Jason - work on it, to see if she can do anything with it. You know, it may be of use to you guys after I don't know. But I mean, I don't know how open your data is to Sharon. But she is a, she, her her background is in data science. So he's very interested in that kind of thing. So those are the main two things, we like to figure out if we can have enough information to put together some type of paper for the scientific community. So that so, people, so Quincy, she's in agriculture now. So education, um, in electrical engineering and computer science and dishes and computer science. So we had that whole sphere cover type of thing. Yeah. Yes. So now, we did come up with some questions for you. And so, yeah, we didn't have enough time to send these to you beforehand. But we do have some questions for you. Okay, so. So? Yeah, so should we just start with the questions,

Gina - whatever you want, I guess I can, thinking just on some of the points you made about what you're looking into researching, I'm happy to, you know, of course, kind of share whatever information I can that would help as far as kind of the, you know, the the data that we collect, I guess one point I can make on sort of that the greenhouse gases point is about. So we do, like you said, it's maybe not always every single companies that we work with objective is, is focusing on the greenhouse gas portion. But I will say that it is a pretty, it is a pretty common objective, I would say a lot of times our customers are really focused on kind of the cost saving aspect of reducing waste. So you know, basically having to purchase less food, because in the end, they're sort of wasting less of it. So there's kind of that piece. And of course, kind of the return on investment that comes with our technology from doing that as well. But we do get a lot of inquiries, I would say more and more now, as opposed to kind of when we first started the company, that they really, there really is a big kind of sustainability objective. And that's kind of what a lot of our customers are gravitating toward now is focusing on lowering their carbon footprint, and just kind of we work in hospitality. So I think kind of brand perception is really important to our customers. And so that sustainability piece really is key. And that's typically what they kind of tend to focus on when they're sort of shouting about, hey, we're using window to do this, because we want to be more sustainable. So one thing that I was going to mention about, we do provide some reporting on co2 emissions kind of produced from the food waste that we record. The only kind of the only kind of caveat there is that we haven't gotten yet. It's in our roadmap, but we're not at the point yet, where the specific items that we're identifying, we're not saying, you know, this is a meat product. So it has kind of this level of emissions versus a vegetable, basically, we're just taking the overall weight of the food waste that we're capturing. And we're applying a multiplier to that I think it's four, I'll have to double check. It's four point something times the number of pounds that we're capturing. And that's a combination of, I think estimates from a group called World Resources Institute's and one other ones. So again, I'll just have to double check where exactly that figure comes from. So the the figures that we provide as far as co2 emissions that we've been able to reduce with our customers, it is a pretty broad estimate, because we're not taking into account the specific items or kind of categories at the food waste. So just wanted to share that for for some

Jason - great information. So in your case, so let me understand that. You're saying that you take the number of pounds of food in his vegetables and meat, and you multiply that by like, what 4.5 or whatever. And that's around the calculation of co2 emissions?

Gina - Exactly. Yes. Well, we're just focusing on that the level the overall level overall weights of food waste, as opposed to saying, obviously, meat is going to have a higher impact. We haven't taken that into account yet. It's something that some of our enterprise clients have asked as they kind of include their food waste numbers in ESG reports, for example. So that's something that we're looking into. We just haven't gotten there quite yet. But definitely a big interest to us.

Jason - Yeah. I didn't know is that that that's a large factor. Yeah, yeah. I actually thought it was a fraction of the pounds, but it's actually Wow, okay.

Gina - Again, I'll double check. I really I could be, I could be interesting. Maybe Maybe it's that multiplier by kgs. So that would take it down a little bit because we are if your higher was better than one that's important.

Yes, for sure. So we'll double check on that for you. So don't don't quote me fully, but I'll follow up and let you know what I find there.

Jason - Okay. All right. So, yeah, yeah, thanks for that. So, so, so Disha came up some questions. And you, you want to do this t shirt or want me to ask the question. So how do you gonna do this?

Disha - Oh, yeah, sure. I'll go. I'll go ahead and ask questions. Okay. Like, there are some basic questions as well as some questions which are like little technical related. So, lastly, like technical questions first. So the thing is, like, how does the Windows system like the bin actually identify food items placed in the bins? Does it like have a camera? And if a camera like what sort of camera?

