NEW APPLIED NOW

IMPROVING TAXPAYER EXPERIENCE: REVENUE'S VIRTUAL AGENT

John Barron - CIO - The Office of the Revenue Commissioners (Revenue)

We were very interested in getting into artificial intelligence and natural language processing. The most common channel for contacting Revenue is still telephone and handling telephone calls is very expensive.

Put bots in and you can answer the call at any time day or night, any time at the weekend. So from a customer service point of view that becomes much better for people.

We worked with Accenture to develop a bot that could actually take a call, understand the call and answer the call.

The call comes in, connects to the cloud, we convert the speech to text, then we send that text to another part of the cloud and it understands the call intent, which converts the text back into speech, and that connects back into the phone system – and all that loop has to happen instantly because the customer is on the phone.

We learned very quickly that we had to be very specific about the questions we posed so we drive them down a certain path rather than letting them have a free speech interaction.

So a lot of it was round the design and having a very much customer centric and a focused target on what it is we want the customer to do with the bot. It is live, it is handling hundreds of calls a week, it has proven the technology, it is obviously a useful service, it is popular with customers.

What makes me proud? it is probably the first in the world. Despite what people think, having something answering the phone is not that common – most of the AI work is with Chatbots where people type in something – like we were taking in actual calls.

(Audio of voicebot in action)

Virtual Assistant: Hi, I'm Revenue's virtual assistant for tax clearance.

For security and so I can help you best, I'll need to look up your file. Ok. What is your date of birth?

Customer: August the 21st, 62.

Virtual Assistant: Ok. Just to check I heard the 21st of August 1962. Is that right?

Customer: Yep that's correct.

There is still a lot of lessons to learn, but I think technically we have proven that the technology can work, that's was the big thing we wanted to prove, you have to take the customer centric view.

It is all about driving the organization forward and this is all about – you know people talk about digital transformation, this is what it means. We've got to use that technology to enable the tax authority to do its job better and to provide a better service for customers, to cut costs and make ourselves more efficient and it is all in the public good.