



## Session: **Austin Given: Does your packaging pass the test?**

*With Shannon Curran, Austin Given and Michael Ireland*

Shannon Curran

Hey everyone. Welcome to the Packaging Unwrapped podcast. I'm Shannon Curran and I'm joined today by my co-host, Michael Ireland. We're excited to be talking with Austin Given, Senior Manager of Packaging, Engineering and Testing, and certified packaging professional at Veritiv. Welcome to the show, Austin.

Austin Given

Thank you for having me.

Shannon Curran

So that's quite the title. Can you start us out with a little bit about your background?

Austin Given

You know, I'm one of those people that started in packaging early, early on. I'm one of those that grew up in packaging, family owned and operated, converting plants for corrugated foam, thermoformed plastics. So I've been in packaging for pretty much my entire life. But over the many years, I've dabbled in packaging design, packaging engineering, product development, and packaging support. So over the years I've developed as an engineer involved in testing and became a leader within that functional group. So coming to Veritiv was a very natural fit for me. It allowed me to combine a lot of the different areas of my background and loved every minute of it.

Michael Ireland

Well, on this podcast, we are big on heroes. So, Austin, who is your hero, and why?

Austin Given

To me, hero is less about the individual. It's more about the embodiment of behavior. So heroic behavior to me, is really people that face adversity and triumph or just attempt to triumph in the face of adversity. I think of Martin Luther King, Frederick Douglass, in a point in time where action was necessary. So, I see people who see adversity, they face it down, and they strive to, you know, make the world better.

Michael Ireland

It's all about moving forward. And doing those great things... which is a nice lead into our next question. What continues to inspire you to strive?

Austin Given

I'm inspired by the people around me. I love to be surrounded by people of great character—the people who embody some of those heroic traits that I see. Those people, they did that because they knew to act, they knew to good, and they wanted to help others. So I'm inspired by others who embody great character, are very talented in diverse spaces, and have who have a passion. That's what inspires me. We're all very different, but if we stick together and combine the talents that we all have, we can really accomplish great things.

Shannon Curran

Well, you've been accomplishing some great things in packaging. Reflecting on your start in packaging—clear back to your family business, when you're starting out, to today – what do you feel like's the biggest change over the years?

Austin Given

The biggest change... I mean, packaging is a pretty, relatively old industry, especially within

the US. A lot of the manufacturing processes have been around for quite a while now. But the biggest change is really revolving around technology. Technology in the computer aided design, sample making, using a CAD table... as opposed to cutting out samples by hand. While I'm not that old, I do remember... I'm old enough to remember the days of hand cut samples. You really had to take a lot of time to do all your measurements, make sure all the calculations add up. You have all your tolerances, your panels are in the right sequence, and everything's going to fold up. Because it's going to take you quite a while to draw it all out and measure it all out and then cut it. Where nowadays, you can draw it all in CAD, pop that file over, cut it out on the table, refine quickly if things don't quite line up the way you want it to, cut more samples. And you can quickly cut 10 samples—2 samples—whenever you need to, very rapidly. That's the biggest change that I've seen... is just the ability to do what we've always done, faster, more efficiently, and really, ultimately with better output.

Shannon Curran

Sure. So, with technology changing so quickly, even nowadays, how do you continue to learn and stay on top of things?

Austin Given

There are a lot of great trade journals. A lot of great conferences around. We do participate in the major packaging conferences, and networking with various schools as well. There are great academic research facilities throughout the country that are doing great investigation into different materials and different technology. We partner where it makes sense with a lot of these different groups, to learn together or leverage some of their research and development skills. It's a lot of networking and a lot of learning. Tradeshow and journals are a great source for that. We're also members of ISTA, which is the International Safe Transit Association. We're members of ASTM. We're members of Tappi. So, we are ingrained in a lot of the organizations that make a lot of these decisions regarding packaging, testing and engineering. That also helps us stay at the forefront of advancement and technology.

Michael Ireland

With you and your group, who are your target customers? Do you even have target customers or target industries?

Austin Given

It's less target industries and target customers... it's more what are our clients are looking for? What is needed? Our group is within the PDN (Packaging Design Network) of Veritiv, is focused on custom solutions. We focus on consumer electronics, food, cold chain, durable goods, industrial packaging, premium, high end packaging, etc. You name it, we have the resources and the skill set within our design, testing, engineering, and sourcing to be able to find the right solution that's addressing that particular need, and coming up with that custom solution. Veritiv is an amazing place...we have an entire suite of stock items that are very competitive, that help solve immediate and quick turn needs. We also have the ability to create custom solutions with more than one material commodity at a time. That's a big, powerful piece that we can offer. A lot of B2B manufacturers—typically they'll deal with maybe one or two commodities. With our partnerships with suppliers, we can work with pretty much any commodity and develop an entire system that's best suited for that need. That's what excites me... it's really leveraging a lot of materials, a lot knowledge sets, and putting together the best solution. Not just the solution that works best for us.