Gina - Absolutely, yeah, here, I'll share my screen. And I can kind of walk you through just a quick video of what that process looks like. I'll just jump around a bit here for the sake of time, so let me blow this up a little bit. So basically, if you can kind of imagine, I'll walk you through the kind of hardware components first, but if you can sort of imagine what this video loads, and second, than doing this, to me today, should pull up, here we go. So essentially, if you can imagine this backup house and a commercial kitchen, we basically provide the digital floor scale. So that sits beneath whatever food waste when they're already using today. So we just provide the scale that sits beneath, and it connects to what we call the window vision box up above here. And if you can kind of see just below. So this is a stainless steel enclosure, it's just mounted on the wall on a bracket in the kitchen that just hangs directly above the food waste. And so there's a light and emotion sensitive camera that's built in flushed to the bottom of this component here. So it's motion sensitive. So every time something's being thrown away, we're actually taking a series of pictures so that we can get kind of the the best view into the bin once a new item is introduced. And then also, there's a touchscreen tablet included as well that the staff use to kind of interact with the system. So with the artificial intelligence, we're at this point now where it happens in a couple of different phases. So basically, when a kitchen first gets started with using window, we turn the AI on from day one, because we are training a universal model. So the technology is already able to recognize several hundreds of different menu items are ready, I think about 600 is where we are today. So basically, what happens when we install in a new kitchen is we activate what we call the AI predictions from the very beginning. So the system is set, you know, you saw the staff member kind of scraping food waste into their typical bin as usual. And the system is taking a photo of that the scales capturing the weight. And the system is just going to say okay, I've you know, I've seen this item, I think in many other kitchens before, but I need a little bit of help confirming that what I think I'm seeing is what actually was thrown away in your kitchen. So. So the first phase is what we call the predictions. So the system is going to have a shortlist of the top eight, basically guesses that it thinks the item could be. And we're at about 80% accuracy right now of basically guessing the correct item within the short list or in the predictions phase. So the system, this is what's going to pop up immediately, the staff simply just needs to select one of them and just confirm which was thrown away. And the second task required in this prediction space is just identifying, basically why the food waste occurred. So was inventory spoilage was it prep waste was it overproduction, etc. So just a couple of taps required for usually the first few weeks, maybe to a couple months or so of using the system before we get to what we call passive touch AI or kind of the second phase, basically the end goal of kind of where we want to get to with the automated food waste tracking so really depends on kind of the complexity of the menu items that are being thrown away as well as kind of the volume of data. So obviously, that the more frequently it sees a certain item, it will automate a bit faster than say something that's a super kind of complex looking dish that's maybe only thrown away kind of once in a blue moon that will take a little bit longer to get to this passive touch phase. But once we do get to the passive touch phase, basically again, same process scraping the food waste and as normal. But at this point, the system is saying you know I'm super confident are ready and identifying what this item is. I'm going to go ahead and automatically categorize it. And I think we're at I'm actually going to have to double check accuracy of getting to the passive touch point. But again, it's a menu item that the system has seen time and time again, the staff has been super helpful during the prediction phase and correctly kind of confirming the item during those first few weeks. This is the point where the system says, Okay, I'm gonna go ahead and just categorize this automatically rather than kind of asking the staff to to interact with the system. So. So that's kind of the end goal of getting to that the fully automated phase with with this technology here. Any questions on how that process works? Yeah, like, that's pretty depressing. I like it.

Disha - So, yeah, so that's what I wanted to know, like, the specification of the camera, and, you know, the, like, the specifications of other sensors use, like weight scalar. Yeah, the camera basically.

Gina - Got it. Okay. I think in we have a product manual that probably after our meeting today, I can kind of snip a few of the key sections and kind of put that together and share that with you. I think it does have kind of the specific details on the type of camera I use. So I don't know off the top of my head, but happy to look into that and share with you afterwards.

Jason - Okay, so Tina does you guys have? So I remember, you're saying it has like like, like 600 items that are already in the system. You know, but if it's like for a restaurant, restaurant, restaurants have a finite menu, right? And so do you guys ever take advantage of that? Any in any kind of way?

Gina - Yeah, so typically, so we're kind of, we've experimented with kind of a few different ways of how we want to build a site sort of specific menu into the system, there's kind of a couple of considerations that we take there. So sort of the, the standard that we're trying to work with as much as possible. Now, there's always kind of exceptions, and some clients want to be a little bit more specific and kind of customize their own menu. But basically, the system, it's, it's kind of the the menu template that we have today, it's a little bit generic. And so basically, you know, a kitchen may have three different, you know, chicken with vegetable entrees, for example, you know, you have your chicken breasts, maybe a couple of different kinds of different vegetables. But overall, the components are kind of relatively similar, or maybe they cost similar as well. So typically, what we would do in that case, is we would look at those three different dishes. And we would just categorize it as chicken with vegetables, and we just create one label on the menu. And as far as kind of assigning the value that we're seeing, we basically just take their average cost of those three dishes, and assign it to that one label. So, again, there's a couple reasons for that. One is just a user friendliness perspective, during the production space, for example, we don't want the staff or a steward to kind of have to be searching and saying, Okay, is it chicken with vegetables, A, B, or C, we want it to be super simple and straightforward for them, but also still kind of giving them enough granular data to be able to make changes after seeing the reporting. And then just from that AI perspective, we want to be able to kind of automate things as fast as possible. So sometimes we maybe sacrifice a little bit of that granularity, in order to kind of make things easier for the staff, they really appreciate kind of the as little interaction as possible. So instead of kind of training the AI to recognize those three separate chicken with vegetable dishes, it makes a little bit more sense, in most cases to just kind of categorize that into one label.

Jason - I see. So it's like, if you have like a dish that has a mixture of things, like let's say, some mix of vegetables, right? For kind of vegetables all mixed together, you'll categorize that into one food item. Is that right?

Gina - Yes. So so the way that we break up that menu, kind of by that second tap that was in the prediction space, you know, is it inventory? Is it spoilage is it you know, prep waste versus overproduction. The system can recognize kind of those different categories. So it will be able to recognize kind of a single sort of raw ingredient that may be spoiled in the pantry or the fridge. That's kind of one set of the menu that has a specific value assigned to each of those ingredients. It can tell the difference between that versus maybe what trimmings look like for that ingredients. And that is kind of its own set as well. And then same with overproduction. That's typically where we see the most value because it's kind of fully prepared food that was simply kind of made too much of that tends to be the biggest opportunity we see for reduction. This so the system can even recognize kind of a fully prepared dish, even if it has kind of multiple ingredients in it.

