



**select**  
statistical services

be selective

# Select News...



## Select Shortlisted for Business Award

Select Statistics were pleased to be shortlisted for a Western Morning News Business Award in the Best Startup category. Although we didn't win, Select was picked from over 100 entrants by an impressive panel of 12 judges drawn from a wide range of regional public and private sector organisations. WMN editor Bill Martin said: "All of the businesses that have made it onto the shortlist are real Westcountry success stories who are achieving some incredible results despite the difficult trading conditions. I'd like to congratulate all of the shortlisted organisations and to thank the judges who kindly gave their time and expertise to assess a very strong field of entries."

## RSS Conference 2012



Select were delighted to take part in the Royal Statistical Society 2012 conference with an eye-catching stand in the exhibition hall and as sponsors of the delegates' internet access. It was a great opportunity for the Select team to enjoy mingling with old friends and make new ones, and be inspired by an array of stimulating talks, posters, short courses and workshops.

### Our Services:

#### Advice

Our statistical advice service offers detailed expert guidance on all areas of statistical analysis and interpretation to allow your staff to understand or perform their own statistical investigations.

#### Analysis

Our statistical analysis service aims to identify and apply the most appropriate statistical tools to make best use of your data in addressing the questions that you need answering.



#### Research

Our statistical research service extends the analysis service above to tackle problems that lie beyond the boundaries of current statistical know-how perhaps because of the inherent complexity of your data or simply because the usual underlying assumptions don't apply.

#### Training

We provide training for statisticians and nonstatisticians alike and can cover any statistical topic from the applied end right through to cutting-edge methodological research.



#### Data

We can source, collect, collate and cleanse data either simply for presentation direct to the client or for subsequent analysis.

#### Surveys

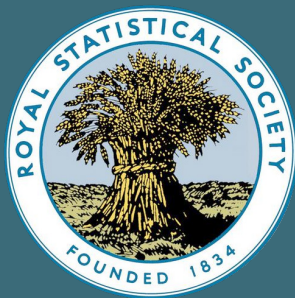
Often the easiest and best method to obtain information you need from people is simply to ask them. We can conduct online, phone and face to face surveys starting from initial design through to final analysis.

#### Making numbers work for you

If you would like more information on any of the Services that Select Statistics offer, please contact us on 01392 440426, email: [info@select-statistics.co.uk](mailto:info@select-statistics.co.uk) or complete the online contact form on our website:

[www.select-statistics.co.uk](http://www.select-statistics.co.uk)





## Steve returns to the RSS Council

Select are extremely pleased to announce that Steve has been re-elected to the RSS Council, the governing body of the Royal Statistical Society. This is the third time that Steve has been elected to join the Council and it follows a ballot of the Society's members over the Summer with nearly 1,300 members voting for seven of the nine candidates using the single transferable vote system.

## Select launches new website

The revamped Select website is now online. The refresh includes new blogs, even more case studies and a gallery section so you can see what the Select team has been up to! We hope you enjoy the new look and find the new structure easy to navigate. If you have any feedback we'd be pleased to receive it: email us at [info@select-statistics.co.uk](mailto:info@select-statistics.co.uk)



# Professor Risk, a.k.a. David Spiegelhalter, introduces the 'microlife'



The first joint ExISTA and RSS South West Local Group seminar took place at the University of Exeter on Monday 19th November with invited speaker Professor David Spiegelhalter. David, the Winton Professor for the Public Understanding of Risk at the University of Cambridge, is not only a well-known figure in the statistical world, but often appears in the wider media, including as a guest columnist in the Times and on Radio 4's More or Less series. Recently, he could be seen on BBC4 in his documentary 'Tails You Win – The Science of Chance', described by its makers as "a combination of wit and wisdom, augmented-reality graphics and gleeful nerdery!", not to mention being a contestant on the BBC's Winter Wipeout!

Much of David's work aims to help improve the way that uncertainty and risk are discussed in society, and in his talk he introduced two measures of risk that help to describe both the acute and chronic health risks that we all face: the regularly used micromort and the new microlife. The micromort represents a 1-in-a-million chance of dying and, as David described, is useful as "a friendly unit of deadly risk"! To put this measure into context, with 50 people dying of non-natural causes in England and Wales per day and a population of approximately 50 million, just by living, we experience one micromort every day (on average).

But what about the risks that we take that don't kill you straight away, such as smoking, drinking, eating badly and so on? David introduced a new measure of risk in his presentation that he has called the microlife. A microlife is defined as 30



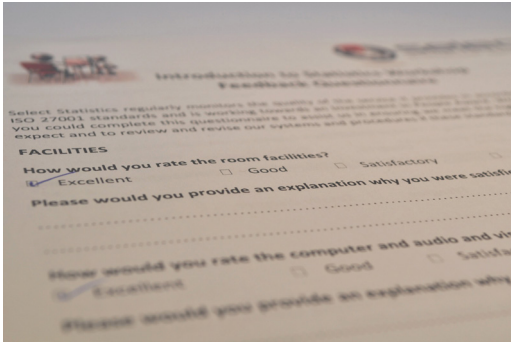
minutes of your life expectancy and makes chronic risks comparable by showing how much life we lose on average when we're exposed to them. Examples of everyday activities that cost us a microlife include eating red meat, smoking two cigarettes and drinking alcohol (although the first drink gains you a microlife, so there is only an overall loss of microlives after the second drink!).

In the final section of his talk, David discussed the communication of uncertainty and the importance of acknowledging deeper uncertainties (or the 'unknown unknowns'). This issue is of vital importance in science and this couldn't be demonstrated better than by the recent controversial trial of the L'Aquila scientists. David finished a fascinating talk on this note, which prompted much discussion from the audience on how deeper uncertainties could be assessed and communicated and whether microlives could be applied to other risks such as climate change.

