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Data integrity key to Australian Bureau of Statistics

Industry

Public Sector

Business Issue

Ensure the integrity of data and statistical outputs that are used across all divisions of the ABS.

Solution

SAS is used in data processing and analysis operations, and runs on all platforms within the organization, from mainframe to UNIX to Windows XP on the desktop.

Benefits

Data integrity equals productivity gains.

As Australia's official statistical organization, the Australian Bureau of Statistics (ABS) knows that thousands of individuals, businesses and government organizations, rely on the accuracy of the information from the surveys it conducts. The information from ABS surveys assists policy and decision making across all industries and levels of government.

The ABS processes thousands of questionnaires a year in order to produce hundreds of publications, such as the quarterly *Business Indicators, Australia*, *Consumer Price Index, Australia* and the monthly *Labour Force, Australia*. The faith that organizations put in its data is a big responsibility and one that means it invests heavily in technology to ensure data integrity.

To assist in its data processing and analysis operations, the ABS uses solutions from SAS. In fact, it has been a SAS® user for more than 20 years. SAS runs on all platforms within the organization, from mainframe to UNIX to Windows XP on the desktop. Most ABS survey data is processed by SAS at some point.

One group that is a heavy user of SAS solutions is the Methodology Division. This division has around 120 employees and is responsible for ensuring that the processes underlying the statistical outputs of the organization are based on sound statistical principles and are being carried out with statistical integrity. The division's clients tend to be other divisions within the ABS that run the collections.

"For example, we determine which businesses will be selected for particular surveys," explains John Preston, an Assistant Director in the Methodology Division. "We also carry out analyses of the surveys to see how we can get greater efficiencies from them.

"We usually work with large data sets," Preston says. "Many of our collections have thousands of units – a unit being an individual or business – and with such a high number of records, SAS makes our tasks more efficient, especially as many of the procedures we require are already pre-programmed into SAS."

Preston is responsible for implementing methodologies into the organization's infrastructure. He says his division is in the process of building a new estimation system for all its business surveys.

"This is being written in SAS, and we are writing the system as a number of components, which are essentially SAS macros," he says. "This is so that we can tailor estimation systems for the needs of individual collections."

The Methodology Division is also involved in a project that analyzes scanner data from a third party to provide methodological advice to one of the division's main clients, the Consumer Price Index Section.

The data used in the ABS surveys come from hundreds of interviewers who

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knock on Australian doors each month. The data that comes from these surveys is collected in a variety of formats and is processed using SAS.

Fred Wensing, Director of Household Surveys Facilities, a section within the Population Surveys Branch, is responsible for building the systems that support the collection and processing of survey data.

“SAS provides us with productivity gains at many levels,” he says. “For example, on an individual level, if you can use a spreadsheet you can use SAS. It has extended our capabilities to do all sorts of interesting things with data.”

His section also writes systems using SAS for other ABS workers to use.

“This way, they are using systems which have tools that have been developed specifically for them,” he says. “The users don’t even need to know anything about SAS.”

Wensing says that his section is very interested in exploiting the concept of writing SAS systems that generate SAS code.

“We have data sets that are big, but size is not the issue,” he says. “It is what you do with the data, and we want to analyze it, tweak it and extract from it more comprehensive statistical observations or conclusions. The flexibility of SAS makes this possible.”



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