

## THAT MAKES CENTS



### Fresh tech for fresh food

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**Bobby Stephens:** Hello, everyone. Welcome to That Makes Cents. It's Deloitte's podcast on all things consumer. I'm your host, Bobby Stephens. On today's episode, we're exploring a critical topic, both globally and locally: the future of the fresh food industry. We are super lucky to be joined by two industry leaders, Mike Balint, Walmart's director of fresh flow supply chain, and Josh Mellinger, a fresh supply chain leader with me here at Deloitte. So let's just jump right in. Mike and Josh, I'd like to invite you to both introduce yourselves and, frankly, just share a little bit about your work before we get started. Mike, why don't you go ahead and start?

**Mike Balint:** Bobby, good morning. Thank you so much. Appreciate the opportunity to

be here. So yes, as you mentioned, I work for Walmart on their fresh supply chain. My team engages from the field all the way to the customer, so it's truly an end-to-end scope of work that we have.

We've been solving for a wide variety of issues centered on delivering the freshest food possible to our stores and to our customers. And this is something that, I think, is a pivot inside of supply chain, specifically, with what I've seen inside Walmart, where supply chain has historically been looking at cost reduction, safety, level of service, continuous improvement, accuracy. Those are things that have historically been a part of what supply chain objectives are. My group brings in a

lens to say, "What is the impact on freshness?" As we make decisions, as we look at how we're trying to improve those objectives, what is the impact on freshness? And do we understand what that is, and is it the right decision? Safety is always a right decision, but it's something where we want to make sure that we are understanding what we're doing to the food inside of our supply chain so that we understand what we're delivering to our customers. And so this has been just an area of work for me that has been truly fulfilling and something I've really, really enjoyed.

**Josh Mellinger:** Hey, I'm Josh Mellinger. I am a digital supply chain and data analytics practitioner. I co-lead Deloitte's Future Fresh market offering, and essentially what that

means is, I get to spend every day helping companies implement digital solutions that change the way that we connect with food and the food value chain. We're fundamentally changing the way that we buy, make, and move food in this country so that, hopefully, in kitchens and restaurants, food manufacturers, grocery stores, and, ultimately, people's homes, food looks better, it lasts longer, it's more nutritious and, hopefully, it's also more affordable. So when customers pick up the products, they smile, they put it in their basket, and I think that's really important. With more than 40 percent of the food in this country that's going directly into the garbage, it's not feeding people who need it, and it's not feeding the bottom lines of companies who want it. So I think it's an amazing space, it's ripe for disruption.

**Bobby Stephens:** Awesome. Thanks, Josh. One of the places that I wanted to start is really on the consumer. It's the theme of this podcast, and you both hit on it in your intros in terms of fresh and food. And really that the consumer kind of drives a lot of this. So if we first take a look at research, many sources of research and data indicate that consumers want more and more fresh food than ever before. In fact, a survey conducted by Deloitte just this year shows that two out of three US consumers report they're buying more fresh food than they did just two years ago.

And in addition, retailers are, of course, allocating more space to the fresh perimeter to meet that demand from the customer. So when you take a look at this, you've got key drivers like quality, freshness, convenience, and, of course, good old-fashioned price that are driving how people shop in this category. And sometimes those drivers can be in conflict with each other. So, help us make a little bit of sense of this complex element, especially from the consumer side. What are some of the changes you've observed in the way consumers think about fresh food in recent times?

**Josh Mellinger:** I will say that some of the most interesting research I've seen is on kind of the different considerations across those customer groups. But, without a doubt, we've hit it, from Mike's intro and

talks about the evolution of supply chain to the fact that people actually want high-quality food, whether it's on an airplane or at a gas station. It's that with high-quality, fresh food, people want this consistent food experience. And, right now, about 30 percent of the perishable items that are sitting in a grocery store don't actually meet customers' basic expectations.

And I think it's kind of crazy. It's like we live in this world that's more connected than we've ever been to, essentially, everything. And we're more disconnected from our food than ever before. We've got this food structure where we're dealing with this complexity, but we've got a consumer who says, "I don't care about the complexity. What I want is transparency and trust in the system." And I think that consumers are really going to redefine the way that we think about quality. So I think these elements of trust, experience, convenience that really were not a topic 10 years ago, they weren't even possible five years ago, are really coming to the forefront of how consumers shop and interact with their food.

