

NEWSLETTER

SEPTEMBER 2007

While good workplace management must not treat workers as just numbers, statistics and mathematical modelling still have critical roles. This issue reflects on recent work by Data Analysis Australia in assisting organisations improve their workplaces.

*Dr John Henstridge
Managing Director*

Planning For Work

Most organisations realise that their workforce is one of their most valuable assets. The training, experience and loyalty of their staff might not appear on their balance sheet but they are absolutely critical to the good running of the business. This is particularly the case for organisations where the training or experience is unique to the organisation - replacing lost staff is not simple and requires forward planning to ensure continuity and retention of corporate knowledge.

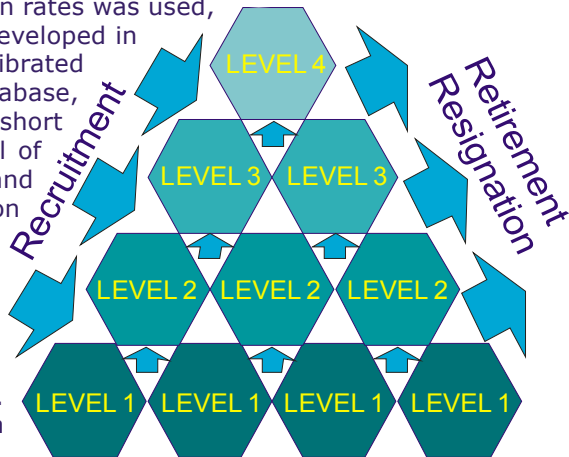
For many organisations in Australia this challenge is driven by changes in the population as a whole. A generational change is occurring with the baby boomers reaching their 60's. Many workforces are facing higher rates of retirement than in the past and this effect will increase over the next decade. Compounding this is a greater uncertainty of what workers might plan to do. No longer is 65 the mandatory retirement age - some may choose to retire significantly earlier or later than this and some workers will also opt for part-time work. Changes in Government policies on retirement and superannuation are likely to have a large effect on retirement decisions made by workers and, in turn, the policies themselves must change in response to a decreasing proportion of the population being in the workforce.

Good organisational planning is required to effectively manage the impact of the change in the working population. Ideally, this planning should be based upon the best quantitative evidence available and should highlight recruitment, training and succession planning requirements well before they become a real problem. Data Analysis Australia has recently tackled several aspects of organisational planning, ranging from initial data collection to the analysis of existing information to understand the future.

An understanding of employees' intentions about retirement is an essential aspect in the development of strategies to both influence retirement and for recruitment to replace retirees. Employee surveys are an essential tool to collect this information. Web based implementation can be used as a cost effective survey method for organisations where most workers have access to computers. Data Analysis Australia has recently undertaken a large scale survey of this nature including the collection of the data and analysis and reporting of the responses.

Another project recently undertaken by Data Analysis Australia had the challenge of forecasting the recruitment and in-service training demands over the next ten years for the Western Australian Police. For this, the problem was not one of simply looking at typical retirement ages but rather it was necessary to understand career paths in an organisation with a sophisticated rank structure and promotion by merit. A matrix method based upon modelling promotion and attrition rates was used, an enhancement of a much simpler model developed in a similar context some years ago. Once calibrated using the WA Police human resources database, this model gave an understanding of both short and long term needs, in particular the level of recruitment required to sustain and expand the number of officers to match population growth.

The common feature of these projects is the way in which Data Analysis Australia harnessed statistical and mathematical methods to deliver practical outcomes to assist organisations in workforce planning. Further information is available from **Anna Munday**.



Are You Measuring What You Think You Are Measuring? Reliability and Validity in Questionnaire Design.

In survey design, it is important to ensure that your questionnaire is measuring what it is intended to measure. Considering issues of reliability and validity when developing questionnaires is crucial, especially when the results are used to infer a deeper level of

information. A discussion of these topics is available using examples to highlight these concepts when designing questionnaires.

See www.daa.com.au/analytical-ideas/questionnaire-validity/

Staff Profile - Anna Munday

Anna Munday has recently been promoted to the position of Consulting Manager. In this role, Anna is responsible for the day-to-day management of the consulting operation including project performance, staff performance and financial performance. A key aspect of this role involves working closely with other Data Analysis Australia consultants to deliver high quality and value for money projects for our clients within designated timeframes.

Anna has worked at Data Analysis Australia for over five years, with three of those years as a Senior Consultant. A highlight in Anna's career at Data Analysis Australia was representing Data Analysis Australia at the International Statistics Institute conference held in Sydney in 2005. Anna retains her role as Senior Consultant in addition to her new management role. She also has the position of Synergy Client Manager, which entails overseeing the numerous projects undertaken by Data Analysis Australia for Synergy Energy, Data Analysis Australia's single largest client.

Prior to working at Data Analysis Australia, Anna worked at the Australian Bureau of Statistics in Canberra for two years where she developed a good grounding in the theoretical aspects of sample survey design. This continues to be one of Anna's areas of expertise. Anna is an active member of the Statistical Society of Australia (Inc), currently standing as a committee member, and previously holding the roles of Vice-President and Treasurer of the Western Australian Branch of the Society.

Outside of work Anna enjoys tennis and avidly supporting the West Coast Eagles.



Company News

Jodie Thompson, who joined Data Analysis Australia as a Consultant Statistician 11 years ago and rose to be a Senior Consultant and Branch Manager, has left to take up a management position at the RAC. **Anna Munday** has taken over Jodie's management role in the newly created position of Consulting Manager. **Alex Maund** has recently been promoted to Senior Consultant.

Natalie Smith who was with Data Analysis Australia for 3 years has moved to New South Wales to further her dancing career. Also departing us is **Kathryn Creelman**, who is leaving to live in America. **Angela Cinanni** has taken over from Kathryn as our new receptionist and office assistant, while **Judy Pearce** also joins us for bookkeeping and financial reporting.

Prof. Cheryl Praeger, a Director of Data Analysis Australia, was recently awarded a prestigious Federation Fellowship, the highest research award available in Australia and the first ever to a theoretical mathematician. The award, announced by the Hon Julie Bishop, Minister for Education, Science and Training, will enable Cheryl to continue her work in symmetry and complex algorithms.

We have just redesigned our website to a brand new look. Visit www.daa.com.au for our latest updates.

Classic Quote

"It is commonly believed that anyone who tabulates numbers is a statistician. This is like believing that anyone who owns a scalpel is a surgeon."

R Hooke, *How to Tell the Liars from the Statisticians*

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