ENTERRA-ACCENTURE PODCAST
AUDIO TRANSCRIPT

AUTONOMOUS DECISION SCIENCE: THE NEXT FRONTIER OF AI

Speaker 1 [00:00:01] Good morning, we are joined in Accenture's New York City office. We have Lee Barrett, Managing Director of Applied Intelligence and Steve DeAngelos, the CEO of Enterra Solutions. And today you're joining us for a podcast on autonomous decision science and its application in the real world environment.

Speaker 2 [00:00:25] Steve, thank you so much for joining us. Before we just jump right in and talk about Autonomous Decision Sciences, ADS, do you mind explaining what you define AI as?

Speaker 3 [00:00:35] I think the reason why we ask that question as to set off definitions that a lot of people have a misnomer about what artificial intelligence is, the way that I define how we define artificial intelligence and Enterra solutions is having a machine reason in a human like fashion about data in order to make a decision that has a beneficial business outcome. Most people today define artificial intelligence as the use of a machine learning algorithm. Truth be told, there's nothing artificial nor intelligent about the average machine learning algorithm, right? So what we try to do is

create a mechanism where we define AI as computers that reason in a human like fashion and autonomous decision science. What our company does is the next step in the journey beyond artificial intelligence, where the machine cannot only make decisions and analyze data, generate insights, automatically make a decision with subtlety of judgment and reasoning like the best human expert or the best data scientist, but also be able to execute that machine speed with machine reliability, with the judgment of human rights. But this is not to say that this is how from 2001 A Space Odyssey, it is if it is practically aimed at certain business problems so we can learn and have enough domain knowledge about a part of an industry, that we could reasonably make informed judgment based decisions with subtlety, the way the best human would against a a constrained set of choice of a market. So, for example, we could we look at business applications and consumer insights, sales and marketing, analytics and supply chain in industries that our company works in. So in consumer products or retail. So we don't say we are our system reasoned about everything in the world, but it could reason about the business areas that we focus on in a way that is robust and reliable.

Speaker 2 [00:02:47] Very interesting. So you mentioned consumer. Why should consumer goods companies think about ADS or what's the benefit or even outside of CPG?

Speaker 3 [00:02:56] Sure. I mean, the the notion is we we have the benefit today of of being awash in data that we have tremendous amounts of data that we have access to. The

challenges making is analyzing that data, generating an insight and making a decision within a quick enough time frame that you could either mitigate risk or exploit a business opportunity fast enough, right. And the problem is most consumer packaged goods firms or retailers that we work with, we come to your firm and my firm with our very big multibillion dollar companies for hundreds of millions of dollars sized companies who have so much data that you can analyze the data fast enough by hand to make a decision within a decision cycle. So what we've tried to do was to build systems that would sense things to learn at the speed of the market so we could make a decision to generate a benefit for our for our clients quickly enough. And that's what it is.

Speaker 2 [00:04:01] That's interesting. So beyond the volumes of data and processing time, what other pain points are you addressing?

Speaker 3 [00:04:09] Well, the pain points we're addressing or we have subject matter expertize that is embedded in the heads of U3. So people who are who are skilled employees at a company have certain subject matter expertize there is another set of knowledge that comes through the analysis of data. So rich knowledge from, you know, looking at vast amounts of data, analyzing it, we understand things that are we understand behaviors or strategies that our clients are deploying in the market through the analysis of their data. We understand the strategies and tactics of their competitors through the analysis of data. So we derive knowledge from analyzing data. We derive knowledge from the experiences and the accumulated knowledge of of employees at companies, that we combine those two together into a into a system that has uses artificial intelligence in the form of semantic reasoning, symbolic logic to execute, to make a decision, to make choices as if the best human was making that choice, just that machine speed, because we've incorporated that knowledge from humans and we've incorporated the knowledge from. The analysis of data into a system that allows us to perform optimizations, we make decisions at the speed of the marketplace.

Speaker 2 [00:05:35] Very interesting. So as you're talking about that ability to pull that data to

make decisions like the best human, could you talk about a past example and the type of value that was delivered?

Speaker 3 [00:05:46] Sure. I mean, look, one of the things that we do is we're able to look at. The way that revenue management works at large companies, so one of the things that happens is during covid the rules of the game and supply chain changed, the normal baseline of demand was spiked dramatically up as people were emergency buying. There were what we call pantry loading. And then after they loaded, every time the human consumes something, every time a person ate a piece of pizza or either frozen pizza that they had bought from the store, they went right back out to store and replenished it. So we had a maintenance phase and then we had a new normal plateau of demand that was substantially higher than the normal baseline forecast, right. So what we were trying to do, we work last year with our clients was ways of understanding what that new new baseline consumption baseline forecasts were. So we're taking in data from syndicated data sources. We're taking demographic information. We're taking information about the pandemic. And we are understanding and predicting how the pandemic is going to affect the pantry loading, pantry, maintenance and and new plateau demand stages so we can then inform price and trade promotion choices very quickly. Now, that process that you would normally take to replan a category for a trade promotion and trade promotion is a temporary price incentive in order to motivate the purchase of a product by consumer through a retailer. So you go to a supermarket and you say you see a consumer goods item on sale, buy one, get one free. There's actually mass. And back to that analysis and back of that, that determines what we did the year. Should you put that product on sale with that retailer? OK, so the process of generating trade promotions typically took three weeks for best in class company to do that with our system, our ADS system, we took that down to three and a half minutes with 95 percent accuracy. So, for example, when you're looking at reclaiming the trade promotion calendar for a client, get three week process, but only let you replant once we ran hundreds of scenarios for

our clients being able to to plot out every potential what if what if scenarios that was possible in order to have them successfully navigate that pantry loading pantry maintenance phase that resulted in huge increases in sale and profit for our clients and in the back half of twenty, twenty twenty, when we were when we went back to executing trade promotions that were put on hold during the Q2 and Q3 of twenty twenty.