**Mike Balint:** Josh, I think you hit on the convenience factor. And I think about a couple pieces. I think about the fact that consumers today are looking for the same selection, the same assortment of produce all year long. And 30 years ago, there were items that were always available all year long, but there were seasonal items, and you knew that when that produce was in season, that was when you bought it because that was when you were going to get the best produce. And today, there is an expectation that that same assortment is no longer seasonal, but is annual. It is available at all times. And so that changes your growing regions, which changes your supply chain requirements and increases complexity.

And all through that, we still have to make sure that we're delivering the same quality, the same freshness of produce, regardless of where it's sourced, where it originates from. And so I think the piece around convenience truly is something that has impacted supply chain and increased the requirements of our supply chains to be able to continue to be agile and fast and be able to manage multiple places where produce can be coming from.



I think the trust is another key point. Our customers absolutely want to, and need, and require that we are handling their produce in a way that is responsible. That we are making sure that it's safe and that we are giving them the best. And so that transparency is one that, certainly, we've seen increase tremendously that our customers want to understand exactly where it has been coming from. And to be able to know how old the product is, in certain cases. They want to be able to see those pieces.

And so I think the complexity that has been introduced into supply chain over the last . . . probably a decade now, certainly, has increased and put pressure on just how well we can take care of our food as it moves.

**Bobby Stephens:** I'd love to build on that just a little bit. You mentioned, Josh, around sort of the battle between convenience, or at least I would see it as a battle between convenience and transparency at time. Those two elements could be at conflict with each other. And Mike, when you mentioned sort of the shift from what used to be very seasonal products, which inherently gives you a little more trust in the quality of a fresh item versus expecting it to be year-round, how do those conflicts start to really introduce supply chain complexity? And what are some of the major shifts that you can help our listeners understand on the supply chain side of this?

**Josh Mellinger:** Yeah, I think it's important that when we talk about fresh food and fresh supply chain that we realize that there's kind of two elements. There is the

element that actually gets you product, whether it's in a grocery store or a restaurant. And then there's this secondary element that's really hard to see. Mike talked a lot about freshness or quality. But you're actually delivering both. And I think that's such an interesting point that you actually are delivering two things, but one of those things is really hard to see.

And so one of the trends I've seen coming up in the restaurant industry as well is this notion that hey, consumers are not always right when it comes to food. In fact, consumers understand very little about the food that they consume. And I think that idea is kind of crazy if we think about the fact that these are things that we put in our mouth, we actually eat them, and we actually know more about pretty much everything else, right?

But one of the things that I love to do is stand in a grocery store and watch people shop for berries, because you get this really good sense of how people judge quality. And there is this moment where, if you stand and watch somebody buy blueberries, where they shuffle the packages of blueberries and then they have this classic *Lion King* Simba moment, they hoist the blueberries up to the sky, they look underneath, and they see if there's any juices that are there. And if there are not, they smile. And if you get a really good experience, you'll see somebody open multiple packages of blueberries and put them together, and you're like, "Wow, there's a lot of effort that goes into buying blueberries." And that same customer walks away and grabs a couple oranges, some russet potatoes, and frozen meals, and they leave the store.

And so you think about how much time went into that, it's like customers have very little understanding about what the rest of quality looks like. But that means that in the supply chain, you've got to holistically manage this freshness, right? No one wakes up and says, "Today's the first day of strawberry season. Let me run to my local grocery store and buy them." What they do is they buy more strawberries when they look good, and that happens to be when strawberries are in season. And so Mike

brought up the complexities of not only the growing regions, but you've got local food that's got to be integrated into global sources. So the customers both get that eating locally concept, but they get high-quality food that they can enjoy.