Shannon Curran

So, are there certain customers that are more fun to work with than others?

Austin Given

Every client is different. There are different challenges, different needs. We get to meet really great people. That's the part that really energizes me, is meeting so many people and talking packaging. I love talking packaging, and advancement... product development is very much

in my blood as well. So it's more about the excitement of being able to launch something new, or launch something that is important, and be able to solve various challenges in different ways. No day is the same within packaging, especially in our world because we're creating custom solutions for so many different types of clients.

Michael Ireland

So, with that scale of customization, and product and variance... are their common key challenges you see customers facing right now?

Austin Given

The biggest challenges we typically see are optimizing for performance and cost to meet the needs of the environment. It's always a push and pull... what's the right material? Whether or not there's a sustainability initiative that we're trying to drive towards. Balancing that with the needs of the operations group, the needs of automation, and needs of their end customer and final consumer. It's balancing this holistic world of so many different complex requirements and finding just the right balance through all of that. Every client has a different operations need – either from manual assembly up to fully automated, fast-paced, fast fulfillment speeds. So every time it's different, and you don't always know what you're getting into until we develop a conversation around what the needs and operations are. That's typically the biggest challenge. There are so many different types of challenges.

Shannon Curran

So I'm curious, and I bet our listeners are too, what's a typical day in a packaging testing lab?

Austin Given

Every day and the test lab is a ton of fun. I think a lot of people would enjoy coming to see the all the different equipment that we have to offer. We have simulation equipment that basically can replicate what's happening in the real world in a repeatable and predictable way within a closed test lab.

So we have shock equipment, we have drop vibration equipment, vibration is running in—it will run frequencies of vibration based on what profiles we need for over the truck over a period of certain amount of miles, or is it airfreight? What's that vibration frequency in an aircraft? We can do vibration profiles based on what those needs are.

We can do compression testing. A big concern within warehouse space and in shipping is—*is my package going to get crushed? Is it robust enough to support what it needs to support?*

We have thermal testing. We know we have environmental chambers in our various labs so that we can run various environmental conditions: hot, cold, high humidity, low humidity, to be able to assess what the package will endure—what that performance is. We actually have the ability to measure what the thermal changes are within the pack or product of maybe an insulated pack that is supposed to ship something cold over a period of 48 to 72 hours to someone's door and not exceed a certain temperature. We have the ability to measure that, test for that, and review that.

So every day is different. I mean, some people need a whole suite of performance testing that is related to over-land truck and general handling. Some people need environmental testing. You know, there's trying to ship food cold from a fulfillment source to an end consumer over a period of 48 to 72 hours. We have the ability to do that.

And then when we don't have the physical product or physical packaging, we do have the ability to do simulation. So we have FEA, or Finite Element Analysis. The ability to use CAD and computer modeling. To be able to review if we drop this in a certain orientation, what is

the G, or gravitational impact on that unit from a certain height based on a certain orientation. We have a lot of very advanced tools to be able to test the individual package. The pallet itself, we can test the entire pallet unit, we can do simulation. And then what kind of sets us apart from many other testing houses, is our testing technicians and engineers—they also are engineers. They understand the physics behind it. They understand packaging too. So if there are issues that go on—part of our review and analysis is a partnership with our design and engineering group to solve those problems through design or operations improvements. So it's not just testing and finding out whether or not it passes or fails, it's testing to find out what occurred and then are there areas of opportunity where we can make improvements, or are we optimized to the point of success and we can move forward? But it's a ton of fun. I mean, it's a lot of fun to be able to drop large pallets and... or slide them down a sled and have them impact a wall.

Shannon Curran

I've been out there, to Chandler—if you go there, it's like mad scientist. It's fascinating.

Austin Given

It's a lot of fun. You know, if you like to try to break things or like to drop heavy items and see what happens—can feel like a playground for people that like to see things and trying to break things.

Shannon Curran

Oh, yeah, the kid at heart right here. Yeah, she's all for dropping things and seeing how they can break. So, you just went through a ton of different types of testing, and there are a lot of certifications that back that, like Amazon certifications and all the acronyms... ASTM, ISTA... so if you can share with us a little bit about the certification process and compliance testing, like what goes into that.

