

# CUSTOMER INSIGHT

## 2014: a retail odyssey

IBM's Watson supercomputer has won an American game show, helped diagnose and treat cancer patients and created new recipes. Now its cognitive computing is being put to work in retail. **Rebecca Thomson** finds out how

**B**ack in 2011, IBM's Watson supercomputer set the internet alight by beating long-running contestants in an episode of the American game show *Jeopardy!*. The computer's appearance on the show was PR gold for the technology giant, attracting attention for Watson's ability to apparently think about and answer questions. Three years later, IBM's business case for the advanced software is starting to take hold in companies across the world.

Watson is just one example of software in the growing field of cognitive computing, in which computers can be trained to 'know' things and become experts on particular topics. They do this by being taught the correct language for a particular topic or area by a human expert. The expert also teaches the computer how to process the knowledge and any correct links between different words and phrases.

Cognitive computing differs from other analytics in that it can understand natural language. It can also integrate other types of data and find patterns that previously weren't seen.

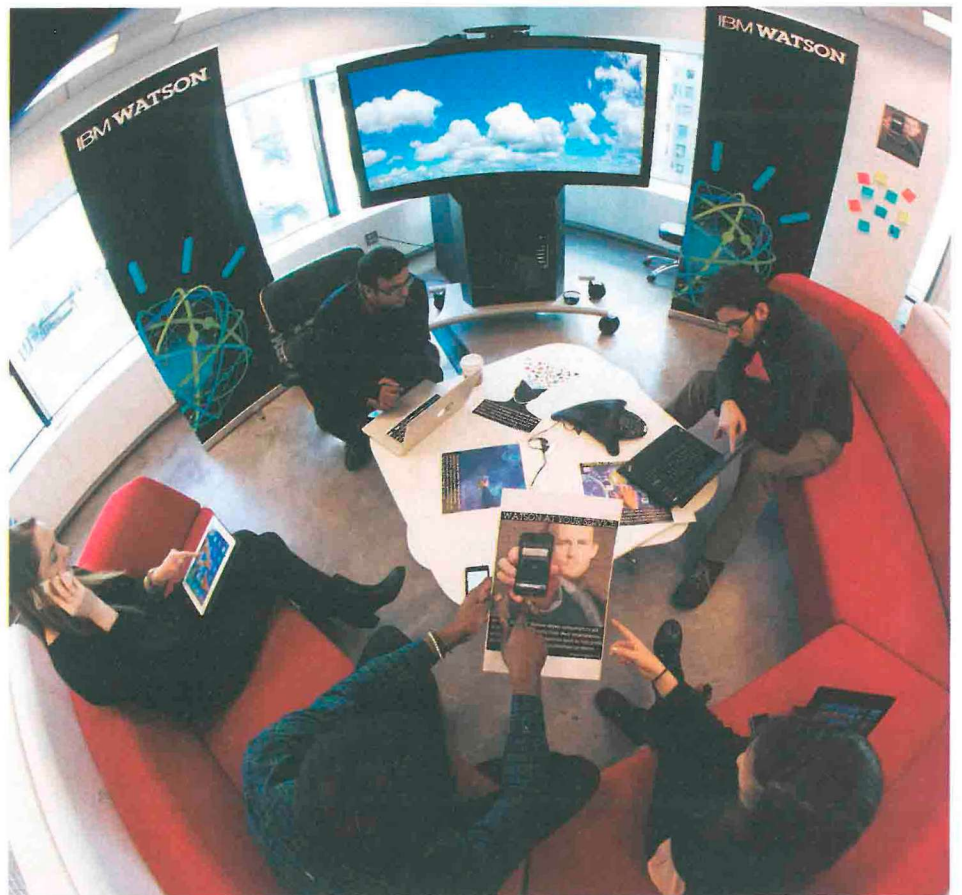
As a result, it is useful both as an analytics engine, and as a potential customer service booster – its understanding of language means it can be used to provide advice and answer questions (see box on The North Face).

### From cancer to finance

Post-*Jeopardy!*, Watson's first use was in healthcare, where oncologists have used it to analyse vast quantities of data – the computer can read thousands of medical journals and help doctors diagnose complex cancers and suggest treatments for patients.

Then it moved into financial services, where it has been used in wealth management – a range of disparate data are used by wealth managers to help decide the best option for clients' investments.

Other uses are starting to be looked at, and some retailers are already well aware of Watson's potential. Tesco chief information officer Mike McNamara said in a recent speech: "How can cognitive computing work for retailers? Well, it takes the computer from being a programme and a database to a device which can make intelligent



decisions for customers. Watson is not programmed in the traditional sense but rather it understands natural language and can read and understand documents much like a human."

Tesco has been trying out the software: "We've experimented with Watson by feeding it thousands of recipes and getting it to create its own brand new recipes. Some of them were even palatable."

### Data soup

'Chef Watson' is another example of how unexpected uses of this technology can be. The idea first came from Condé Nast website *Bon Appétit*, which used the computer in its test kitchens to come up with new recipes. Using the site's database of 9,000 recipes and the computer's

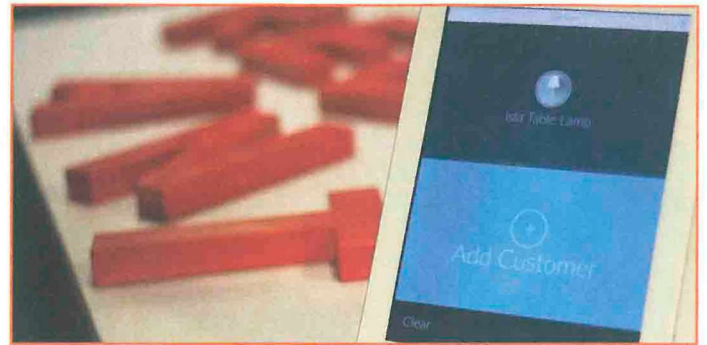
knowledge of flavour combinations, Watson came up with a menu for US holiday July 4 that the site editors described as "surprising" – it included fennel-spiced ribs and an herbaceous berry cobbler.

