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Q&A with Sharon Daniels, Chair, CEO and Co-Founder of Arria NLG providing Business Analysts with Natural Language Generation (NLG) Technology that Turns Raw Data into Automated, Expertly Written Narratives in Seconds

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> "Arria NLG is right at the heart of Artificial Intelligence, truly coming to fruition in a way that is humanizing AI by giving data the power of language."
> - Sharon Daniels

CEOCFO: *Ms. Daniels, what is the concept behind Arria NLG?*
Ms. Daniels: Arria delivers Natural Language Generation (NLG) solutions and tools. NLG is an advanced artificial intelligence technology that turns raw data into automated, expertly written narratives in seconds, not hours or days. The solutions that Arria delivers includes the automation of enterprise reporting, financial reporting, pharmaceutical reporting, news and media story writing, and the ability to fully narrate business intelligence dashboards such as Tableau, Power BI and QlikSense.

Arria's NLG Studio was designed to be a sophisticated, yet easy-to-use tool for business users and developers alike. NLG Studio has advanced linguistic functionality providing users the ability to extract insights contained within data. Those insights can be instantly communicated in rich narratives that deliver the complete story or message contained with data. It's amazing to see the many different ways companies are using NLG Studio. It ranges from large enterprise companies to smaller companies who are building new businesses using our tool. As an example, Urbs Media and the Press Association were awarded a grant from Google to pursue their RADAR project which uses Studio to generate local news stories. I expect to be continually surprised.

CEOCFO: *How can you translate meaningfully when it seems that most translations do not work on a very basic level?*
Ms. Daniels: Natural Language Generation translates data into meaningful text. One of our large enterprise clients recently reported "100% accurate, efficient and consistent quality of report generated by Arria NLG with over 10,000+ words per minute NLG writing speed."
A simple way of describing what is possible with NLG would be to think about an Excel spreadsheet with multiple worksheets and tens of thousands of rows of data per worksheet. You can literally drag and drop that spreadsheet right onto our software and within seconds you have a

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fully written report describing the value and meaning within those numbers.

When trying to distil NLG into the most simplified version, you can think of NLG as the writer whereas NLP (natural language processing) is the reader who consumes what NLG technology writes. NLG begins with the data and unlocks the meaning to turn the data into language and then communicates it. NLP can then take over and use the language that was generated. I believe the integration of multiple forms of artificial intelligence is where we are headed.

CEOCFO: *Who benefits? What types of companies, what types of information might get onboard first with what you are doing?*
Ms. Daniels: The business analyst is a prime target. He or she has to wade through mountains of data. Enterprise reporting and Business Intelligence dashboard users are the early adopters. BI dashboards are a mature market but you are still required to interpret the message and meaning. Now, instead of just viewing a chart or graph, that chart or graph can be supplemented with fully written narratives describing the information in multiple dimensions. If you were just to rely on the visualization, as a business analyst, you would still have to dig deeper into the numbers to get more information. With NLG Studio you are able to narrate the entire dashboard. You can then literally drill down into the underlying data and instead of just seeing data in visual form you can get meaningful written text that describes exactly what is happening, why and where it happened and what to do next.

CEOCFO: *Would different clients want data presented in a different manner? Might some want more or less in the data report or does NLG decide what you get? What are the variations?*
Ms. Daniels: That is a great question! Everyone wants their data presented in their own way. There are some things that are more common across most enterprise clients. For instance, a P&L (Profit & Loss) report is pretty typical no matter what company you are looking at; P&L, balance sheet and your FP&A (Financial Planning & Analysis) report. However, sales reports are often very different from company to company. They want to see sales information in a format that is relevant to their organization. That is precisely why we have made our tool available to the masses. We have transferred the ability to build NLG applications allowing everyone from the business analyst, all the way to the developer, to use our tool to customize the way that their reports are written.

Arria recently launched its library of sample projects and starter packs to help users get started quickly and easily. NLG can be applied across many different industry sectors. The goal is to help accelerate production by providing a pre-built starting point which users can then customize according to their needs, the persona that they want to project, their own corporate language that they want to embed, and so on. We are empowering anyone with any skill level, with the ability to tailor NLG according to their application.

