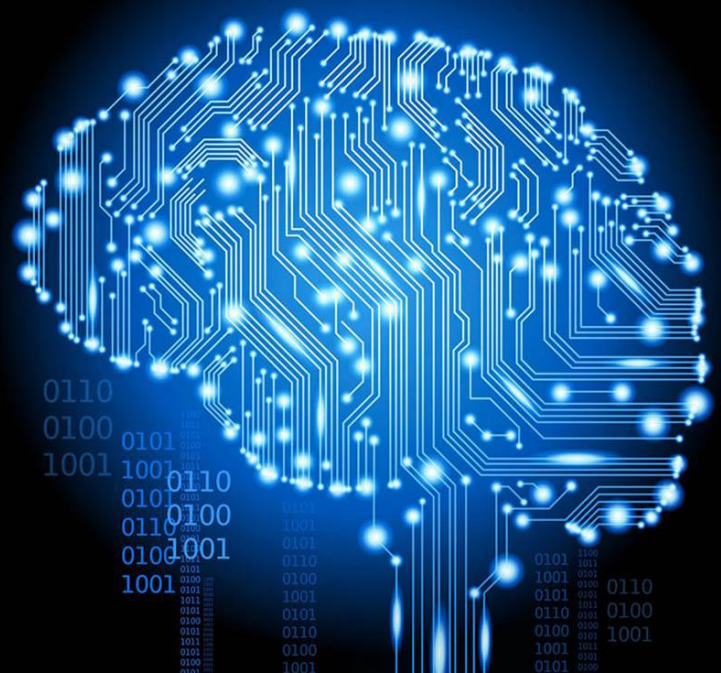


GETTING STARTED WITH COGNITIVE COMPUTING AND MARKETING



Getting Started With Cognitive Computing And Marketing

Machine learning, artificial intelligence and augmented reality have been bubbling away in research labs for decades, but in recent years, they have burst into business consciousness.

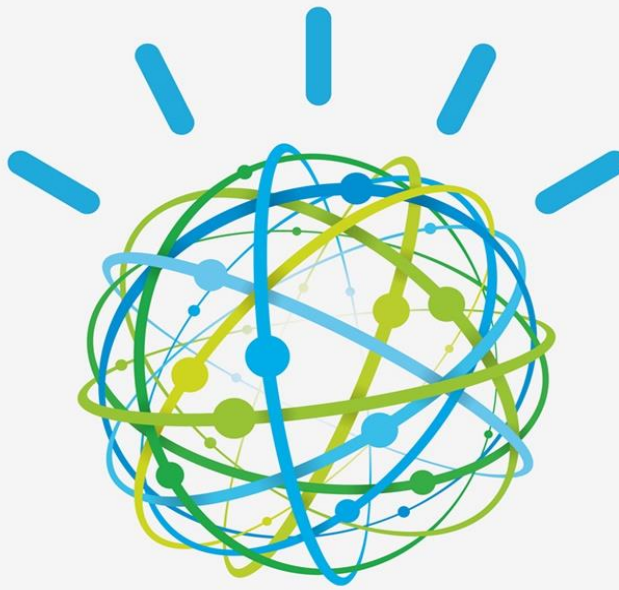
For marketers, the rise in big data, programmatic advertising and marketing clouds have all coincided with the commercial emergence of cognitive computing – the umbrella label for technologies that ingest data and then learn as their knowledge base grows.

According to industry analyst Gartner, cognitive computing is a “disruptive platform with a shift more impactful than many other technologies in the past 20 years”.

For an industry, which seems to reinvent itself every three years, this is a suitably bold claim. And yet, clearly, cognitive computing is already having a serious impact across a range of industry sectors. Miners are using it to guide investment decisions, medical schools are using it to train doctors, and marketers are deploying it to better understand consumers and deliver world-class experiences at the speed of web.

The impact of cognitive computing and the emergence of technologies such as IBM's Watson were discussed at length at a series of senior executive round tables run by ADMA and IBM recently in Sydney and Melbourne.

Starting with the basics – a definition of cognitive computing – participants then discussed real-life use cases, the opportunities in future for marketers, and the kinds of conditions they needed to establish within their own businesses to take advantage of this new technology.



What is Cognitive Computing?

In an article in Forbes last year, Jay Bellissimo from IBM's Watson Group wrote that cognitive computing offers fundamental differences in how systems are built and interact with humans.

"Cognitive-based systems, such as IBM Watson, are able to build knowledge and learn, understand natural language, and reason and interact more naturally with human beings than traditional systems," he wrote.