Speaker 2 [00:08:49] Very interesting. So in that scenario you're kind of describing the ingestion of data, the processing at speed, the insight recommendation. Then you got even to the execution downstream. And that's how we're thinking about that end to end process and what we're starting to define as intelligent enterprise. Can you explain or describe in terms of vision for the entire intelligent enterprise?

Speaker 3 [00:09:09] Sure. I mean, the the enterprise at a large company is a living, breathing organism, right? We are what we do at Enterra. We're experts in analyzing and controlling complex systems, a lot of the work that we did came out of analysis and control of complex biological systems and quantum mechanics. We brought those same analysis and control techniques to the world of big things and looked at analyzing and controlling the value chain of very large companies. So back to the world that we have where we're watching data, large companies have a tremendous amount of consumer data on upstream in their in their value chain. They have a large amount of sales and marketing data sales data for retailers, pricing information, trade promotion, media assortment, data of how products are positioned on shelves in the supermarket. And then they have a tremendous amount of demand and supply chain information. So all of that data needs to be captured. If we view a large public consumer products from a retailer as a living, breathing organism, what our job is to provide the elegant system that allows them to analyze and control their operations in order to maximize an objective function or a goal. The goal is to increase profit, increase revenue, increase environmental sustainable compliance rate, increase market penetration into desirable markets around the world. So whatever the goal state is, we help them understand that goal state

and then how to derive optimization solutions. In order to effect their their goal but assist companies don't live in isolation, the consumer analytics department, the marketing department doesn't live in isolation from the sales team who doesn't live in isolation from the supply chain. The problem has been up to this point. Our technology has not been able to go across the value chain and create one elegant system that could allow you to perform analysis in each of these areas. We get across all of them simultaneously, and that's what we do internally, providing analysis control capability for the world's largest companies.

Speaker 2 [00:11:28] So that's interesting. So profitability, growth, sustainability, these are common goals, trade promotion, assortment pricing. These are common tactics. What's the differentiation that Enterra's offering in these areas?

Speaker 3 [00:11:41] The differentiation is threefold. One, which appearance of the data, like with an electron tunneling microscope and find the combination of variables or find the components within the data that drive and explain behavior. So you may have heard of blackbox machine learning algorithm we use we have a glass box and so our machine learning capability goes into the data. But actually, unlike a black box where it's opaque is translucent, you could see the combination of variables that are responsible for the actions that we observe with within the data. Once you can see those variables, you can control them. You know what you actually control. So we have a glass box engine that allows us to understand truly. And it's what is happening within the data that we get, the second capabilities we're able to, given that those variables becomes think of them as control knobs in an optimization. So almost like a a Air Force jet fighter where they have control knobs on their on their dashboard, we're able to see what control knobs need to be on the dashboard and then we're able to set the control knob settings in order to realize the mission objective. OK, and then lastly, we're able to make decisions in an automated way with subtlety of judgment and reason, much like the best human expert was. So we're able to introspect data to form optimization and reason and make decisions automatically using a

technology platform that allows us to perform optimizations. Like I told you about trade promotion, where we move from three weeks to three minutes with ninety five percent plus accuracy rate. And so with that speed and agility comes the ability to get to the dance first, to get to the consumer first with the right offer and to outcompete their competition in the market space.

Speaker 2 [00:13:46] Speed to value is critical. So everything you're talking about is resonating. It's very exciting. Can you talk about how Accenture and Enterra have worked in the past and what your vision is on how we go to market together?

Speaker 3 [00:13:56] Sure. I mean, look, our job is to have one plus one equals five, right? So we are a technology firm. We build reusable technology gear that's durable across a company and across companies in an industry and then across industries. They Accenture brings into an ability to integrate data and to perform the change management and management consulting work for clients that are needed to transform the operating model of those companies operating model needs. What's the the business model at the company? And if you posit that you can analyze and control the large complex system through the specific key components of the value chain, then you'll you'll operate that business differently. So Accenture is at the forefront of helping those companies transform their operating models in order to move from an analog state to what we call an intelligent enterprise, one that is run through the analysis of data to the decision making that comes from the fusion of the best humans with with the analysis of data and the ability to systemically take an action within a decision cycle in order to win in the marketplace. So our goal literally is to create an asymmetric advantage for our clients. We do that through the use of technology. That technology is activated or actuating within the company by the the combination of interest, technology and Accenture management consulting and data integration technology services that help the company transform from the current state to their future state, which we call an intelligent enterprise.

Speaker 2 [00:15:51] I couldn't agree more. And as they're trying to move the intelligent enterprise, doing it at scale has been critical. It's one of the things we've seen organizations struggle with. So adoption, how do we do change management; I think that's some place that we really could partner together. So I want to take the time to thank you for joining us today, sharing their solution, the stories, your insights, and look forward to what we have in store in the future.

Speaker 3 [00:16:16] Thank you very much. I appreciate it.