Jason - And how does it tell the difference between things are the same color like let's say you have like By cut up orange pepper versus fed up carrots, they're both orange like,

Gina - yeah, um, so I believe we're at a point where, yeah, even kind of similarly looking again, it might be a little bit trickier for the system, it may not get something like that correct every time. But for those kinds of basic, you know, ingredients that you see in every kitchen, I believe we have the system trained to recognize those differences. So it's really just been kind of a matter of time, we released the AI model, back in 2019. So we've kind of had, you know, a few years to sort of work. And we're always kind of investing in the AI and being able to expand that sort of taxonomy of 600 items that we have today. So it's really just a matter of kind of the volume of data that we're seeing and being able to train our model to recognize those differences.

Jason - Wait, so what do you mean, you you release the AI model?

Gina - Um, so we used to have a different kind of our legacy product was called Winter waist monitor. And it was basically just a tablet and a scale and it was more manual tracking on the tablet, instead of having something that took the photos. So this technology that you see here, the window vision technology, which basically just indicates this type of hardware. We released that back in 2019. And then kind of since then, we've been, that's been our flagship technology. So this is what we've been working on.

Jason - So when you say you released it, you mean that you guys are now using it in your company? Not that you released it, like open source?

Gina – Correct? Yeah. Sorry. We introduced the product to them. Okay. Okay. Okay.

Jason - Did you have another question? Disha.

Disha - Yeah, and what happens actually, if a non food item enters the bin, as in, if it's not a food item, let's say like a plate or something, I'm sure.

Gina - So if it's say like, let's just say it's kind of silverware or a plate that was accidentally thrown in, so the system won't necessarily flag it kind of as an as an incorrect thing that's been thrown into the bin, the system will still kind of look at it and try to make a prediction, if it tends to look a little bit like a food item, it may find whatever is white in the menu item, for example, if it's a plate that's thrown in, and try to find something similar, but it's just trained to recognize food for now. So while you'll maybe see a prediction pop up, or it'll say, you know, I can't find that menu item and ask the team to select from the full menu and kind of manually categorize instead. But yeah, so far haven't trained it to recognize anything other than food. So the system will basically kind of give its best guess. And it will kind of categorize it, whatever the staff tells it to. But we do have the data team that retro actively kind of looks at the transactions as well. So if it was a really high impact transaction, typically, anything over let's say, five pounds, our data team is looking at those and they'll be able to flag that to the client and say, hey, it looks like we're seeing some non food items being thrown in. So we can always delete those kinds of transactions so that it kind of doesn't count negatively in their in their reporting.

Jason - Or maybe they would be very interested if they keep losing having to replace you know, your utensils

Gina - that we have heard that a few times from clients that they actually want to see those photos so we don't have anything necessarily an alert but but I have heard that a few times before. Yeah. Interesting.

Disha - Interesting. So yeah, like what is the smallest amount of weight that that the window AI senses

Gina - um, so we do have kind of various options so the site is able to go into the system and change the Scale Sensitivity. I do think it is. I'll double check. It's probably something like 25 grams, something like that. But we do provide a range of kind of scale sensitivity that you know, if you don't want kind of something super small that might bump into the scale and trigger a transaction you've kind of decreased the sensitivity I'm just going to note that down so I can follow up with you on what those options are. Kind of the lowest wage

so Yes, happy to look into it, those kind of that specific ranges that we do for the Scale Sensitivity.

Jason - Is it really fast? Like if like, can you like Just keep putting putting food in like, one after another article like, wait a few seconds while it analyzes, you know, between each time

Gina - it is pretty quick, it is usually within half a second to a second as predictions pop up. So. So we do ask, you know, when we provide training that, you know, the staff is, is keeping an eye on the system, again, we don't want it to be, we want it to be as kind of minimal interactions as possible. But, but typically, when you have the process of again, when we do the training, you know, scraping one tray in at a time making sure everything's categorized, and then moving on to the next one. But yeah, usually just takes a few seconds per transaction.

Disha - And what what type of data is provided back to the customer, as in, you know, the photos and the, I think classification plus the way in what what,

Gina - yes. So the key, and I can kind of, I'll zoom into our online dashboard next, so you can see what that looks like and kind of see these zoomed in a little bit. But as far as the reporting we provide, so basically, that the staff will, or the kitchen manager, or maybe the head chef, they'll sign up for automated daily and weekly reports. And these are just downloadable PDFs, we send them super early in the morning. So basically the chef and look at it the next day and see all of the waste that occurred yesterday. So we kind of give them a summary of kind of the total weight that was thrown in the total value. So again, that's something that we calculate when we're doing the menu building process with the clients, as well as, of course, kind of a breakdown of their top wasted items. I'm gonna go ahead and switch screens really quick. So I can show you a little bit closer view of what this looks like. Bear with me a second.

So, so this is our online dashboard called window hubs. So in addition to kind of these automated reports that we provide, we do have kind of a full online dashboard that you can just sort of sign in anytime look at the data in real time, you have lots of kind of options for basically filtering and in different settings, choosing specific dates that you want to view the data from. This is just kind of a mocked up version. So there's actually quite a lot more functionality that a real site would see if they have real food waste data to work with. But again, kind of

Jason - interrupted for a second. So is this what you're talking about before where you have the weight? And then right here is 862 pounds. But then you have that co2? I guess II asked that 3600 factor you're talking about there?