He also described how cognitive systems could put content into context with confidence-weighted responses and supporting evidence. *"Cognitive systems can quickly identify new patterns and insights. Over time, they will simulate even more closely how the brain actually works."*

In leading the round table discussion in Sydney, Tim Doidge, IBM's Watson Marketing and Watson Commerce Manager, ANZ – Customer Engagement Solutions, was careful to draw a distinction between artificial intelligence and

the work Watson does. *“Think of it more as augmented intelligence. This is really, where the cognitive technology is going. It is emulating human cognitive ability. For marketers, it is not only taking all the standard data that we would use to derive a marketing decision, but it’s taking contextual-based capabilities.”*

Doidge was careful also to keep the conversation grounded.

“Watson is never going to be a human being. It is never going to have that implicit EQ that we as humans do, in looking at the eyes, and understanding the body language. But what it can do is what computers have been trained to do for the last ten or twenty years: help understand sentiment, and derive feeling from the choice of words that are being used.”

He told the marketing executives that cognitive computing is about helping them to be more proficient.

During the discussion the participants said they saw technologies like Watson as being useful in any profession where data forms a considerable part of the value in the work the profession does. However, one of the issues, which came up, was how hard it is for companies to make themselves *“Watson-ready”*.

As with all systems, the challenge is also about access to data and the technical ability to ingest that data into the system. At a technical level, the solution is relatively straightforward: one of the iterations of Watson is as a series of application programming interfaces (APIs).

“For organizations with their own digital applications, this is a relatively easy and inexpensive way to integrate cognitive capabilities into their own digital applications. For example, a company could choose to plug in to Watson for its speech recognition or to help recognize and tag images,” said John Mullin, Head of IBM Cognitive Engagement, ANZ, who hosted the Melbourne event.

“The goal here is to make it easy for organizations to work with Watson and help them get started.”

Watson is also represented as a series of products and can be a custom-built system as well.

Of course, as with all analytics challenges, the issue of data silos weighed heavily on the minds of participants.

The advice from the group was not to let the perfect be the enemy of the good. While the best case involves seamless real-time flows from all parts of the organization, examples were provided of companies that choose instead not to wait, but to get started with what was available.

“Start with a simple use case. I haven’t seen a lot of grants go to the more advanced use cases first. Find one type of interaction that you want to improve and take it from there.”

Early gains and wins from such an approach demonstrate the advantages of cognitive computing and actually reinforce the case for further data integrations, the groups agreed.

“Watson is going to be useful. As marketers, if you think about the overwhelming amount of data that we have at our disposal – some of it organized, some of it all over the place, and some of it dark data – but it’s all available in some form. Imagine what you could do if you could just ask really simple questions and get the answers back quickly.”



People - Centric

One of the discussions that typically comes up around cognitive computing is the issue of computers replacing people. Participants believed that while it may be technically possible, it is still best to think of cognitive computing as augmenting the work of people.

Take wealth management as an example. In a traditional wealth-management setting, the advisor engages the client in a lengthy interview process to determine the investor has needs and risk profile.

Having compiled the responses, the advisor then assesses the data they have collected and provides the client with recommendations and the justifications for those recommendations.

To make this a more efficient process, the wealth manager could feed data into Watson and then Watson would be able to provide answers immediately, along with the rationale for those answers.

“The interesting thing is, you would need a financial advisor to sit in front of Watson, because Watson is not certified to offer financial advice. Ninety-nine per cent of the time, all the advisor will be doing basically is reading off what Watson is saying,” one participant said.

That raised an interesting point in the round table discussions from a marketer in the advice sector: *“Can Watson be certified as an advisor?”*

Right now, the answer is no – a human advisor needs to be present to *“drive”* the machine.

The opinion from the executives in the room was that, irrespective of regulation and technology, that situation is unlikely to change. *“Human beings want to interact with human beings. There’s a lot of value that people get from talking to other people.”*

The view across both discussions was that there are still many functions for which customers prefer human interaction. Large transactions like home loans, for instance, or very personal transactions like health care (see breakout one)

However, participants also considered the possibility that in the future consumers might not be able to determine easily whether they were talking to a person or a machine.



