



Business challenge

To support people with automated and consistent solutions, Volume Ltd. sought to drive digital disruption and optimize applications so that businesses can speed processes and boost revenue.

Transformation

With the natural language processing (NLP) and machine learning capabilities of the IBM® Watson™ platform and a host of IBM Watson APIs, Volume is building new solutions and transforming its incumbent client applications into cognitive tools that customers and employees can engage with through voice and text in natural language.



Chris Sykes,
Chief Executive Officer,
Volume Ltd

Business benefits

96%

decrease in training time

by using the IBM Watson Conversation API to help deliver training

93%

positive feedback

from customers who now receive technical assistance 24 hours a day, seven days a week

Improved

customer response times

by using a cognitive technical advisor application to extend self-service capabilities

Volume Ltd.

Building first-of-a-kind customer applications using IBM Watson Services

Founded in 1997 and based in the heart of the UK's Silicon Valley, [Volume Ltd.](#) is an award-winning global provider of digital content and customized technologies to many of the world's top brands. It supports its customers through key areas of competence: client services and project execution; creative digital content and design; e-learning and instructional design; custom-built applications; and cognitive computing and artificial intelligence innovations. Volume employs 115 people across its three locations in the UK and its technology center The Colombo Centre of Cognitive Computing (CCCC) in Sri Lanka.

“Watson is probably about 80 percent of what we do right now. We are totally wedded to Watson.”

—Chris Sykes, Chief Executive Officer, Volume Ltd.

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Modernized applications

As a business-to-business (B2B) marketing services agency with a bias toward technology, Volume Ltd. began by building web applications for large technology companies.

The organization continues to foster strong relationships with its earliest customers because of its ability to drive innovation within customer relationships and applications. Therefore, to remain a competitive industry leader, the company constantly strives to introduce cutting-edge technologies into new and existing customer applications.

Although Volume was already highly inventive, its chief executive officer (CEO), Chris Sykes, a self-proclaimed futurist who has a fascination with technology, was looking for innovations that change lives and support people in an automated, controlled and consistent ways. The company sought to further optimize incumbent applications to help customers speed processes, boost revenue and improve productivity.

Intrigued by artificial intelligence (AI) technologies, Sykes began paying attention to various providers' cognitive offerings. In February 2015, Sykes had the opportunity to see the IBM® Watson™ cognitive computer in action at IBM's Customer Experience Centre in South Bank, London. "It was sort of a revelation,"

says Sykes. "We saw cognitive applications and smart machines as the next generation of content delivery mechanisms—from books, the internet, mobile, et cetera—yet in a controlled and consistent way. That's when we realized what we could achieve with technology like Watson."

The event prompted Volume to examine its portfolio of technologies to drive digital disruption and improve processes. Sykes explains, "Our strategy was to look at some of our incumbent client applications and see if we could optimize them further by making them cognitive." Integrating cognitive technology into already high-caliber applications could transform customers' businesses and users' experiences.

The organization recognized an opportunity to use cognitive technology to improve one customer's sales training and speed its sales cycle. The Virtual Consultant is a web-based sales performance optimization application originally developed in 2014 for communications provider Virgin Media Business Ltd. At the time, the application was a noncognitive learning management platform that generated proposals and hosted product training modules and customer presentations for salespeople.

"By making the Virtual Consultant cognitive, we could negate the need to create and update precompiled

training content and, instead, build a know-as-you-go platform," comments Sykes.

Using IBM Watson technologies hosted on the IBM Bluemix® platform and developer tools from the IBM Watson Developer Cloud, Volume built a prototype of the enhanced Virtual Consultant application in just 45 days. In addition to using the machine learning capabilities of Watson, the solution employs the IBM Watson Natural Language Classifier to interpret the nature of questions and return confidence-rated answers, as well as IBM Watson Dialog capabilities to respond to users through natural language. In combination, the services enable salespeople and customers to tap in to a knowledge pool using text and voice input and output.

When the Virtual Consultant application relaunched in mid-2015, it was the first cognitive learning platform and sales optimization application in the market. The project also proved a turning point for Volume. Inspired by the application's success, the company established the Volume.XO Centre of Excellence for Cognitive Computing and Machine Learning with renewed focus: to find opportunities to drive digital disruption by developing new cognitive solutions to help customers speed processes and improve productivity.

Extending human expertise

Among the Centre's first projects were an application for Castrol, a brand of lubricants from oil and gas giant BP plc, and two solutions that Volume will initially use itself: Susy™, a cognitive employee well-being application still under development, and the Digital Concierge, the next generation of web interface that slashes the amount of time needed to access information. Each technology uses the same IBM Watson application programming interfaces (APIs) but in slightly different ways.

Castrol Technical Advisor, developed in October 2015, is a virtual assistant that uses the Watson Natural Language Classifier and other services to answer technical questions from Castrol's customers and distributors. Trained specifically on the subject of marine lubricants, the solution addresses the organization's need to provide around-the-clock advice and customer service in the way of self-service, freeing its technical solution experts to focus on more complex issues.



Sykes explains: “About 60 – 70 percent of the questions customers ask are repetitive and not really technical. By having the cognitive Technical Advisor answer those questions, we’re helping Castrol’s technical experts focus on the 30 percent of the questions that are more challenging and fulfilling for them as employees.”

The Technical Advisor application, which went live in July 2016, answers about 85 percent of the questions it receives. It also helps differentiate Castrol in a highly competitive market and improves customer loyalty by shortening response times to questions and advice about marine lubricants. Because the solution’s architecture is repeatable, Volume can scale it to meet the needs of other BP brands or business sectors, such as aviation and industrial automotive.