Gina - Yes, exactly. I won't, I won't speak to the accuracy of this particular example, since this is just kind of mocked up data. Yes, exactly. So we've just used the weights that's calculated, and we apply that multiplier to to that weight Exactly. And same thing with with the value, whatever the value of those specific items per pound that that we took into account in the system, that's how we calculate the dollar value as well. And then we also provide just kind of a figure on equivalent meals as well. So I believe it's at something like 400 grams is what we count as an equivalent meal. So again, just based on the on the soul sort of weight of that food waste. And then typically the the key metric that our clients use to look at reductions is actually waste as a percentage of sales. So there's a really simple kind of data entry function here that we just asked the site to enter total number of covers, so kind of meals served or people served, and then their sales for each day. And that just helps them kind of normalize their data against sort of the volumes of business that they have. So if they have kind of a very busy day versus a very slow day, those weights levels are going to look pretty different. So sometimes just seeing the overall weight or value is not as helpful as kind of normalized here. So yeah, this is kind of where this is kind of where they have all of their data sort of at a glance. Again, we have these kind of quick views of graphs that we can share. So you can compare where you are this week to your baseline period, your target the previous weekend, etc. But where you can really find fun of all of the data for each of the individual transactions is the waist log. And this is something that's accessible on the system itself as well. So if a staff member needs to kind of go in directly and look at a transaction that they just did, they can do that there. But basically, you just click on one of the transactions that you get the photo you get the value, the weight and the reason it was wasted as well as the name of the item as well of course. So that's kind of the data that we provide on sort of a transactional basis here.

Disha - Okay, so, this data as in You know, the minute the food is like food get disposed, does it show up on this dashboard?

Gina - Yes, it's usually just within a few minutes, I think of a transaction kind of being categorized on site. And then to send the data to the cloud, we require an internet connection in the kitchen, the system itself, and the AI will work offline. So that all happens on premise within the system itself. So if there is a period of downtime, which we anticipate a lot, in a kitchen environment, the system will still work to record transactions, but whenever we sort of reestablish that connection, all we use it for is to send the data to the cloud so that we can generate the reports and provide this here on the dashboard.

Disha - Okay, so you're saying that the data is processed in the, you know, that tablet box that you have on top of the? Okay, okay. And

that occurs directly in the system? Yeah. Okay, since

Jason - the day, but it's also a learning system to write, like, like, Isn't it like, the more people interact with it, the more accurate it gets over time? Is that right?

Gina - Yes, absolutely. So that's kind of something that we talked about during training that, you know, over time, kind of the effort that they put in sort of in the initial phase, again, when we're in that prediction phase, and helping us confirm the correct item. That's just kind of further training. Every time we do that it's helping the model kind of learn more and get more automated. Yeah.

Jason - Does that also mean that since you guys are connected to it online, then that means that the next deployment of window in another company, that initial window will actually be more accurate? Because it's using data that is collected from your other prior customers use? Right?

Gina - That is correct. Yeah. So we are kind of using data from all the vision systems around the world to train that universal model. Yep. So kind of as we, as we go over time, the system's kind of expanding its knowledge of of food items, and being able to recognize that and so yeah, kind of as we move forward, those our future customers will kind of get the advantage of having great questions on the reporting and kind of the data we provide.

Disha - Yeah, I like I have a question on like, data analysis part. I mean, as you I mean, I wanted to know, like, what type of machine learning techniques or data science techniques do you use to? You know, when you process the data?

Gina - Great question. Not something that I know 100%. What I do know is that we have so I don't know, kind of the specific tools, I guess that are being kind of used with our with our data, we do have a remote data and no rotation team that, again, I'm thinking kind of the beginning of our journey with window vision was a little bit different and more manual with people basically just looking at all the food waste photos that were coming in and doing some manual categorization to help train our model, our data team and annotation team, they still do that. So basically, they're just kind of looking at transactions, ensuring that the AI guessed it correctly, if there's new items, they help to kind of train the model in that way as well. But as far as specific tools for kind of the data analysis, I may have to follow up with you on on that one as well, as far as kind of what they're using to to help do that.

Disha - Okay. I have few questions on the implementation part, as in when you what are the required requirements that you know, that, you know, that you need to fulfill for the implementation of the men?

Gina - Sure, so. So typically, our kind of sales process and operations process with the appliances, we always kind of talk about their operations beforehand. So just to make sure that it's kind of a good fit for window, a lot of times we see the most opportunity in sites that have more prepared in advance offerings. So against buffet style, sort of overproduction is really kind of a key, I would say it's kind of our bread and butter areas where we really provide the most value. But again, on the inventory spoilage and trimming space, there's still still value there as well. So even an ala carte operation can can get some benefit from it as well. So we always come to talk through the operation, we look at their annual food costs as well. And we do kind of an ROI business case just to make sure that it's financially sound decision as well. And then, like I said, some some clients don't care too much about that. And it's more on the sustainability standpoint. But so once we kind of do that determine the right amount of systems we'll kind of walk through sometimes we'll do an on site visit if it's a very kind of large complex operation, but we have gotten pretty sufficient and doing a lot of this remotely. So we'll kind of do a virtual walkthrough of the kitchen or we'll review a floor plan or the chef's can kind of just tell us we only have one food waste bin in the kitchen where everything is that's something like

Add, it's super easy. But really all we need is space. That will space directly above the bin, it doesn't take up too much space, because you can kind of see in that video that it's really just about the size, that is your food waste and will take up. Yes, so kind of the, to get a picture of it. Basically, again, system, it's just about the same size as kind of your standard bin. And the scale typically flip fits pretty flush beneath it as well. So just making sure that they have the space within the kitchen to fit that and to be able to mount this on the wall. And then just need a power plug to connect the system to for power. And then Wi Fi or Ethernet, like I mentioned as well. So those are really the main kind of technical requirements.