**Mike Balint:** Josh, just sitting here listening, there's a couple pieces that I think about within supply chain.

Typically, there's this view that we have cost reductions. But when we start talking about fresh food, cost is important, but time becomes the objective because the longer that the produce is sitting inside of our supply chain, whether it is the grocer's supply chain or it's the actual grower's supply chain, the more negative impact we have on the quality of produce and the more we increase the chance of actually throwing away that food before we even get it to the customer. One of the things that we're starting to look at is, as online grocery picks up, it offers a new situation, a new problem that has to be realized. We have customers that will come into our stores, and freshness is the sum total of what they see. The presentation of the produce department, the broad assortment, the freshness can pop from a distance. And it gives that initial feel.

But as online grocery picks up, we no longer have that experience inside the store. We now have an experience where a personal shopper is putting together that online order. So now, instead of having the sum total of the assortment, you have this place where now it is what actually got placed into the bags down in the trunk of your car, and you actually don't see it until you get home.

And I think there's two different pieces where you have this impact on freshness now. We have this online grocery piece of like, I only get to see the individual piece of produce that I ordered, or I get to see the full assortment. I think on the other hand, too, we have a piece where we know that, through data and through surveys, that customers choose the store they shop at because of the freshness that they perceive with that grocer.

One of the things that I have been seeing personally is that customers are now making a choice around whether or not they do online grocery based on whether or not they believe that someone can pick out the freshest produce for themselves. And Josh, I think that gets back to a place where we were talking earlier around do customers have the best understanding of what fresh truly is and what high-quality produce is?

**Josh Mellinger:** That time element is so important, but maybe a different way to say this is that what customers are actually good at seeing is not something that's high-quality, but it's low-quality. So when you see rotten apples, next to good apples you know which ones are rotten, you actually only perceive that the other apples are good because they're not rotten.

Now we live in this world of convenience where an apple shows up at my house, and it's very hard to tell whether this is a good one or not, and I have to trust that somebody picked out this produce for me. And I like what you said there around convenience and people's trust in sort of the brands and who's going to pick out their food for them. I think this is the place where you've seen online grocery fail in the past, where if you get a portion of the order wrong, people feel like, "Now I don't have the things that I need." And so all of a sudden, it's less convenient for me.

**Bobby Stephens:** Josh brought up around 30 percent of fresh products are not meeting consumers' expectations on the shelves. Sort of parsing that out is not just freshness, but the right type of freshness, is really, really interesting and, I think, adds to the nuance of this conversation. The 40 percent that go directly in the garbage, those are big, big numbers and big challenges that the fresh food industry has likely been grappling with for decades. What's different about today in you guys experience and viewpoint that makes this an exciting time to be focusing on this topic?

**Josh Mellinger:** We talk about the fact that the opportunity in fresh food is huge, but I would say, like, it's always been huge,

right? Most people grew up hearing that we shouldn't waste our food. No one wants to waste food, yet we're still throwing out 40 percent of the food that we make. There's trillions of dollars being lost. And I think about how inefficient this value chain is, that if it was anything other than food, like, people would be rioting. If the US was throwing away trillions of dollars of plasma TVs, like, there would be just such an outrage. If you're the shareholder in a Fortune 500 company and their CEO came on and said, "Hey, so 40 percent of the inventory we had in our stores this year was stolen," you would go crazy. But when it comes to food, you're like, "Ok, I get it." We try.

I think the reason that now is different is because people want food that's good for them, that's safe to feed to their families, and it's good for the planet—at least the research would say it's not bad for the planet. And so now we have this entire suite of new digital technologies that can help us define this customer perception, this quality and freshness in a way—and I think this is super important—that's simple and easy to understand for the consumer. Because when I think about this food value chain, it's like we've had the erosion of trust where we have all of these confusing on-packaging marketing claims. I'm sure Mike gets this a lot, like, "Should I eat grass fed? Should I eat organic?" People are confused. And then it seems like every week that there's a story about food safety, and people no longer want to know that 95 percent of the time that you eat lettuce like, it's okay. It's like that doesn't work anymore. They want to know the individual pack of lettuce that they're holding in their hands is safe. And so when we define quality in a way that's easy to understand, people will say, like, "I get it." I have trust in every package of food that I eat, not that our parents told us that lettuce was good for us, even though the news tells us that maybe it's not.

