

FEATURE

Make Big Data Your New Gold Mine

Having all the data in the world at your fingertips is meaningless unless you're leveraging the data to drive growth and better business outcomes. Dr Carol Hargreaves of NUS-ISS tells you how.

Dr Carol Hargreaves
Chief of Enterprise Business
Analytics
Institute of Systems Science, NUS



There are many examples of how many businesses have used their data to make decisions faster (almost in real time), smarter (listening to what the data is telling you) and timelier (data also has a use-by date). Using statistical techniques, we are able to run algorithms that identify patterns in huge data sets. These patterns help businesses identify insights that allow for smarter, faster and timelier decisions. For example, Google used search terms by region in the United States to predict flu outbreaks faster than was possible using hospital data.

Big Data Analytics can also help transport-related organisations identify where the next accident is likely to take place and the probability of the accident occurring. The police, ambulance, fire brigade and re-routing systems can then all proactively make decisions based on the information provided and position themselves strategically so they

are more likely to be at the right place, at the right time, to clear the incident and transport patients to hospitals more quickly. The number of lives and sums of money that can be saved by using Big Data Analytics is huge. This is the gold mine that transportation organisations, hospitals, and many other types of organisations can make better use of.

Taking the first step

More examples can be cited, but the most important question is: "Where do you start?" The answer is today!

Data visualisation is key. Building a business intelligence system is the first step in better understanding Big Data. A business intelligence system is typically a dashboard that displays bar charts, pie charts, trend plots and, these days, is highly interactive and can tell a story in a few minutes. It is your starting point to understanding key variables and metrics related to your business profitability. One important thing – make sure whatever you decide to have on your dashboard delivers actionable insights. This means if the "traffic light system is red, the business user needs to know what to do as opposed to if the traffic light system is green".

Go Agile

I also recommend taking an agile approach. Here are three simple steps:

- 1) **Ask questions.** Start with a business problem where the solution is achievable in a reasonable space of time. Don't be overwhelmed by the data. Instead, focus on the questions and gather insights to help you transform a problem to a business solution.
- 2) **Get expert help.** Start small. Take baby steps with someone with the experience and expertise to help you along the way. They can help you select the tools and techniques to extract actionable knowledge and insights.
- 3) **Learn and measure.** Yes, you may fall as you take your first steps. Fall and get up. Take this as a learning journey and improve the process or change the course. Measure the value gained with each step and iterate till you find the answers to the business questions/problems.



FEATURE

Let's Get Started

Through our business intelligence and analytics courses at NUS-ISS, we have worked with close to 500 Infocomm professionals from sectors such as ICT, manufacturing, logistics and transportation, to help them develop and implement analytics initiatives at work.

Come join us and soon, you will be walking confidently and then running and enjoying the power of Big Data Analytics. And you will find your gold mine.

NUS-ISS assists businesses with courses that provide Infocomm professionals with a rigorous understanding of enterprise business analytics and that enable them to apply the skills and knowledge learnt to their work contexts from Customer Analytics, Text Analytics, Statistics for Business, Statistics Bootcamp using R & Tableau, Predictive Analysis, and Optimisation & Resource Utilisation. Courses are accredited under the National Infocomm Competency Framework (NICF) – a joint development by the Infocomm Development Authority (IDA),

Singapore Workforce Development Agency (WDA), and industry experts.

To find out more about NUS-ISS and relevant NICF Enterprise Business Analytics courses, visit www.iss.nus.edu.sg.

What beneficiaries of NUS-ISS NICF Enterprise Business Analytic courses say:

- “Relevant course materials that are applicable in real business world.” (Customer Analytics, March 2014) – Tan Li Fern, Manager, ANZ
- “The course allows me to understand the basics of the statistics concept.” (NICF - Predictive Analysis – Insights of Trends &

Irregularities, March 2014) – Pauline Koh, Principal Engineer, DSTA

- “Good insight into theory and application of text analytics.” (NICF - Text Analytics, June 2014) – Chionh Choon Lee, Systems Manager, Oracle
- “Useful practical metrics applicable to work.” (Customer Analytics, July 2014) – Ng Sze Hui, Business Analyst, ACE Insurance Ltd

- “I like the hands-on workshop and the fact that I can try out the concept during the workshop. The data set used in the workshop is also very applicable.” (Statistics Bootcamp using R & Tableau, July 2014) – Neo Hwee Kian, Service Program Manager, CISCO