Disha - And that any challenges that all smartphone manufacturers face?

Gina - Hmm. Um, so you mean as far as like our suppliers of of the hardware? Or do you mean, kind of the, I guess the challenges from the client perspective? Sorry, if I misunderstood you there?

Disha - No, like, yeah, like, you know, challenges from the clients perspective, as well as I mean, like, if, let's say, there are like many SmartBand manufacturers, so there would be some sort of, you know, common challenges that everyone faces, like, let's say there is a space issue and, you know, bigger kitchens, don't know where to place the bins so that, you know, it's, it's efficient for everyone. So yeah.

Gina - Yeah, so kind of physical challenges, I guess sometimes we do have kitchens that are just, we know kitchens aren't meant with meant to be designed with sort of extra space in order to to fit a system like this. So it can be a little challenging kind of, if they have to sort of change their flow a little bit to fit this in. But typically, again, we always recommend, it's just those at the end location for food waste. So there's no need to kind of set up a window bin in one location and use it to record food waste, and then have to throw it away elsewhere, we want it to just all be at that one location. And yeah, we do run into some technical requirement issues as well. So some, so from a security standpoint, sometimes we have to undergo security reviews that can take some time, just because again, we are accessing their Wi Fi or their Ethernet network. So sometimes there are some concerns from the security team. So we just kind of provide all the materials and talk through their teens as far as what we need there. And then as far as kind of from an operational sort of staff engagement standpoint, I guess, again, just with kind of providing the training that we give, making the system as sort of easy to use as possible. And again, trying to fit it within the flow of their operations without making too many changes to their original process. We kind of rely on that to hopefully help build engagement with the team. But it's really important. I mean, we can kind of talk about the type of operations where this fits best, and that sort of thing all day long. But it's really about having kind of, I would say leadership support from whatever client group or the hotel, for example, really important to kind of have the whole team on board. And just to make sure that the staff knows this is an important initiative that we need to kind of take seriously. So there can be engagement issues sometimes, but I think we do provide a lot of kind of high supports as well, high touch support. So you know, each client has a dedicated customer success manager that walks them through the whole journey, you know, we can always flagged kind of higher up members of the team if we're if we're seeing an engagement issue. But again, having like a champion, like the executive chef that's really into technology, or sustainability really, really helps move things along. So So yeah, sometimes you'll see a staff engagement issue where they're not using the system properly or kind of just don't care about it. So just finding ways to sort of navigate that, and using kind of the window champions for health as well. So do you guys have a challenge? I'm sorry. Oh, no, carry on

Jason - Okay, so So do you get Do you guys have a challenge in and companies or restaurants, where the, their their patrons are the customer that their customer throws away their own food instead of a the best person coming by gathering food back to the system?

Gina - Sure. So on the sofa, we're talking more on kind of the plate way side. So we actually have a typically the AI solution. It's used mainly for all of your what we call pre consumer waste, so basically anything before it hits the guest plate, or maybe what we've called kitchen waste. So kind of any of the three waste streams that we talked about here, and then plate waste, we kind of hold that separately. So Okay, so you can throw plate waste into the AI bin. But the AI is typically what we recommend, there's actually a actually find the view of the screen here in just a second. So if you throw a plate waste into the bin, the artificial intelligence doesn't work to identify all those kind of individual items on a single place. So we're not at that stage yet. It's all for just kind of single item or single recipe at a time. So basically, what happens again, some of our staff or some of our clients do want to track kind of the full picture of waste. So if they want to use just that one system, for everything, you can, you just click the Save As plate waste button here, basically, we take the just the total weight of each plate that's being scraped in and we assign an average value, but we're just categorizing it as quote unquote, plate waste. So we're not getting super granular as far as that the plate waste items that are being wasted. So staff are the clients have the option to do that with the AI system, we do have another package as well called window sense, which is just for plate waste. So it's the same exact hardware, you still get access to the photos, again, just categorizing it as flight waste, assigning an average value per pound and providing you access to the photos. It's configured a little differently, though, in that it's completely touchless. So there's kind of no need to click save as plate waste, the system is just automatically sort of doing its own thing as plates are scraped in. To provide a little bit more granularity or kind of insights on what's being wasted on plates, we do provide plate waste audits as well. And basically what happens there, only if you're using that the plate waste only system, not necessarily if you're if you're capturing plate waste in the pre consumer system. But basically, the point waste audits are data annotation teams will take a period, typically of 24 hours, they'll look through all of the photos at the plate waste that occurred. And they'll assign kind of these more general labels. So there'll be like a typical sense of late waste is a meat product or a vegetable product. And so we can kind of provide some further insights, talk with their teams on sort of how to reduce those specific categories. So again, a little less detailed than than the data we're able to provide on the free consumer side, but still trying to give them a little bit more insight into at what they can do to kind of cut down on that play waste as well.

Jason - So I assume some machine learning could be taking place with that, right? If they're, you know, you have a human, you know, in the system, where they're looking at the pictures and saying, Oh, that plant waste is this, this and this, is that being fed back into the computer, so it could help identify what those things are next time.

Gina - So as far as what we're doing that again, and I know, it's in our roadmap to eventually get to the point where the AI can sort of take one picture and recognize, you know, a third, you know, a third of the weight on this single plate was was this item versus this versus this. So I don't know, necessarily where we are in that process. I don't think it's something we'd be implementing anytime soon. But yes, just as you said, kind of all we're doing today is having our data and then a patient team actually looking at those, those questions.