Austin Given

Probably the most important thing to know about Veritiv's labs is where is ISTA certified Labs. ISTA being International Safe Transit Association. They will go out and make sure that the equipment can be used in their standard tests that's been calibrated. There's a whole auditing process that goes into making sure a lab can be certified to run ISTA tests, and be certified. Oftentimes people will come to us for, say just an ISTA standard test that involves maybe some drop testing, vibration, could be compression, could be environmental conditioning. ISTA has very high standards. If you're familiar with ISTA, you'll know what I'm saying. There's various types of tests depending on what your package type is, your sizes, and the method of its shipment. So, we're able to do all of that within our various labs. We have lab in Chandler, Arizona; Livonia, Michigan—kind of Detroit area; and we have a lab in Chamblee, Georgia, just outside of Atlanta. From just a ISTA standpoint, that that's a lot of power to be able to have this equipment, have that certification through them. And it's just ensuring that we can perform these tests with reliability that they expect for their output.

Amazon is something that is becoming more and more prevalent as people are getting more involved in e-commerce, ship to home. Amazon actually worked with ISTA on developing a standard. Their ISTA-6A test protocol. It's basically e-commerce through the Amazon distribution path. Amazon wanted to make sure that they're working with labs that are up to speed and certified and capable of executing their tests. So they have a list called the APASS list. And we are APASS certified within our labs as well. So, if anybody is looking for Amazon-specific testing, whether or not that's Ships-In-Own-Container (SIOC) certification or other, that is something that we are able to support as well. ASTM is a is an organization that's heavily within engineering standards. We're members of that organization. So, we also have access to their testing protocols. There's so many different organizations. TAPPI is another one that we're members of that organization as well, that allows us to be able to

have access to the standards, make sure that we are compliant with their expectations of performance and compliance. It sounds complicated, but ultimately, it just means our labs are up to snuff. Our labs are very robust from an equipment, testing personnel, and reporting. The output from our labs will be reliable. Ultimately, what we try to strive to be and ultimately, it's so that we can support our clients in their packaging solutions and design so that we can make sure that whatever the output is, it's the best output.

Michael Ireland

In describing your packaging testing “fun-house,” you mentioned that Finite Element Analysis (FEA)... can you tell us a little bit more about that?

Austin Given

Not to get overcomplicated, but essentially, it's computer modeled simulation. We take a computer model of a product, and packaging components, and run it through various types of situations. Whether or not that's, dropping it in various orientations from different heights impacting it in a certain way. Typically, we use it for simulation for impact and understanding cushion performance as it relates to the product, and the G-forces that are applied to that product. Oftentimes, we'll use our testing facilities—if we have the physical product and can have a prototype package made relatively quickly—typically don't necessarily need to model something unless you have a limited supply of the product. But, if we have limited supply of the product, or the packaging components have a very long lead time to make prototypes, we have the ability to do the simulation. What it does is buys us time to be able to iterate and learn as opposed to cutting a prototype tool. Learning from that, maybe having to refine it, and then cutting another tool or iterating. It just truncates that development time substantially. So it's quite a powerful tool that we use. Oftentimes, when the components needed for physical testing would be, maybe long lead time or the product itself is maybe very expensive or very sensitive, it allows us to get to the point of physical testing much quicker with a higher level of confidence.

Michael Ireland

You have so many cool things going on right now, I don't even know how to position this. Is there something specific... what's going on right now that you'd want people to know about?

Austin Given

The biggest thing we're involved in is cold chain testing. Obviously, with COVID, people are adapting to a world where going out to grocery shop isn't always available, or people are going back into the stores but they're realizing, *hey, I can get these things delivered to my home*. What we're seeing more and more of, is shipment of items that need to stay cold for a long period of time. Basically, e-commerce shipped from a fulfillment center. And it needs to stay cold so it's safe and ready to be consumed. We have amazing capabilities. We have a lot of knowledge in that space. From insulated packaging... if you go to our website, you can find an entire section on insulation packaging as well. But within our testing facilities, as I mentioned before—cold chain testing—we have the environmental chambers so that we can change the environmental conditions that are maybe in the natural ambient space surrounding the lab. Within that chamber, we can set specific temperatures... all the way down to subzero and then up to well over 140 degrees Fahrenheit. High humidity to low humidity. These conditions are important for our various clients to understand the performance needs of their product and whether or not it's going to get to the end destination safely. So that's probably the biggest update and change that I've seen within the packaging—especially testing space, is more for food makers and distributors are looking to distribute direct to home. That's why we've invested so heavily within our testing organization on environmental chambers and being able to support those types of endeavors.