**Mike Balint:** So, Bobby, I think one of the things that has changed, one of the forces that I think is at work, really ties back to sustainability. There has been a mind shift, a paradigm shift, if you will, for whether it's supply chain or whether it's growers, whether it's the grocers themselves around

how do we take care of our food in a way that's responsible? And maybe the flip side is the way that—I heard this from a really important leader for me and the way that she put it was, throwing away food is irresponsible. It now becomes a personal problem. We need to make sure that we're taking care of the food as we move it, as we handle it, as we store it. Are we doing the right things so that we are maintaining our responsibility to the food supply and that we're doing everything we can to deliver the highest-quality freshest produce? I think one of the pieces that I've seen over the last couple of years is a shift around making this more of a moral or ethical issue. And I think it's easy to make it a business issue. You throwing away something that you've bought is immediately going to hit the bottom line. But making it personal, I think, is where things have shifted, and that really starts to engage a person at a different level, to think and operate differently and to make it a priority.

**Bobby Stephens:** The examples that you guys were drawing out around other products being wasted at this rate would draw the ire of the consumer. I really think that's a super interesting contrast in terms of the emotional quotient of food, but how we are willing, at least at the moment, to allow for more waste in that area than others. So what do we do about it? Can you take us behind the scenes in things that we're doing right now in the industry, whether it's new technology, new processes, or just, frankly, new shifts in the mindset of fresh food professionals, that create a meaningful change in the very near term?

**Mike Balint:** So, Bobby, I think there's a shift from looking at items that no longer require us to save money, save costs, reduce our costs, but now looking at items that require us to reduce time. And so we're . . . I think with inside of supply chain, you're seeing a growth in enabling capabilities to have velocity strategies. I think anytime that, you know, we're starting to see a lot of those pieces getting enabled inside the supply chain to say these are items that require us to move them fast, we need to handle them less, we need to store them shorter durations of time. We need to be able to get these things to our customers faster.

And so this is something that starts to break down transportation efficiencies. It starts to break down distribution efficiencies. And so those become the challenges that we have to say, okay, these efficiencies that we're starting to break down were huge enablers of cost savings historically. And so there is this piece around how do we decrease the amount of time inside of our supply chain, but how do we make sure that we're doing it in a way that is responsible for the business knowing that we're trying to be responsible for the customer? I think another element that we're seeing is better decision-making. And I think that is where a lot of the technology—and I think Josh will be able to get into some of this as well—is enabling us to be able to see things as they're happening, more near-time, in some cases, potentially even real-time.

**Josh Mellinger:** Yeah, I like that. These are the core issues of this industry. Mike hit it exactly. We have to shift from a mindset of investigation where we looked at "Hey, what went wrong?" to this mindset of intervention. So what are the actions we can take before food goes bad? And I think the most important things for us right now to do that is IoT sensors and analytics to establish what we call a digital measure of quality. Without understanding what the current quality is, you can't make decisions about it.

You need better demand sensing, what the consumer is buying, and this is a perfect place for things like machine learning and AI to come in and really enhance the separation between our supply and demand. Then I think you need a trust platform. We need digitally enabled trust. Things like blockchain, distributed ledger really provide transparency to the consumer, as well as to a restaurant or a store employee, on how much freshness or quality is left on this product. And then the final stage, when Mike says we have to do this fast, is we have to automate these decisions. We have to be able to take this digital measure of quality, look at the speed that it's moving in stores or restaurants, and then automate those decisions so that our food does not go bad, that we intervene and make the right decisions instead of looking at it a year later asking ourselves, "What went wrong last year on this day? How do we fix it?"

**Bobby Stephens:** Awesome. That's really, really helpful. I'd love to learn more, but, you know, this is only a certain-length podcast. I want to talk about something that I feel is really important. I live in Chicago, a great food city, and so there's always a lot of buzz around eating local, right? Farm to table, whatever it might be, and there's a lot of fun in doing that at a restaurant. However, what I'd like to hear from you guys about is, how do you scale that, or something like that, that can drive good on a more global or a macro level?