Disha - So do you do you have like any tech support team, which, you know, customers can concern to if they get any issues with the system?

Gina - Yes, so we do have, we do have a pretty big tech support team. Basically, if something goes wrong with the system or their reports, anything, we have just a phone number that they dial to reach what we call our help desk team, or they send an email, which raises ticket with with support so that they can kind of action that as needed. And that's pretty much done all all remotely, there's not usually a need for someone to come on site. If we identify it as a hardware issue, for example, that kind of can't be fixed remotely, then then we basically just send a replacement system.

Disha - Okay. So like, do you offer any training to your customers before? You know, before installing the system?

Gina - Yes. So we do. Yeah, so we have both remote and on site training options, again, depending on kind of what their their preferences again, if it's kind of a large resort, for example, with multiple systems, always something we recommend doing an on site training for, if it's just a smaller location, or maybe just a single system implementation. Usually, remote training is pretty sufficient. We kind of just do a zoom meeting like we're doing now. And we do more of a train the trainer model. So the customer success manager will just meet with the head chef and maybe a couple other kind of key people from the team. And they'll basically kind of take their learnings and sort of train the rest of their staff as well.

Jason - So I got a quick question. Do you guys keep the pictures? Like all the pictures that are just like every single picture implement, like some big database. So you guys are

Gina - not every single one, not every single one. I think, if I go back to the waist blog here, I, I'm not 100% Sure if we, you know, like I said, the system is taking a bath and doesn't have a photo, the system is taking a series of photos so that it can kind of identify the best view and kind of the best one to assign to each transaction. So I don't believe that, you know, once we find a good one, and the AI says, Okay, I've got a clear view, I can identify this. I don't think we're keeping kind of all the other photos in that process. But yeah, typically, I, we may have a certain time limit, you know, several years, I'm assuming, but basically, you have the option to go back all the way to the beginning of your journey. Wow, your transaction? So we do we can pretty much all but yeah.

Disha - Where does your you know, the images and the data gets stored? Like, which, let's say cloud platform, or like, what do you use to like, store the data?

Gina - So something I know that we use AWS, but I'm not going to I'm not super technical. So I'm not going to be able to answer if that's necessarily how our I know we have a server where we store kind of in our different regions, we have different servers that we store that data on, so I'll have to double check on that as well. As data store, yeah.

Disha - So next, like Yeah, I wanted to ask, I mean, how much do each band cost? I know that I guess the company offers like six type of bands, three of which use the AI system, and three of which don't. So like the, you know, the cost of like the bins?

Gina - Yeah. Yes, this so kind of for our standard AI package called the transform package, but I think I have here basically, in this is our most common package as well. So we have a few different pricing models. So we have an option where the site can purchase the hardware. And then they kind of get the benefit of lower monthly license fees going forward, we have kind of a we have a strictly sort of monthly lease option as well, where there's sort of no upfront fees for the hardware and just a slightly higher monthly license fee. And then we have kind of a blended version as well, which tends to be the most common, which is a one time configuration fee per system. So not as high as purchase price would be, but one time configuration fee, and then kind of a flat monthly license fee per system per month. So for something like the transform package, again, assuming kind of that blended option, the configuration fee is about 1200 for the first system. And then the monthly license fee is between five and $600 per system. So that's for the very first system and a kitchen, we do have what we call clone systems, which is let's say we're working in a very large kitchen or very large property that needs multiple systems. Of course, we do discounts the additional systems, both the configuration fee and the monthly license fee, about 40 to 50%. So you know, the second system may be 600 for configuration, and you know, 250 to 300 for that monthly licensee or one price for the first system, and then everything else is discounted from there.

Jason - So but but in terms of business, you guys, your system is paying for itself, basically. Right?

Gina - Yeah, so usually within I would say the first six to 12 months is when you're going to see the most kind of significant changes and reduction of hurrying so, so we definitely do kind of tout the the financial benefit as well. So if we're looking at overproduction, like I said, that's kind of the highest value opportunity, I would say because it's kind of fully prepared food, nothing wrong with it, we just made too much of it. So kind of high opportunity for food cost savings there. You know, yield management, lower value opportunity, but still some options for food cost savings just from a yield management perspective and making sure we're kind of utilizing as much of those kind of trimmings as possible. From plate waste even lower I would say financial opportunity just because there's not much you can kind of do with those leftover pieces of food on the plate. But yeah, typically our system we see our allies have usually anywhere from two to even like 10x for super large cruise ships, casinos, that sort of thing. Just because they spend so much on food and they're throwing so much of it away. So yeah, usually I feel like six months is kind of our average for when you really start to see a good turnaround on the on the return

Jason - either because also the customers they have to figure out based on the data that they get back from you guys where they should best tweak things aren't you guys have have a team that helps them determine those kinds of things? Or do you say, Yeah, you guys will figure it out?