## Working with the Trading Standards Institute

The Trading Standards Industry (TSI) is in the process of developing a successor to the Office of Fair Trading's Consumer Codes Approval Scheme (CCAS) from April 2013. The two aims of the CCAS are to raise consumer service standards and reduce consumer detriment. The code helps consumers choose businesses that have promised to provide a higher standard of customer service than required by law, including better protection in the event that something goes wrong. Select are pleased to be working with the TSI to help them develop new guidelines for monitoring the performance of the code by its members. The objective of this work is to introduce the use of statistical techniques in performance monitoring that will ensure that both consumer detriment and the monitoring burden are minimised.

## Case Study: Self-Selection Biases in Customer Satisfaction Surveys



Customer Satisfaction Surveys (CSS's) are a useful tool for identifying strengths and weaknesses in a commercial organisation providing goods or services. However, these types of surveys suffer from a self-selection bias that can negatively influence the quality and reliability of the results and can lead to an inaccurate evaluation of customer satisfaction. These errors occur because whether or not a survey is completed is not an entirely random event and the people who choose to respond to a survey may be systematically different from those who do not.

For example, if a survey is conducted by calling a random sample of publicly available telephone

numbers during a weekday, it is likely to have a disproportionate number of respondents who have traditional land-line telephone services, and who are at home during working hours (for example the elderly).

Since organisations often hold personal information about their customers, this information, in conjunction with the knowledge of who undertook a survey and who did not, can be used to model the probability of response and then to correct the biases caused by self-selection. Examples of the type of personal information that is available include nationality, age and gender in addition to specific details about the level of service received.

Since there are often a large number of responses in CSS's, the resulting estimate of the level of customer satisfaction can be very inaccurate. By employing statistical techniques that aim to eliminate self-selection errors, the reliability and accuracy of the results are improved. This means that businesses will better understand the needs of their customers and provide services of higher value.

### Interested in more case studies?

Check out our website for more case studies in marketing, retail and many other areas, as well as details on the many statistical services that Select offers.

## Select and Co. go Commando

Three teams from Oxygen House competed in this year's 10km Marine Commando Challenge, a gruelling 3.5km road race followed by 3km of tunnels, mud and water-based obstacles, followed by another 3.5km road race back to the start.

The 8 Assassins and the ATASS Honey Badgers took first and second position in the male and vets categories, whilst the Malayan Tapirs comprising Select's own Steve and Lynsey together with Georgie and Gemma from Sparx and Grace from ATASS Sports came a respectable 5th in the vets and 4th in the mixed categories.

In total, the three teams raised nearly £5000 in sponsorship to support Devon Air Ambulance and the Royal Marines Charitable Trust Fund.



## Lynsey gains her Chartered Status

We're pleased to announce that Lynsey has been granted the prestigious status of Chartered Statistician by the Royal Statistical Society, recognising her extensive training and experience as a professional statistician.

The Chartered Statistician (CStat) is the RSS's highest professional award providing formal recognition of an individual's work experience, formal qualifications and professional training. To qualify, the RSS require an approved degree together with at least 5 year's post-graduate training as a professional statistician.

Lynsey's award recognises her experience gained during her PhD training together with four years working at the Met Office as a statistician. She was also able to demonstrate a strong and consistent commitment to continued professional development (CPD).



## Summer Data Conference

Select and ExIStA are partnering to organise a data-themed conference in June 2013. The conference will cover all aspects of data; from storage and management to analysis, communication and visualisation. Speakers will be drawn from data-rich organisations in the South West together with a number of keynote speakers drawn from further afield. The conference will be a great opportunity to showcase the diverse range of statistical skill within the South West and for the local statistical community to create and forge new partnerships and links.

If you would like to register your interest for the conference please contact us at: [events@exista.org](mailto:events@exista.org).

## The Select Network

Select is supported by an extensive network of external consultants based at the UK's top Universities and research institutes and also by a community of specially-selected partner organisations offering skills and services that are likely to be of value to our clients. The Select Network provides us with an enhanced range of skills and expertise to deliver service and value to our clients. Details on how to register your interest in the network are provided in the box at the bottom of the page.



## Focus on... Medical Statistics

The medical statistics industry is well established and deals with many different aspects of health; from trialling new drugs to monitoring and controlling the spread of disease, and from improving patient care to planning large scale deployment of medical aid.

Whilst large pharmaceutical companies generally have their own in-house statistical expertise, they still benefit from external and specialist advice. More generally, many health-related organisations struggle to make use, or are even unaware, of the broad range of statistical techniques that could be used to improve the help they provide to others within their budgetary and ethical constraints.

Select's medical statistics team has a wide range of expertise and are well placed to ensure that the most effective statistical techniques are being used for your study.

See our next issue for Focus on: Official Statistics

### Meet Michael Roughton



Michael is a medical statistician, with almost 10 years' experience working in clinical research. He gained a MSc in Statistics with Applications in Medicine from the University of Southampton, and has since worked for a number of highly regarded organisations, including The Royal Brompton Hospital and

University College London.

Michael has extensive experience of working alongside clinical colleagues to help define the questions they wish to answer in their research, and then implementing the best statistical solution. He is a named author on over 70 peer reviewed articles and has particular expertise in clinical trials, epidemiology, survival analysis and studies involving the use of many different imaging modalities.

Would you like to join the growing Select Network?

If you are interested in joining the Select Network as a freelance consultant or would like more information, please contact us on: 01392 440426, email: [info@select-statistics.co.uk](mailto:info@select-statistics.co.uk) or complete the online contact form on our website: [www.select-statistics.co.uk](http://www.select-statistics.co.uk)