**Josh Mellinger:** What I would say in general . . . There's probably too much buzz around eating locally. I think eating seasonally is really the big challenge, but what we've got to do for local is one of the elements we talked about earlier. We've got to bring time into this. Do we need to talk about, for each type of product, how far we consider to be a local? We have to move time into that. So I often hear people talk about, "This food comes from a hundred miles away." A hundred miles away on a bullet train or an airplane is a lot different than if you're walking or you're driving it. So I think that there is this time element and where we should really define, like, what local lettuce means. Is it from the country or is it from your local community? And there are so many supply chain complexities of getting to scale. I think this is right in the wheelhouse for Mike.

**Mike Balint:** Yeah, Josh. I think the idea of eating local has this synonymous piece with eating fresh. If it's local, it got here fast, it was this idea that it was picked out of the field yesterday, and it's on my table today, whether that's at a restaurant or at my house. And I know that no matter where you live, there are certain items that when those things are in season, you absolutely want to buy them.

And I think local is one of those places where if we introduce this idea of time, we can actually be successful. It's probably . . . It should be one of the easier equations for us to solve for. It is the closest to where our customers are. It should be the one area of how we source our produce, how we source our fresh product, that we should be able to be successful in throwing away the least

amount and in delivering the highest-quality produce for our customers.

I think there's a really interesting piece in terms of how technology is starting to get invested as we look at not only farm- field-grown product, but also look at how products are being grown inside of controlled growing environments. We look at what's happening with greenhouses, we look at what's happening with dark buildings. There's an interesting growth in each of those areas to say, how can we, again, provide this local, idea of local, but now providing it year-round, not just seasonally?

And so to me, it's going to be interesting to see where things go in the future as we look at this idea of annual availability versus seasonal availability. But regardless, I think it is the one place where we have the opportunity to truly be successful in ultimately being responsible with our food and with how we move it and handle it.

**Bobby Stephens:** So one thing I like to do is leave our listeners with something to ponder. So the question I'm going to ask is, in an ideal world, how do you see us driving towards the future of fresh? What do you think that we, as both professionals and as consumers, could do now to drive towards this outcome?

**Josh Mellinger:** I do see a world in where there's almost zero food waste, because I think that food is such a fundamental part of who we are, how we perceive the world that we live in. I think that this ecosystem has the opportunity to provide great food for everyone. So if you're a consumer, I say you have to strengthen your connection to your own food, where it comes from, and you have to expand in the way you think about quality. Let other people who know this well—the chefs, standards that are defining what good-quality food looks like, and then you have to demand it.

From a company standpoint, we have to help consumers. We have to be simple and clear in the way that we communicate. You really need things like a digital measure of freshness, things like blockchain, to create that trust. And I would say, finally, we need a call to action to stop piloting

these technologies. It seems like every day we've got a different food company piloting a technology, which we really have gotten maturity in. The amount of food that we waste, the amount of opportunity that goes by every single day, that means that there's people who are not eating. And I think Mike said it right; It's irresponsible. From a company standpoint, we've got to stop piloting. We've got to get to scale so we can fix this problem.

**Mike Balint:** For our listeners, just as a consumer, we cannot look at our food as being something that we can just buy and either decide to use or not use. Responsible purchasing becomes a key piece. As we look at the industry, we have a very real problem, and General Patton has this great quote—and I'm going to paraphrase it here—but he would rather violently execute a good plan than wait a week for a perfect one. We have a lot of really good technologies, a lot of really good solutions. We'll be able to perfect them over time. We'll be able to optimize them over time. Getting them implemented now is something that I think we all can do. It is a risk. It does take some organizational courage to be able to step into some of these new and disruptive technologies, but it is something that I believe will yield a significant impact.

**Bobby Stephens:** Mike, Josh, thanks again for joining us today. I know I will be thinking about fresh food differently in the future, and, Josh, I might even be looking over my shoulder next time I'm in the supermarket and I'm comparing blueberries to make sure my Simba moment is on point and acceptable to you. But all jokes aside, I do appreciate you letting us into your world and helping us be more responsible on a critically important topic. So thanks to all, and we will see you next time on That Makes Cents.

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