Gina - Yeah, yeah, so the reporting is met. So we do in the first, typically, like 100 days is kind of our highest touch sort of support period, or what we call kind of the coaching or success period. And basically, what happens there is kind of the timeline is the first couple of weeks is just our baseline period. So after the training, we just want them to measure kind of their current waist levels, we don't want them to make any changes, it's just kind of our starting point. So after that baseline, we review the results with them, we set a target, we talk about the highest opportunities. But yeah, basically, the customer success manager is there, reviewing the data with them holding a few coaching meetings, usually in those first few months, just to really kind of help walk through some weekly reports, talk to the chef's about kind of what's happening in the kitchen, and maybe why certain food waste did occur, and kind of what we can do to prevent that moving forward. So yeah, there's lots of coaching in those first few months. Typically, after that the reports are very kind of easy to read and analyze, we do pinpoints kind of the, of course, the top wasted items from that day or that week. So basically, the chef, even just on a daily basis, can look at this and say, Okay, we wasted a ton of scrambled eggs during breakfast buffet yesterday, let's just put our production by, you know, two or three pounds today and see how that kind of shows up on our food waste report tomorrow. So they're able to make those kinds of decisions on their own, especially after the first kind of feed coaching calls. So typically, after we provide a lot of that support upfront, they're able to kind of take more ownership of the program, as long as they're kind of downloading the reports, which we always check on those kinds of metrics, just making sure that they're interacting with the reporting, they're typically able to kind of just make it part of their daily process. And they kind of take ownership of the program from there.

Jason -Are you guys learning from your customers in terms of which types of cutbacks are which types of modifications work best? So you can share that with your other customers? Like our newer customers? Did you guys do that kind of thing? Yeah.

Gina - Yeah. So I think I feel like Yeah, our customer success managers, I'm more I'm mostly on the sales side. So I'm not always directly involved. So I can't speak to it too much. But definitely after, you know, our customer success managers or operations team has kind of worked with quite a few clients under their belts, I do feel like it definitely kind of better flips them, you know, they're used to working with hotel customers, we sign a new hotel customer, they have a little bit more kind of knowledge about what's going to work versus maybe what's not going to work. So we're always suggesting and kind of recommending and helping identify those opportunities. But we don't want to be in a place where we're kind of telling the chef's what to do, we just kind of want to provide the data in an easy to analyze format, so that you know, they know their operations best. So just again, giving them kind of the tools that they need to help make change in their kitchens.

Disha - Questions? Yeah. So like, How scalable is the window system for demand? As for Yeah.

Gina - Yeah. So we, you mean, kind of our scalable as far as kind of within, like a certain client group or just within a single location, just want to make sure I'm understanding correctly

within a time row.

Gina - Yeah, so as part of our A lot of times, what we'll do, if we start talking with a new account is obviously we'll kind of do a pilot in a few locations first, just to kind of prove the concept for a period, again, typically of six to 12 months, and then start talking, of course, about how to kind of grow and scale with them. We do have a multi site view as well included in our report, as well as cross site reports, things like that, that we can generate for these client groups. So that way, they're able to kind of see and kind of compare all of their different locations that are using window. So we definitely provide the tools that are available to them to sort of look after all of their locations and see how everyone's doing. But yeah, typically, it's very easy, especially if we can stick with kind of a similar menu, for example. So we work with a lot of contract catering clients that maybe have lots of staff dining accounts. So kind of corporate offices that have an employee cafeteria. A lot of times with enterprise clients like that, we're able to basically just kind of duplicate the menu. So onboarding, and setup is super easy. Sometimes we'll do kind of regional pricing. So kind of one set of locations has certain pricing on the menu and we kind of update those as needed. But we are the kind of global leader in deploying AI at scale. So I wouldn't say that's definitely kind of one of our key advantage. is over our competitors for sure.

Disha - Yeah, that's very interesting. I'm like, can it Yeah, it can adapt to a changing menu or other needs of the customers, right? In terms of like, even scalability is concerned. So?

Gina - Yeah, absolutely. So with the menu building process, like I said, we tried to kind of stick as close to our menu template as possible. But there's always going to be room for kind of adding things, deleting things, changing the names. Typically, we do quarterly menu cost updates. So if you know, there's been a significant change to their food costs, or they've changed suppliers, or obviously just the cost of food changing so often these days, we typically do that on a quarterly basis, but we're always open to kind of working with the client on what's going to work best with them in order to implement those changes.

Disha - So like, is there anything that any plans going on, which enhance the capability of the system?

Gina - Um, yeah, so I would say, I mean, our basically main kind of objective in the company, and kind of where we invest all of our fundraising is into the technology in the AI itself. So always working on improving the accuracy and kind of the speed of the AI. As far as kind of other things in our roadmap, I believe, we are working on kind of a production planning tool. So I don't have, it's still in beta, I don't have all the details of kind of how that works, but looking more at what's the volumes of what's actually produced, compared to kind of what's wasted, which is what our system currently tracks right now. And kind of connecting the dots between those two so that we can be even a little bit more helpful and helping them kind of make production changes. So that's kind of something that we're working on as well. But yeah, I would say for the most part, it's just always, we're always reinvesting into our technology and putting all of our fundraising there.

Disha - So as you said, you said, like images of the food waste of like, let's say, one client, and then train the model. So like, do you even share the data as in? And how if yes, then like, how do you handle the data privacy?

Gina - So we're not I guess we're not necessarily sharing. Like one cites food waste data with another. That's always if there's we're just giving an example. It's always anonymized. So I, we haven't had an issue as far as well, actually, I won't say that, I will say that there have been a couple kind of like tech companies that have been really kind of adamant on basically not using anything cloud based. And if we, if we don't do that, we can't really help, I think kind of use their data to further train the model. So sometimes that can be can be tricky navigating that. But as far as kind of training, the universal model, again, as long as the site is open to to connecting us to their internet so that we can utilize the cloud and kind of further look at their data. From the universal model perspective. Typically, we haven't run into into many issues there as far as data privacy, because we're not kind of directly saying to another site, you know, this is data from one site that we're applying to your system, it all just kind of collectively pulls into that universal model.

Disha - Yeah. And you don't share the collected data with any external parties, right? Third parties.

