Jessica LOVE: Watermelon Oreos. They sound...not good. To me, at least. Well, to a lot of people, because they didn't last too long in stores.

But if you happened to LOVE these Oreos…you're the kind of customer that brands should fear.

Eric ANDERSON: You're this bellwether, not of success, but of failure.

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LOVE: Eric Anderson is a marketing professor at Kellogg. And in 2015, he and a team of researchers looked at customers' purchasing behavior at a national chain of convenience stores. They wanted to sniff out patterns that could help them predict how certain products would perform. What they found...was unexpected.

ANDERSON: If you reliably buy things that fail, you're going to do so again in the future, meaning that if you're the kind of a person that bought Watermelon Oreos, another product you buy is also likely to be a failure.

LOVE: The lesson for marketers is this: Positive customer feedback isn't always a great thing. Pay attention to the people who fell madly in love with the defunct...like Cheetos Lip Balm. This is a REALLY useful thing for companies to know as they conduct market research, or decide whether to discontinue a product.

But there's a bigger takeaway here. And that's all that goes into discovering these kinds of insights in the first place. You need to be thinking holistically about your entire business--not focusing JUST on sales or focus groups. And you need to be collecting and analyzing a lot of data. Analytics and AI were used to uncover this insight. And for companies that want to glean their OWN insights from AI, the process starts with managers thinking broadly about and being open to the art-of-the-possible.

And there's a related topic managers should keep in mind. To analyze and derive insights from massive amounts of data may require new approaches. Simply having the data may not be enough.

ANDERSON: One of the big challenges inside companies today is that you have processes for nearly everything...you have a process for doing financial reporting, for managing supply chains…but if you go back and ask yourself, "do we have a well established process for doing AI and analytics in the company?" the answer, most places, is "no."

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LOVE: Welcome to the Insightful Leader. This episode, we break down some advice Anderson imparted at our Insightful Leader Live event. You'll hear how to think about building analytics and AI processes that are capable of transforming your business… cyrstusiness leaders need to start the whole process by thinking about what problem they want to solve...and they'll need to

learn a little more about how AI works so they can hire the RIGHT people and finally put a system in place that will take them from thoughtful analytics processes to transformative business decisions.

[MUSIC]

First things first: You are going to hear us use AI and analytics interchangeably throughout this episode.

These are NOT exactly the same thing. Analytics is the process of turning data into knowledge. And when a process is automated and can perform "intelligent" actions such as learning or making inferences, it can be called AI. But importantly, Anderson's big-picture advice applies to both.

Moving on...before you even begin to THINK about gathering data and funneling it into an algorithm, Anderson says you need an actual problem to address.

ANDERSON: There is this perception out there that, "if I get all of this data, and I get this super sophisticated model, and I hire some really smart data scientists, I'll be able to uncover all the insights that Eric just talked about, right? Then I can do that too." And the answer is, "not quite." You've got a number of priorities inside your business and you really want to be able to step back and ask yourself "where are the problems that AI and analytics can create the most value? Not that they could create value, but where are my highest priorities?"

LOVE: You'll need to go in with a plan and direct your resources accordingly. This allows you to better understand what Anderson calls the art of what's possible.

Let's look at an example of an HVAC company. Anderson says the business was looking for ways to engage customers beyond one-time purchases of equipment. So it worked with a convention center...and did something kind of cool.

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ANDERSON: They put these massive things like chillers that they install to provide air conditioning for the convention center, but it's throwing off tons and tons of data. And what they did is they started using that data and combining it with AI models, and they determined the best way to operate the convention center, to provide the ideal humidity, the ideal temperature — and it's a complicated problem because you've got tens of thousands of people moving in and out of spaces — so you have to understand the flow of traffic, you have to understand current conditions inside and outside the building. But they used AI and analytics to better operate their convention center. So start sort of shifting your entire mindset away from "we're building machines — in this case, chillers — that last 20 years and we talk to our customers once every 20 years when they need a chiller" versus, "we're in there every day talking to them about, is it working correctly? Is this the humidity level you like? Is this the temperature you like?" And it changes your entire business model from start to finish.

LOVE: By asking a question like: 'How can I increase the amount of business I get from customers?', the HVAC company had a place to start. It could now think outside the box on possible solutions.

Which leads us to our next point. You can't think outside of the box if you as a leader don't know much about how AI or analytics works.

That's why, Anderson says, you can't just hire data experts and let 'em loose on your data. People at the top need to play a role in this process, too.

ANDERSON: Business leaders need what's called a working knowledge of data science. This does not mean that you are a data scientist. What you need as a business leader is to have this working knowledge, and when you have this, what we think you have is intuition. You know enough to talk to everybody, to sit through meetings, to make decisions.

LOVE: If you're that business leader...having a base-level knowledge will help you ask the right probing questions of your data scientists. Which is key because you have a comprehensive understanding of your business, and your data scientists might not.

The movie "Moneyball"...based on a true story...illustrates this pretty well.