CEOCFO: *Is the world ready for NLG Studio?*
Ms. Daniels: Yes. NLG Studio is the result of listening to the requests that came directly from our clients, partners and prospects. They wanted a tool they could use themselves without having to depend on a vendor for professional services. They asked for a tool that was easy to use but

had the sophistication of Arria's SDK (Software Development Toolkit). They also wanted the ability to deploy on premises or in the cloud. The world is already using NLG Studio. We have quite a diverse group of users already today. We also work with global partners that are bringing NLG solutions to their client base.

CEOCFO: *What is different with what you introduced in January? What have people been using and what is now available?*
Ms. Daniels: With the release of NLG Studio in January, the world is now empowered to build their own NLG solutions. Today, NLG Studio for BI enables analysts with the ability to narrate any number of dimensions within their BI dashboard, going beyond narrating charts and graphs. You can also go straight into the data to extract insights directly from the underlying data. Some of the other vendors narrate charts and graphs, but it is canned pre-written text that cannot be customized by end users. We have brought to the world our very sophisticated NLG capability in a tool that is easy to use providing users the ability to generate advanced NLG on their own.

CEOCFO: *Would you tell us about ease of use and also customer support, should people want to have you direct them a little more in what they should be doing?*
Ms. Daniels: Yes. Natural Language Generation is about working with data to ultimately understand and extract value from. Everybody's challenge is, "I have all this data and they want to extract the information and meaning within it. Most people spend the majority of their time analyzing data but it is only when you have the ability to clearly articulate that information in near real-time where significant value gets delivered.

The ease of use comes when people are familiar with their data. If you imagine a business analyst, he/she is living and breathing and understanding what they are looking for within their data. Therefore, it does not matter if it is a business analyst or a financial analyst or if it is even a journalist. In fact, we were at one of the major news providers recently in New York City and they said that journalists are really quite analytical. We are analyzing information all the time before we write our stories. It is the people that are comfortable working with data already and looking for a tool to simplify their jobs, essentially; the process that goes into analyzing information and writing and reporting on that. The beauty of it is that you can do this in real-time. You can actually report faster, report very accurately and you can report more often.

CEOCFO: *What have you learned even in this short time that people have started to use the tool? What have you needed to tweak over the last couple of months?*
Ms. Daniels: We have found that people are more interested in the solution than the technology itself. Therefore, we will continue to innovate and refine our tools and starter apps to make it faster and easier to deploy NLG solutions. Users want built-in functionality to do the job without exposing a lot of the complexities. That is one thing that we have learned and we have come quite far. We have already advanced forward in this area. If you think about where Excel started and where Excel is now, the sum function is a perfect example, you no longer have to write formulas for basic functions. NLG Studio is similar to that. This is critical for widespread adoption. The world wants to be able to automate and scale. They want real time information. They want information that is

consistent and Natural Language Generation enables that. That is where the real value comes in.

CEOCFO: *What is your business model at Arria?*
Ms. Daniels: Our business model is to deliver NLG solutions through three channels; online (virtual), direct and through partners. You can sign up directly online. You can download Studio and try it for free. Then, if you like working with the tool you can license the tool and pay on a consumption basis. We also work directly with enterprise clients who want access to Arria's NLG expertise. We will always continue to get feedback so we can further innovate by working directly with clients. By working with key partners, we are able to scale and ultimately fulfil our vision of NLG everywhere.

CEOCFO: *Once they try it are people typically hooked? Do they recognize, almost immediately, what it can do and the value, ROI and ease of use?*
Ms. Daniels: There are ranges. Some people, when they know what they are looking to get out of the data, simply download Studio and start building their project. They take to it very quickly. There are other people that need a bit more help and in that case we have online training, starter apps, sample projects, training programs, and ongoing support, so it really varies. There are users that take right to NLG Studio and others who reach out for assistance. We cover multiple verticals and lots of different functionality, across the verticals. Where the ROI becomes instantly obvious when applying NLG is where you have information from a lot of sources that needs to be combined, integrated and presented to various audiences quickly.

CEOCFO: *Why is Arria NLG important? Why pay attention to the company?*
Ms. Daniels: Arria NLG is right at the heart of Artificial Intelligence, truly coming to fruition in a way that is humanizing AI by giving data the power of language. Of all of the things that a machine can do, it is the ability to take what the human mind does so naturally and that is "language". It is the most natural way to communicate. It is the easiest way to understand something; to articulate a message. Therefore, in this wave of AI, we are excited to be able to bring back the human aspect of artificial intelligence and that is the power of language, natural language as written text. It is still the best way to deliver information.

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