Gina - Correct stuff that I know of? It's just all used internally. Yep.

Disha - Yeah, I think these were the questions I had. And, Professor, do you want to ask

Jason - something? Oh, yeah. So just Yeah, I guess just one last thing. So so so so first of all, that was really great answers Gina. Very enlightening about what's going on there. And I'm really excited for you guys. You know, doing this. It appears that you guys are like the main people in this area. Is that right?

Gina - So as so I would say the one thing as far as kind of our competitors in the US, I think lean path is a lot more well known. They've been around about twice as long as we have. And they're actually very implemented into a very cemented into like the university space, for example, where we had a little bit harder time growing. Candidly, in the US, they also have a big hand in contract catering as well. So just to give you an example, so we work a lot with campus group and ISS. They work a lot with Aramark, and Sodexo. These are just kind of big sort of contract catering I name brands that I'm mentioning here. So So there are a couple of kind of competitive areas that have been a little bit harder for us to break into. And the US, or I guess the Americas overall, is actually our newest market. So we've been here about four or five years. We started in London about 10 years ago and kind of grew eastward from there. So a lot of our kind of market shares is in those regions. And so we're still kind of building up our markets here. But as far as artificial intelligence, yes, I would say we are the leader there, again, lead path has a little bit more of a manual approach.

Also, they're not using AI.

Gina - Yeah. So I've heard some speculation that they're starting to work with cameras, and intelligence now. But I just said, it's not at the level that that we're doing. And that's what we're really investing in. So again, they have various various packages. So I'm not sure where the AI comes into play there. But a lot of what they're doing in universities is they have more fun at the countertop model, where they have sort of a smaller scale, they use smaller containers that you've kind of dumped the food waste into and then weigh it and kind of manually categorize on the tablet that's sitting next to it. So I think that's kind of their standard model today. Again, I'm sure they're investing in in AI and cameras and that sort of thing as well, but they're not as as far advanced as we are at this point.

Jason - Okay, so the show did you say that you were familiar with Lean path?

Disha - Yeah, yes. I think. Yeah. I saw, you know, the Benson some of the system, some of the cafeterias somewhere on campus here. Yeah. On campus? Yes.

Gina - Oh, okay. They are they are headquartered in Oregon. So I wouldn't be surprised.

Disha - The gift. Gina is right, they are more of a manual system as in, you know, chefs usually log the waste, whatever food waste, they're going to dispose off. So I

Jason - see. Yeah. Okay. So, yeah, so so so the other issue, the other thing I was thinking about is, is there anything that you guys would like to outsource to Disha as some type of project, and you may need to talk to other people in your team or whatever. There's anything in there. But yeah, we are totally open to if you guys have any data that needs to be analyzed, or some kind of way, that would be great. You know, because I also, I wrote a few things down, just as like, maybe some tentative things. When were what was that? You know, you guys were saying that, you know, you have lots of these pictures that are stored, right? And I might like wonder, like, hey, what do you guys do with these pictures? Maybe that could be a source of data for DISA to do something with to see if there's something of interest that could be of interest to to winnow. Or the other thing that was mentioned was, I didn't find something that's a non food item. You know, maybe there's something that VC could do to to figure out a good type of AI algorithm for that. I don't know. Also, the thing I've played with plate waste, right? You guys have pictures of those? Yeah. Yeah, it also may be. I know, when we were talking about giving advice to back to your customers. That was more of like a manual type of thing. But I wonder if that could be automated, right? Where, if you guys knew from your past history, what things were best, you could go to your new customers and say, hey, you know, we figured out how to, you know, for your system in current, you have to do it that way. But for your system, where do you have here some parameters that would, you know, optimize, you know, those kinds of things, you know, but I don't know you have other ideas? Yeah.

Gina - Great, great ideas, honestly. And I will. Yeah, I will definitely check with my team. If there's any kind of certain projects that maybe are coming up, that would be helpful to outsource a little bit. We're always we're always open to kind of exploring these things. Like, I know there's not at least in the US with my team, which I've kind of been here since we first opened the US office. So as far as I know, we haven't done anything at least regionally or we've outsourced kind of projects

Jason - Yeah, she's, she's already funded, so it wouldn't cost you guys anything.

Gina - That's good to know as well. Yes. Awesome, ya know, happy to happy to definitely look into it for you and see if there's anything that we could do that could kind of be jointly beneficial. Yeah, I will say kind of, I'll point to one example, that it's relatively newer. So I don't have too many details yet on kind of how it's how it's necessarily going at this stage. But one thing just to mention as far as work we're doing with universities. So Stanford University is actually using, they've used lean path historically, for back of house. So for their pre consumer food waste, they did reach out to us because of our plate waste product, actually, that we recently released. So we're actually working with them on the plate waste kind of research side. So typically, with clients, it's sort of a special agreement with them, we don't actually sell our plate waste product just as a standalone system, it's meant to be used as sort of an add on to using one of our vision systems for for back of house already. So it's just kind of an additional kind of value, add there. But for Stanford, we kind of came up with this particular agreement, where they had some grant funding, and they just wanted to use our plate waste systems for some audits that they were doing, and some kind of tests for test purposes and kind of joint research purposes. So So again, definitely kind of open to exploring that, especially on on the university side, because it's so interesting to kind of look at the research you guys are doing on these topics as well. So again, just wanted to share that, that, you know, we're open to exploring. I know. Yeah, I'll basically just have to kind of chat with my my team next week, when I'm back in office, and I think you guys posted.