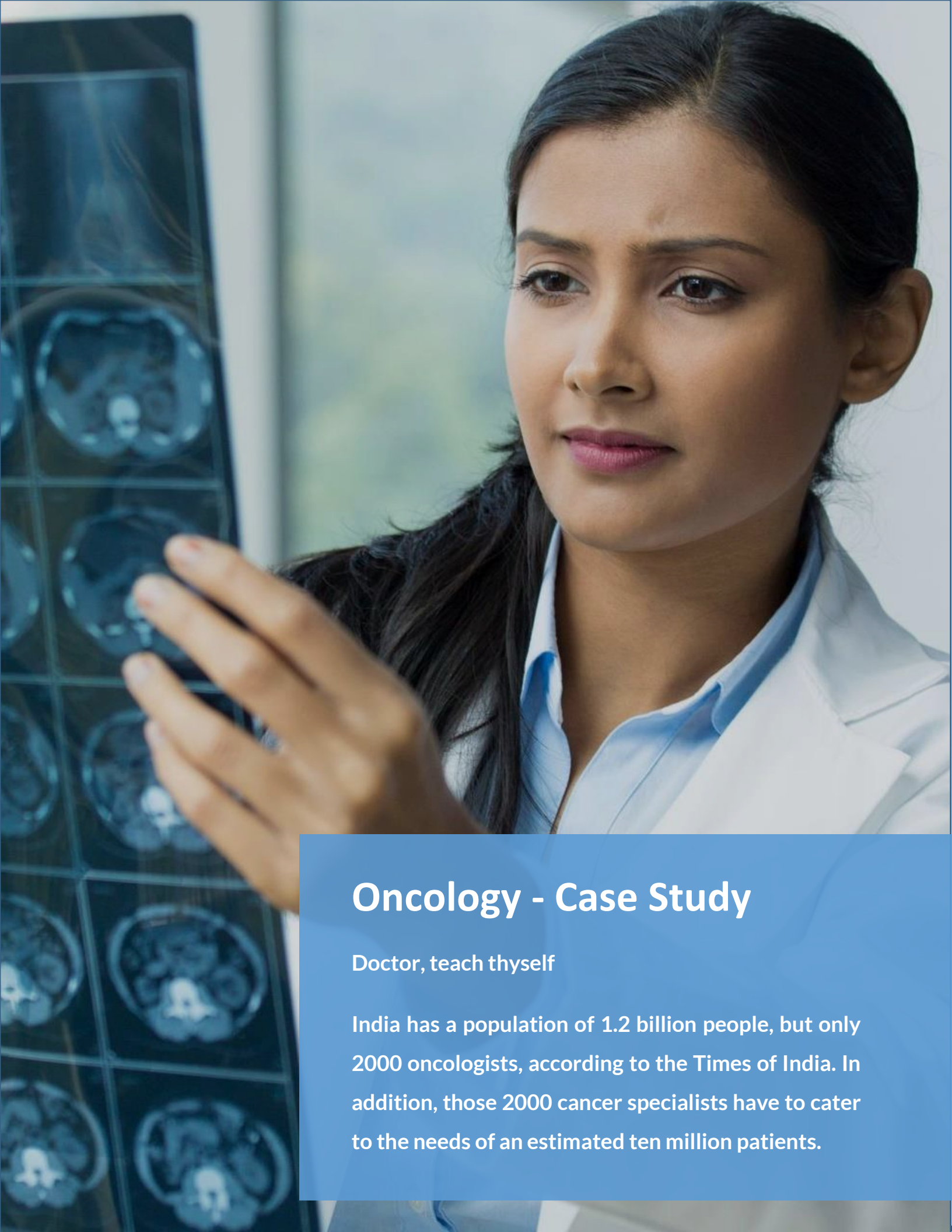
Customer Experience

Another issue raised by the discussion groups concerned the current experience of some cognitive systems. As one senior marketer explained, *“There is a lack of confidence at the moment because our experience is that things like online recommendation tools have been pretty clunky up until now.”*

Until the tipping point arrives — when the technological interaction experience matches the human interaction — people will still put their trust in people first.

The other question raised in the discussion between the executives addressed the issue of data sovereignty: once the data goes into a cognitive computing system, who owns it?

At least in the case of Watson, IBM stressed that the ownership is retained by the provider of the data — either the Watson user or a third-party data provider who had made the data available under license. It does not belong to IBM.



Oncology - Case Study

Doctor, teach thyself

India has a population of 1.2 billion people, but only 2000 oncologists, according to the Times of India. In addition, those 2000 cancer specialists have to cater to the needs of an estimated ten million patients.

That means that if you find yourself with a cancer diagnosis in India, your chances of seeing an oncologist are very limited.

Cognitive computing provides a solution: IBM basically trained Watson to be an oncologist. As it digested information and learnt along the way, Watson morphed into a better oncologist than many human oncologists did.

That is not to reflect on the quality of the medical profession. Rather it is a function of Watson being able to ingest all the thousands of research studies, peer-reviewed articles and white papers that are published every week. That is a capability far beyond the human brain.

As Watson ingests the papers, it is adding to its knowledge base of clinical trials, and the results of those trials.

For patients, this has led to a revolution in health care. Now, if you get cancer in India, you can visit your GP and the GP will use Watson. The doctor will feed the symptoms that you present with into Watson, and Watson will come back with a treatment plan, which is supported by a rationale.

The bottom line is that the survival rate in India from cancer has improved as a consequence of making that knowledge available to all those GPs.

The change came quickly. Just two years ago, the feeling was that Watson's ability was the equivalent of someone fresh out of med school and with perhaps a few years of practice. Now, it can match and exceed the performance of seasoned professionals.