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LOVE: For years, recruiters for baseball teams had used certain metrics like hitting, fielding and base-running... to predict a player's ability to win. But in the 90s...the manager of the Oakland A's...Billy Beane…decided to see if other metrics led to wins. So, working closely with a data scientist, he tested out some theories and found that there were other overlooked pieces of data that translated to wins...like players' on-base percentage and slugging percentage.

Beane didn't need to know how to work with the data on a granular level. But he deeply understood baseball, and he knew what data COULD do and it helped him move forward with some theories.

Now, we do NOT have the time to offer up a mini-lesson plan on the basics of randomized controlled trials or machine learning….but we WILL tell you that you can easily find the resources you need to build up your knowledge--perhaps by taking executive education classes from the comfort of your home.

ANDERSON: Online training for the data science part of it is so democratized now...that if you want to get skilled up, it's not impossible to do today.

LOVE: You can go as deep into this as you want. Here at Kellogg we offer a new MBAi program--in collaboration with Northwestern's McCormick School of Engineering, which Prof. Anderson actually directs. And your friendly Kellogg Insight team actually worked with faculty on a free e-book you can find on our website. It's called "The Marketing Leader's Guide to Analytics and Artificial Intelligence," and it will get you started with some basics to up your data game.

Okay, so, once you've got a problem you want to solve for your business, and you've taken the time to learn more about how AI works...you now have what you'll need to hire the RIGHT people to make the science a reality.

Because, Anderson says, data scientists are not a monolith. They have different specialties.

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ANDERSON: Suppose all I care about is predicting things in the future. I want to predict…does a wind turbine fail? I want to predict if a customer is going to walk into my store. Those are very clear predictive analytics problems. If that's all you care about as a leader, you want to hire people who are experts at predictive analytics. Suppose you say "no, that's not what I'm interested in. I want to improve my business. I want to do a better job at marketing so that customers don't leave. I'm not trying to predict things — I want to use these tools to influence my business and develop better business processes." Now you're in the world of saying "what I want is...I want to hire data scientists who are more social scientists."

LOVE: This latter expert — the one you want to bring on board to boost your marketing efforts — could be a social scientist...like an economist,..a sociologist...or even a political scientist. They'll be trained on how to run experiments...like A-B tests, which test customers' responses to two different versions of something...to see which one is more effective. These professionals are experts in human behavior...in how people think and act…and they can use those skills to improve sales.

Experts who specialize in predictive analytics are different. They don't necessarily know the ins and outs of running an experiment. But they can use data and analytics to determine WHEN a wind turbine will fail, for example, so that the wind farm operator can preemptively send out a repair technician BEFORE it fails.

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Once you have the right PEOPLE in place, Anderson says you're also going to want to make sure you have the right SYSTEMS locked in...to tie everything together. And that's why, finally, you're going to need a framework that takes you from data science to business decisions.

ANDERSON: One of the examples we like to give, is that we have to connect the science to the business. So imagine I have a telecom company. And I'm interested in managing customer churn, and so a data scientist says "great, I can help you manage customer churn. I can build a model to predict customer churn, I can tell you what factors are affecting churn, and I can even maybe tell you how to influence what's happening with churn." But if you go up to a higher level in the company and you move beyond, say, a manager, you might say, "well, what do you care about? Do you care about profitability? Do you care about market share? What are your goals here? What are the overall business goals?" And that forces you to think about, "well, I can build a model that measures customer churn...helps me manage customer churn." But the business cares about things like gross margin. they care about market share, they care about profitability. So how are you going to connect those two worlds? And the connection happens through processes and frameworks. You have to have a process to connect analytics and AI with the business outcomes you care about.

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LOVE: If you don't have a system in place for making sense of your data, for example, you might have managers in different business units making decisions that serve different purposes. So you're going to want to develop a strategy for how certain data can be used to further the organization's goals, as a whole.

To recap: AI has been so buzzed about in recent years...that companies are scrambling to implement it in their own operations...But many of them are doing it without really thinking about whether it's right for their business' goals. So Anderson says that...Before you do ANYTHING with AI and analytics...you'll need a problem to solve. And you'll need to understand how the science works — even at just a basic level — to decide if AI is the right vehicle to solve that problem. This rudimentary knowledge of AI and analytics will ALSO help you hire the right data scientists to bring your plans to life...and it'll help you get a system in place to make sure everyone is working towards achieving the same goal.

And that, my friends, is how the Watermelon Oreo cookie crumbles.

[credits]

This episode of The Insightful Leader was written and mixed by Laura Pavin. It was produced by Jessica Love, Fred Schmalz, Emily Stone, Maja Kos, Isabel Carter and Laura Pavin. Special thanks to Eric Anderson. As a reminder, you can find us on iTunes, Google Play, or our website. If you like this show, please leave us a review or rating—that helps new listeners find us. We'll be back in a couple weeks with another episode of The Insightful Leader.