### Engaging shoppers

Creativity and an open mind are obviously important when it comes to using cognitive computing but Adam Beales, retail specialist for Watson, points out there are some obvious places to start.

He says Watson can understand what shoppers' needs are by comprehending the language they are using. When combined with data on product characteristics, it can be used to find the right option for a particular consumer.

How do you think Watson could be used in retail? Let us know at [Retail-week.com/watsonibm](http://Retail-week.com/watsonibm)



## HOW THE NORTH FACE IS USING WATSON

Outdoor specialist The North Face worked with web development company Fluid to create an online personal shopper service that is powered by Watson.

Fluid says that many online shopping carts are abandoned because of a lack of information for shoppers, who are not able to ask a question about the product they are interested in.

The system aims to provide the same level of customer service that a manager or assistant would in-store. Shoppers can ask questions in the same way they would of a human assistant, even using colloquial terms, such as "I'm gearing up for a backpacking trip in Patagonia in three weeks, what do I need?"

The software reads through everything from product information to blog posts to suggest a selection of products. It will look for the average temperature in Patagonia at that time of year, and the shopper can also ask more specific questions such as the type of backpack needed for an expedition in a particular area.

Finally, once the shopper has chosen a product, they can ask how it is rated online – the software will read tens of thousands of reviews before replying.

## THE WATSON MOBILE DEVELOPER CHALLENGE

IBM is making an effort to open its doors to developers and entrepreneurs in a bid to make sure the best ideas come through. It is developing an eco-system of partners and encouraging smaller companies to interact with the Watson technology.

This year it held a Watson Mobile Developer Challenge, when teams from all over the world were invited to design apps using Watson's cognitive computing capability. 25 finalists then used Watson to build, train and test their apps, and three winners were given access to the Watson APIs and IBM consultants.

Red Ant, a London-based mobile development agency, was one of the winners. Its Sell Smart app is used by retailers, including mobile phone group Three, and enables employees to easily identify individual customers' buying preferences.

It does this by analysing demographics, purchase history and wish lists, as well as product information, local pricing and customer reviews. Employees can either speak or type in their question and receive an answer from a wealth of information from within the business.

Beales says: "It's about being able to engage with a customer in a natural way. The shopper can ask it a question like 'I'm going to a christening on Sunday, what should I wear?'"

In addition, software such as Watson's can be used to analyse data on what people think about brands, whether it's on social media or in emails.

Paul Chong, head of Watson for Europe, says: "We're now able to take a number of tweets and understand the psychological profile of that individual."

## "It's about being able to engage with a customer in a natural way"

Adam Beales, IBM

It means retailers can potentially understand not just what shoppers are doing, but why they are doing it.

Beales says: "What is behind people's decision making? What words might resonate with them more? These are the kind of things we can identify." He says marketing informed by cognitive computing can be better crafted than if relying on data such as demographics, which will involve making sweeping assumptions about how certain age groups behave.

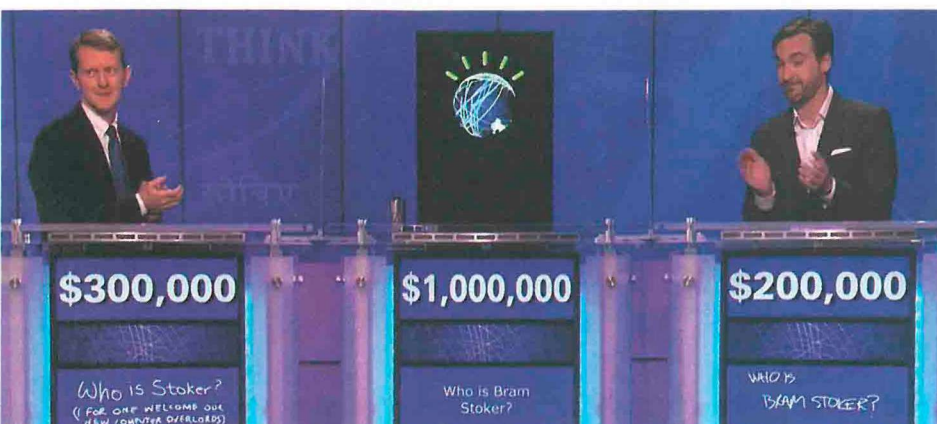
### Future uses

Eventually, cognitive computing could be used in more outlandish ways – it could power in-store avatars, for instance, who would be able to converse with shoppers, ask them about their likes and dislikes, and make recommendations for them.

But even without such futuristic applications, there is still plenty to think about.

Watson could be used to empower employees, giving them access to better information, or as an online sales assistant suggesting products for shoppers with a specific task in mind.

The potential for cognitive computing is huge – all that remains is for retailers to experiment with what it could do for them.



In 2011 Watson competed against and beat two of the most successful contestants of US quiz show Jeopardy!