Martin Fleming was interviewed by Boni Sones during the Cambridge Service Week Industry Conference, **'Bridging to New Service Technology'** on 11 October 2017

MARTIN: Martin Fleming, IBM's Chief Economist and Chief Analytics Officer.

BONI: Mr Fleming, thank you very much indeed for talking to the Cambridge Service Alliance Industry Conference podcast series today. We are looking at Bridging to New Service Technology. Can you tell me a little bit about your presentation, The Cognitive Enterprise, Improving the Power of Decision-Making? Why did you choose that title?

MARTIN: Well, we have a collection of tools and capabilities that we would know as machine learning, artificial intelligence, natural language processing, all of which come under the label of cognitive. The use of these tools has become increasingly important in transforming enterprises such as IBM to be able to deliver increased value and capability to our clients and improve our own performance.

BONI: Can you tell us a little bit about your business structure and streams?

MARTIN: We have transformation efforts underway across 19 different functional areas, looking at the business processes in these areas, redesigning, reformatting those businesses and deploying the skills of cognitive and AI and machine learning across these initiatives.

BONI: And how do you cope with the speed of change and keeping up with the amount of information in your ecosystem?

MARTIN: Well, we are ingesting large amounts of unstructured data, in addition of course IBM is a large organization and collects, in the normal course of business, large amounts of structured information as well. We are using the Watson data platform to be able to ingest all that data, bring it together in an organized format and then bring it to the compute capability that we need to access the Bluemix and the Watson APIs.

BONI: And that helps the clients and the customer base you have, process information and come to a decision, doesn't it? Because you've talked about taking, was it 30,000 pieces of news information? But you don't get that from Google, it's very original what you're doing.

MARTIN: Correct, that's right. The ability to improve our own internal decision-making by making use of all of the data allows for decisions in a number of different areas. The examples that I've used today were all in the sales and marketing space, to be able to more effectively price products, to be able to more effectively engage with customers through understanding what their needs are, and to more effectively respond to those needs is a critical piece of what we are doing here in improving our ability to serve our customers.

BONI: Just talk us through that kind of data analysis that you do. It was 30,000, was it?

MARTIN: Well, there's 30,000 news items per day, all of which of course are unstructured, we need to do two things with those news items. One is to be able to associate each one with a corporate entity, with the company that is relevant for that piece of data, and then understand that news item, whether it is going to triggers some event, whether that is a sales opportunity, whether that is an unmet need that the customer has, or whether it's going to impact our pricing strategy

BONI: You talked about an ocean of data and an iceberg of discovery, some might think they are sinking below the ocean, and they are being swamped by the iceberg. We know you have IBM Watson, but how do you convince your customers that you can make them see the pathways through all this data.

MARTIN: Well, we convince them by showing the financial benefits to the business of deploying the solutions that we've been building. Understanding where the value is being created, how the adoption of the tools is occurring, and then where the business impact is being seen. The advantage of the cognitive capabilities over more traditional analytics solutions is they tie quite clearly into business results, and it's those business results that become persuasive around their value.

BONI: Some of the terms you've used, transforming into a premier cognitive enterprise, you use the date the cloud, cognition, and then breakthroughs and insights, artificial intelligence. How do bring all these together to explain to a customer simply how you can transform their business model? Because transformation was a word that came up a lot, it's transformative.

MARTIN: Yes, it is transformative. And at the end of the day we want to communicate improved business results, being able to meet the newly emerging needs that clients have, whether they are internal organizations, or whether they are external clients, to be able to demonstrate the transformation of the business process and the result that solution delivers.

BONI: And what about IBM itself? Are you looking internally to change… Tell us about the internal transformation too.

MARTIN: We are focused on 19 different business processes, all of which are in the process of being transformed and are using the cognitive capability to help to both make the processes more streamlined and to produce better, more effective results, and as a result help to make our teams more productive so that they can focus on the high-value work that they need to do.

BONI: And in terms tips, business advice, whether you are small... We've heard from Alibaba, they are catering to various business streams, including they had seven case studies, but from the small SME that's working on a handheld device or a smart phone to the big factory manufacturing solar panels. It's the scale and the scope that's different in business today, isn't it? You manufacture on demand rather than produce a product and hope people will buy it. The whole nature of the business structure is changing.

MARTIN: Sure, and of course increasingly we're seeing even manufacturing become much more of a services business, the nature of the service provided to the customer has changed. There are a couple of rules of thumb, if you will, one is most organizations find their data are disorganized, so you shouldn't be slowed down or turned off by that, you have to make the effort to begin to work with the data that you have and then in parallel build the data architecture and data structure that's better organized.

Number two is focus on the adoption of the tools, there's always some resistance to things that are new and different. Then number three, focus on the way the senior leaders in an organization, whether it's a smaller organization or a large, view their business and use the tools and allow the senior leaders to become the advocates for change.

BONI: The example of this you've used at the beginning of your talk was the ice cream seller, you've said that everything used to be precarious, whether the sun came out or it rained, we didn't know the weather. But now you can plan every bit of that business model, and you can know every bit, you can know what is going to happen within an hour.

MARTIN: Yes, so forecasting sales at particular retail locations is a very important function for business, whether it's because of supply chain issues or revenue planning or hiring and retention. It has traditionally been a very wide range of error of being able to forecast at an individual location. Now with the tools of natural language processing and machine learning we've narrowed that error quite considerably, and are able to be quite predictive in terms of the performance of individual locations, and that improves the performance of an overall retail business.

BONI: We are certainly a fast-moving business structure led by data today. But just finally, in terms of the Cambridge Service Alliance Industry Conference, Bridging to New Service Technology, have you found the other presentations useful? We heard from Thales, we've also heard from Alibaba, and Emirates Airline, it's been fascinating.

MARTIN: Absolutely, Alibaba in fact I would go so far as to assert, laid out an entirely new business model for the Chinese business sector, the Chinese industry, given all of the challenges and issues faced by the Chinese economy, we've heard a view of the future. Likewise with Emirates, really fundamentally rethinking the business that they are in and the nature of the value that they are delivering.

BONI: And it's value driven, it's ethics driven.

MARTIN: Absolutely, ethics is an important piece of the work that we are doing. We need to be transparent, we need to be able to communicate to users. Why a particular result or recommendation is as it's being delivered. We need to be quite conscious of how different groups, demographic groups are treated by these tools. Ethics is something that's very close to the top of our list of concerns, in fact back in January we published a set of principles around cognitive applications that are very important.

BONI: We'll hang on to that word, transformation.

MARTIN: Absolutely, transformation is important.

BONI: Martin Fleming, thank you very much indeed for talking to the Cambridge Service Alliance Industry Conference, Bridging to New Service Technology. I've enjoyed it so much.

MARTIN: Great, thank you.