



INDUSTRY X: CUSTOMER CENTRIC INNOVATION

VIDEO TRANSCRIPT

Tyler Pakradooni:

Hi, all. My name is Tyler Pakradooni. I have over 13 years of experience operating within consumer goods across the supply chain and R&D and with a focus on product development. In addition, I have expertise in enhancing the manufacturing and R&D value chain through cloud-based analytics and insights. Russ talked a bit about the digital thread earlier, and hopefully, I'll expand on that a bit and how this comes to life at a use case level through a demo. Again, I will be rooting my story in customer-centric innovation with view of design to margin and how that comes together, so if you could go to the next slide.

All right. In order to maintain a customer-centric view in a design to margin environment, a company needs to build intelligence that pulls in data and insights from across the business to enhance specific use cases and processes. This increases effectiveness ensuring that the impact to the consumer, to operations, and to margins are considered in that story. I'll give a quick example to bring this to light at a very specific use case level; something we worked on for a client started in the plant: monitoring a confectionery production line to reduce waste. On the line, we were monitoring moisture present in the production environment. Using that data, we uncovered how different combinations of ingredients impact the line efficiency and therefore waste. This gave us a clear view of the impact to cost in production. Then, publishing this information or this type of information to product developers gave

significant more clarity in the design process as to the downstream impacts of their decisions. They had a much clearer view in terms of, as they were building their products, what each change and tweak they made would have in terms of cost efficiency and whatnot in the plant. That's that. Next slide, please.

As we look across the value chain from product development to plant, we've identified multiple areas for building in enhancements that will allow you to include impact to consumer operations and margin into an end-to-end story. What we'll be demoing today is called out within that little box where we'll showcase how to enhance product design with a suggested design, including components of design to margin within that story. All right, next slide, please.

As we look to build out a roadmap of how to enhance the formulation process in this case, we mapped out the various data inputs, both internal from enterprise applications, as well as external data sources and third-party services. Well, not all the data attributes are shown in the demo today. Through my voiceover, I'll hope to show you how we bring the design to margin storyline, how we plan to bring that design to margin storyline to life further ahead in our roadmap. Next, please.

In today's CG&S companies, we see tools that apply intelligence to and account for only a portion of these data sources. Further, companies rely on individuals to comprehend, develop insights, and then apply them throughout the process. What we often see is



these considerations get lost and all the push to get products to market fast, based on an initial brief that is often proved wrong throughout the process or changed, et cetera. What you'll see today is how we can use intelligence to ensure these factors are accounted for throughout your value chain and how we can bring a bit more in terms of automation to that process to enhance it through intelligence, therefore, increasing speed and effectiveness. Right, next.

For the design to margin story, in our use case product design, the focus will be on cost and pricing. Tom, who you'll hear from later, will bring to life, a bit more in a deep dive, how these elements can be used to target specific consumer segments. But I wanted to focus on how to bring to life how these factors can be leveraged to build an intelligent formulation capability, again, focused around suggestive design. Later, you'll also see a demo of a tool from aPriori. This is an example of a tool that can produce insights that can be published to other functional areas along the value chain and use to build intelligent capability and then brought together through such a platform view that we'll be showcasing. Next, please.

Before I start taking over screen-sharing here and going through the demo, just a few points. For today's demo, you'll see two key data sources, integrative and active, in the suggestive or intelligent suggestive design component. The first is around publicly available recipe reviews, a source we found online that we pulled into our platform. Our intelligence then deconstructed the recipes into their individual ingredients. We used that information to process which ingredient combinations result in the highest consumer response. The second data source we used was molecular flavor or molecular blend, or flavor compounds to understand what ingredients go best together. While price is shown and is part of the roadmap, it's not currently integrated into our algorithm that produces the suggestive design elements of our tool. Alright Boris, mind

if I take over. Okay. Hopefully, everyone's able to see my screen.

Russ Rasmus:

Yeah, it looks good, Tyler.

Tyler Pakradooni:

Great. Get right into it. I'll try to build up a scenario here. The persona that we're looking at is a product developer, as I mentioned. He or she will get a brief from marketing stating that there's issues with digestion in the market. Therefore, the product developer determines that they need to look at nutritional targets most closely correlated with digestion, in this case, fiber. What we'll do on here, we have our ingredients listed. We have our visualization of the recipe itself, and on the right, we have, as I mentioned, the different factors that we're counting for.

