granted. But maintaining and improving the road network is a complex task. Western Australia's road agency, Main Roads Western Australia, constantly analyses vehicle-related data to ensure the network continues to safely link goods, people and places.

Main Roads looks after Western Australia's highways and main roads, which represent almost 30 per cent of the state's total assets. It is one of the largest geographically spread road agencies in the world, covering 2.5 million square kilometres.

Analysing road data is imperative for the agency – a task that SAS has been helping with for over 10 years. And to ensure its statisticians are up to date with new techniques and developments, they undertake regular SAS training courses.

## Planning for future transport needs

Statistician Dr. Fritha Argus works in the agency's Asset and Network Information branch and says SAS is essential for its planning operations. "Our analysis shows how many cars are on the roads so we can determine whether extra lanes or routes need to be added to ease congestion," she says. "It is also used by our crash safety teams who are tasked with improving dangerous intersections."

Knowing the latest analytical techniques is important because of the industry challenges Main Roads faces. Fritha says one involves the increasing number of new technology sources and the emerging methodologies for collecting data.

"For example, the data that is collected from satellite navigation products like Tom Tom™ is in real-time and uploaded immediately into the cloud," she says. "We need to determine how these new technological advances can best help our business and how we should be providing data from such giant datasets to both internal Main Roads staff and the general public via our website."

The duties Main Roads undertakes has also changed over the years from building the roads to maintaining them and engaging with contract management teams. The new roles require different skill sets and offer more opportunities for Fritha's branch to develop expertise.

"More staff come to us now wanting answers to their queries," she says. "There is a lot of room to grow our capabilities and to get more exposure within the organisation through the expertise we are developing."

Every week the branch produces a crash extract from the corporate database and Fritha says Main Roads staff request subsets of the data. "They may want data on crashes that occurred at rail crossings and then 10 variables around those crashes, such as time of day or day of the week," she says. "SAS is used to allocate those subsets into smaller data tables. We also receive requests from government ministers."



## SAS training keeps skills on-track

Fritha says with roads becoming busier, more analysis is needed to ensure the agency allocates resources in the most efficient manner. To keep up to date with the latest developments around data analysis, she attends SAS training programs. To date she has undertaken a number of SAS programming and Statistics courses.

The two programming courses taught her simple daily tasks such as dataset manipulation, she says. "The Statistics course has probably had the biggest impact on my daily work. I'm now able to graph our data and have the confidence to perform statistical analyses and explain the results to staff who are not statistically trained."

She adds being able to present the results of statistical analysis in a way that is easily accessible to management is an important and growing area for her division.

"One of the benefits of undergoing the training is that you learn new techniques so you get more use out of SAS and this ultimately benefits the organisation," Fritha says. "Having a trainer there in person means you can discuss issues that are unique to your own organisation. We always come back from training being more inspired to use SAS for bigger and better things and in different ways."

Fritha adds that the SAS trainers are very helpful and nothing is too much trouble. "They are also very flexible about tailoring courses to suit particular needs," she says.

While the training has been essential, Fritha says she also gets a lot out of the local SAS user Group, WASUP. "It is really good to get an idea of what other people are using SAS for, talk to them about what they are doing, and share ideas and best practice," she says.

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Dr. Fritha Argus  
Statistician

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