Volume planned to use its Susy tool to connect the company’s websites globally, consolidate business applications and enable employees to access time sheets, benefits, news and other material. However, after a medical group in Australia contacted Volume looking for AI providers to help detect signs of mental illness in their patients, the project’s course significantly changed. Because Susy was using IBM Watson APIs, Volume was able to be flexible and nimble, dynamically adjusting the tool for changing business needs.

“We did some research and found that companies are losing millions of dollars through absenteeism because of worker stress, anxiety and low mood,” explains Sykes. “We wondered: if we created a smart work buddy that encourages dialogue with an individual on a daily basis, could we assess that individual’s mental state? We thought, yes, we could.”

Today, the Susy application acts as a “virtual buddy” in the workplace, extending the reach of human resources personnel and interacting with employees. It is also the company’s first application to take advantage of the IBM Watson Conversation Service, a platform as a service (PaaS) technology that adds a conversational interface to the tool so that workers can engage with it using text or voice in natural language.

“The Watson Conversation API is proving to be quite exciting. It makes it easier to train and tool the applications to make them fit our purpose more quickly,” says Sykes. In addition to employing machine learning capabilities, the application uses IBM Watson services to facilitate conversations. Language services from the Watson Natural Language Understanding APIs — Emotion Analysis and Sentiment Analysis plus IBM Watson Personality Insights and IBM Watson Tone Analyzer APIs—work to detect signs of sustained low mood, stress and anxiety. When the application

recognizes a potential problem, it offers to connect the employee with someone who can help.

“Susy is intelligent enough to know if you’re just having a bad day because you bumped your car in a car park,” explains Sykes. Still, the CEO is clear that the solution is not making clinical diagnoses. “It gets underneath the mask that many people put on,” he says. “For companies, it’s an informal and early way of intervening before someone reaches a breaking point or their attendance or performance at work is affected.”

Perhaps Volume’s most exciting and groundbreaking application to date is its Digital Concierge™, named internally as Lusy. Launched in September 2016 after three months of development, the Digital Concierge application transforms the Volume website into a cognitive website, enabling visitors to interact and engage with it through voice or text.



Sykes adds: “We’re really excited about the Digital Concierge because, in our opinion, it’s the next generation of web interface. Instead of navigating a website through drop-down menus and links, you ask it a question and get all the information you need.”

The technology uses the same base set of Watson services as the Susy application to understand and interpret questions, return answers and recognize visitors’ moods. Trained on a corpus of 16,000 questions pertaining to Volume, the application also applies Watson machine learning capabilities to learn over time, such as the various ways visitors can ask the same questions. The more questions people ask, the more it learns, thereby broadening its ability to answer even the most obscure questions relating to the company. If it’s unable to provide an answer, it forwards the customer query to a member of the client services team who can.

“Our Digital Concierge is a window into Volume,” says Sykes. “With it, we have the unrestricted ability to showcase what we’re doing with Watson and how people can have a natural conversation with a smart machine and get the information they want.” With IBM Watson, Volume upholds its corporate mantra, “optimizing human performance through smart machines.”

Improving business with Watson

Innovative applications have helped Volume advance its reputation in cognitive computing, in addition to becoming one of the first companies to be With Watson verified. This initiative provides Watson Ecosystem partners the opportunity to use the Watson brand in commercialized application and marketing materials. In addition, partners can join a growing environment of With Watson applications in the Cognitive App Gallery of the IBM Marketplace. Sykes credits IBM for its support. "IBM welcomes our feedback because, with some of the things we're doing, we're pushing the boundaries of what Watson APIs can do. It's been a really collaborative exercise. That's the difference between us working with IBM as opposed to other vendors."

Sykes also points to the ever-evolving portfolio of IBM Watson APIs for facilitating application development and speeding time to market.

For instance, by moving to the IBM Watson Conversation API, Volume reduced the training time for its applications by 96 percent, from one hour to two minutes.

Volume customers are benefiting too. For instance, before launching the enhanced Virtual Consultant application, Virgin Media Business sellers underwent extensive and ongoing training on 12 solutions to prepare for working in the field. With the cognitive application, they're market-ready from day 1, a difference that reflects on the bottom line.

"Virgin Media salespeople can query the technology as they go about their day, prior to a meeting or even when they're with a customer," explains Sykes. "It's just like having a natural conversation with a technical expert. What we're finding is that customer confidence ratings are up, sales cycles are shorter, conversion rates are higher and the pipeline revenue per salesperson has increased."

Castrol customers embrace cognitive technology for its self-service capabilities. Not long ago, customers often waited hours or even days for a response to their technical queries. Now, the Technical Advisor virtual assistant delivers answers in seconds.

"For the first time, Castrol can answer technical questions about marine lubricants 24 hours a day, seven days a week. Plus, the feedback we get from customers is 93 percent positive. That's an incredible statistic if you consider that there's never been a solution like this before," says Sykes.

Today, the agency is firmly positioned as a key provider of IBM Watson technology-based solutions. "Volume.XO moves us away from being seen only as a digital marketing agency and establishes our credibility to deliver cognitive computing and artificial intelligence solutions," concludes Sykes. "Watson is probably about 80 percent of what we do right now. We are totally wedded to Watson."

Solution components

- IBM® Bluemix®
- IBM Watson™ Developer Cloud
 - Conversation
 - Emotion Analysis
 - Natural Language Classifier
 - Natural Language Understanding
 - Personality Insights
 - Sentiment Analysis
 - Tone Analyzer

Connect with us



Take the next step

To learn more about IBM Watson APIs and solutions, please contact your IBM representative or IBM Business Partner, or visit the following website: ibm.com/WatsonDeveloperCloud.

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