In here, what we'll say is we want to look at digestion. Therefore, we'll adjust our fiber target content. We'll then have the ability within this visualized circle here to see what the impact of each ingredient, in terms of what that specific target we'd like to get at. By adjusting our targets, we have a feature that shows you how much each ingredient contributes to the content, as I mentioned. You can also here look at the sensory components of it. If you'll see in here, these are the different impacts or sensory level perceptions from consumers about how they look at that. You can also address or adjust each of those and then see the impact, again, of each of these particular ingredients on that sensory profile to your client.

From there, we look to simulate changes to the recipe, our intelligence based on those criteria I mentioned to the right that we adjusted. If we go down here, you'll have a suggested ingredients portal. These will essentially adjust the recommended ingredients to add based on our estimated recipe review value, which you'll see up here. You'll also see the new targets that we set here. That recipe value is essentially consumer perception as well as the molecular



and flavor compounds that go best together; again, the two sources I mentioned that are taken into account. This here will essentially be a ever-moving or ever-adjusting list. You can also see where we visualized, for the moment, cost. We pulled in ingredient costs at the moment. That would be what all your ingredients would cost come together. We'd also want to look at after processing what the costs will be and, essentially, to enable design to margin, we will include various elements of cost, including material, production, supply chain, et cetera, as well as price and market dynamics, and beyond, to include these considerations in the output of recommended ingredients and provide a clear view on impact of changes to recipes as you're formulating.

You then have the ability to reformulate within the UX and simulate the impacts to the recipe live within the engine, all of this to show you how you could bring these sources together to build a more efficient and effective product design capability to get the right products to market faster and increase your specific visibility to understanding what the downstream impact would be as you were going through your formulation. That's the basic demo that I wanted to showcase today. Anything anyone else wants to add before I pass it on?

Russ Rasmus:

Yeah. Tyler, this is fantastic. For our attendees, hopefully, you can start to see. This client started their digital and analytical journey for DTM, obviously, on the innovation side. This is really interesting. Taking these consumer insights and using it with their own formulation expertise, so start to come up with, what's that perfect formulation for a particular segment of customer and particular product segment. Where they're going with this journey, that is along that DTM journey, is there going to be, "Okay, great. How do I get pricing and market share actually mixed into this? We're doing notional at this point because of what we've

seen in the consumer reviews, but let's actually then put that out there and get a pricing and market share estimate. Then, also understand what's the ingredient cost for that part of the world, where it might be manufactured. and then, quite frankly, what's the processing cost to manufacturing.

Tyler Pakradooni:

We built a number of these product configurators for multiple clients across consumer goods, from tobacco, food, and beverage, et cetera. It's always interesting to see out there. The big differentiator is the data sources that we can now pull in versus legacy or traditional tools. But I think the storyline here is quite powerful. It's not just sensory and things that touch the consumer. But it's also downstream impacts in the plant and being able to bring those understandings together into an intelligent engine and how those fit within different areas of your value chain in terms of how you can enhance processes and make people's lives easier. Boris, if you could take back over.

Russ Rasmus:

Yeah. Any questions from the attendees on the demo or any observations around the innovation side of the equation? Don't be shy.

Clara Ganimede:

Hi, Russ. Hi, Tyler. Clara, speaking. A typical question, which we typically get from clients, is how is it to differentiate from current offering available in the market?

Tyler Pakradooni:

Yeah, no great question. Just to be clear, this type of tool is not intended to replace existing enterprise or legacy applications per se, but it's, instead, intended to enhance them. In terms of where it's differentiated, we start with, I would say, intelligence built between many unique data sources. Second, it's the ability to quickly pull in new and interesting data sources and



adjust the algorithms accordingly based on what's happening in the market, how quickly you need to react to different things, and what types of new and unique services are coming into the market that will provide you different levels of insights versus some of the more traditional types of IRI and reports and things you get on the market. Also, this is simple and thought-out UX design for the use case compared to many tools in the market that are quite dated.

Clara Ganimede:

Thank you.

Russ Rasmus:

Hey Tyler, what's the long pole in the tent, I guess, as far as getting something like this piloted or started within an organization?

Tyler Pakradooni:

You really need to focus on targeted use cases that you want to address. You do need to start small. While you want to have an end strategy, both from a technical perspective, as well as a capability, your use case roadmap that you want to build to, it is important to start small and pick a real business problem, one that is both scalable across your business and will have enough value that you'll see other groups in other markets and parts of the organization interested in scaling out. But being quite targeted allows you to deliver value quickly and then justify that scaling. Yep.

Russ Rasmus:

Great. All right. Thank you, Tyler. Great stuff.