- Michael Ireland I asked for “cool,” and I got I got cold chain. That’s awesome. Out of all the things you’re working on, what would represent a big win for you right now... what is something you can share with us?
- Austin Given We do a lot of work within the consumer electronics space. And the packaging we do is so diverse. We do industrial packaging all the way up to high end premium packaging. We’ve won awards for various designs and have also been featured in publications. We were recently featured in the LA Times for a packaging that we developed related to beauty, design and sustainability. Going back to that whole idea of we’re not just supporting one specific commodity. We can find the right solution to meet the overall needs. So this particular project was dealing with ocean bound plastics and thermo forming those plastic sheets. Basically, ocean bound plastics are plastics that have been reclaimed from water streams that are ocean bound. They are reclaimed, processed and then converted into a new resin material that can be produced.
- Shannon Curran Ocean bound plastics, sustainability, there’s a lot of misunderstandings that can occur with those specific topics, especially around packaging. What are some common misunderstandings about that in the industry?
- Austin Given Overall, from a sustainability standpoint, there’s usually a lot of misconceptions around what material is sustainable and why a material may be sustainable versus others. We do have the ability to review materials from an LCA standpoint, or Life Cycle Analysis, where we can look at the material properties of a general, overall carbon footprint. What it takes to make that product, ship that product or material, and then ultimately dispose of that material. Oftentimes, what we often end up seeing is less of a linear path to sustainability, and more of a spread-out web of sorts. Water usage versus energy usage to create this item. So, what we can do is evaluate a material from its true carbon footprint usage—where one item may be amazing from a recyclability standpoint, but its water usage is off the charts. Or vice versa. It becomes this push and pull and balance between, what’s the right material based on what the goals are ultimately. If I find a material that has a very low water usage, low energy usage, but ultimately it becomes a high litter item... I’m thinking more, plastic films and foams... it’s very difficult to deal with those materials at the end of life. Where, it’s LCA up to end of life, actually looks pretty favorable versus items that may be fibrous, that can be end of life recycled very easily. But the water usage to create those items is actually very high. It may not be completely amazing across the board, but what’s the right solution ultimately, for the end goal? That’s usually the biggest misconception, is this sustainable in a linear path, versus is this sustainable in an overall holistic balance of everything that needs to be considered?
- Shannon Curran That’s a great explanation of it. And balance and education is key to understanding everything all the way down to a consumer level. Do you think sustainability is the reason why folks are more interested and knowledgeable around packaging these last few years?
- Austin Given Sustainability is interesting. Everybody wants sustainability. But we find is, most people want things to be as sustainable as they can afford. The biggest drivers of sustainability have been the sales agents of materials. The buyers of products that are the mass retailers of the world. Oftentimes, they’re driving a lot of these sustainability initiatives for multiple reasons. It’s the right thing to do, corporate social responsibility reasons. Sustainability also typically means reducing materials and reducing costs. So again, it becomes this balance where you have an entire world out there that’s looking for products as sustainable as possible. The biggest

driver is less consumer demand and more, the suppliers to the consumer to have that message. Because I think they understand that consumers generally expect their products will be as responsible as possible. That drive, and that move towards sustainability is really driven by those who are basically distributing the product to the end consumer.

Michael Ireland

You obviously have a lot of pride in your team and their capabilities, so let's talk them up a little. What is something you wish everyone knew about the services you and your team offer?

Austin Given

I'm so proud of my team. I'm just astonished and astounded by their amazing talent that we have—from testing to engineering. We have an amazing group of industrial designers who do that creative ideation work, to structural designers as well, who have an amazing knowledge of manufacturing processes and manufacturability. The power of Veritiv is so amazing to me. As a former customer of Veritiv in a prior life, I knew that I could always come to Veritiv. Not only for custom packaging design solutions. Veritiv doesn't just make packaging, and design packaging. We are a logistics organization. We also offer facility solutions. If you're in an operations setting of a product manufacturing firm, and you need to have packaging designed for that product, stored for that product, delivered on a daily basis, and ultimately, your facility also serviced with facility solutions... Veritiv is a one stop shop. It's unrivaled within the space.

Michael Ireland

Very good. How do folks reach out to you... email, LinkedIn? What's your pleasure?

Austin Given

I'm on LinkedIn... happy to connect to there. If anyone wants to reach me, you can certainly reach me by my email: [Austin.Given@veritivcorp.com](mailto:Austin.Given@veritivcorp.com).

Shannon Curran

We'll make sure to put all that information in the show notes. Thank you for talking packaging with us today Austin. Michael and I enjoyed talking to you, and we've learned so much about packaging and testing and you. So, thanks!

Austin Given

I appreciate it. Thank you.

