

Elyte Family Vidcast Transcript

Hosts

Brian Williams – VP of R&D

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Intro to Elyte

Zack: You're here with team Callaway. My name is Zach Oakley, the senior product manager here at Callaway. And I'm joined by Brian Williams, our Vice President of R&D. And we are coming to you today to talk all things Elyte. To kind of go and really set up what this product is all about, our theme this year is going from good to elite. And to go from a position where you're already in a great place and break through that next level is incredibly difficult.

We liken in our story, like what Xander went through these past couple of years, he was always considered one of the best players in the world, but he hadn't quite broken through to be a major champion. And he had to go back and look at every single aspect of his process, his swing coach, his agency, his sponsors, his physio, and really evaluate every little detail to really break through. And then coincidentally, he broke through twice this year.

We think that's very similar to how we're approaching this year, going from great products in AI Smoke and Paradym, and then finally breaking through with something that has really no weaknesses. And so, when we talk about the future of performance is Elyte, we really must look back at the past. And what the past tells us is that there's a trade-off or a limitation between speed and forgiveness.

Fast head shapes, products like Epic, the Epic franchise that you guys remember, fast heads, but they didn't provide the level of forgiveness you see today in the modern driver. Fast forward to products like Rogue ST Max, Paradym, Paradym AI Smoke, super forgiving shapes. They provide that modern level forgiveness, but they don't have the speed that you'd want to see from an elite product, from a product like Epic. And this has really been an issue throughout the history of driver design.

What you're going to be looking at here is an innovation graph, and you've got your limitation between speed and forgiveness here, and really going back to when titanium drivers were introduced, you can kind of see that first curve. There was a jump when we went to 460 cc drivers. Fast forward a couple years, there's COR and early aero engineering, and each time these giant, disruptive technologies were introduced, the products got better.

You can see that curve pushing outward, but the trade-off and the decision of “do we make a driver that's forgiving or a driver that is fast” has always existed. Now you get to about where we are in 2024, where we've gotten really good at making these products, really good at manufacturing, really dialing in all those processes, and we've actually felt pretty good about it

in terms of we've really eliminated a good portion of those trade-offs, but you still have a line where you're having to pick a direction.

And so, we just like Xander looked at our processes and looked at everything we do in driver design to figure out how we unlock that elite performance and that next layer. Brian and I are going to walk you through specifically what those three things were that we looked at. First, we're going to talk about shape, then we're going to talk about materials and then we're going to talk about artificial intelligence and how each of these aspects. We've really created a product that has no weaknesses.

Elyte Driver Shape

Zack: We're going to start with shape. And traditionally when we start thinking about shape, to make things faster you would have to go smaller. But as we've illustrated you can't do that without impacting forgiveness. What exactly did we really do to improve the shape in a way that's not hurting our forgiveness?

Brian: Yeah, exactly, right. In golf going faster has meant going smaller, it's meant a more compact shape, lower profile product. Things like raising the ribbon and all of those have trade-offs, all of those have penalties associated. We see lower MOI, we see higher CG, and higher spin that can result in a short ball flight. We challenged our team to create a new shape that was faster, but without any significant trade-offs to MOI or CG.

And what we really did (was) a deep dive on the aerodynamics of our Ai Smoke Max and found opportunities through aerodynamic modeling. And a couple of significant changes that we made we have a lower profile heel section now. We had more turbulence than we wanted to have through the heel section and kind of behind the head and behind the shaft in the downswing. And we also pulled our ribbon a little bit deeper and a little bit higher and that isn't an aerodynamic improvement that in and of itself would have had a CG penalty, but we had a solution for that ready and waiting in our advanced materials development section and we'll talk about that in a minute. But the only way to really attack this problem was to do lots and lots of prototyping and testing.

To try to get faster without those trade-offs, we had to try things, and we had to learn from it. And normally in golf R&D, you can have three or four cracks at that in a product development cycle. We knew that wasn't going to be enough, and in fact, we talked with our team about sometimes you get worse on some of those iterations and that's how you learn. So, we made an investment in additive manufacturing. We brought in our own 3D printing machines, and we used those machines to make over 75 different unique prototype variants.

Each one of those we learned from, and we continued to iterate and iterate until we saw what to us amounted to years' worth of aerodynamic research that we were able to deliver in one product cycle and get a faster head shape that didn't have an MOI trade-off and didn't have any significant CG penalty that we couldn't overcome with use of our carbon fiber development.

Zack: I do want to point out too, I mean, 3D printing, we use that a lot of times for shape observation and really trying to make sure that we get that right. But those are plastic we're talking about titanium printing where we can pull a part off in a matter of you know days or weeks and as opposed to months and go take it out to the test center. Test it and then go back to the drawing board and figure out how to make it better. and that's really what unlocked this this new shape for us.

Brian: Yeah, We were able to take these parts down and put them in the hands of real players. We have a new biomechanics lab that we use to test with players and we're able to see that we were able to get speed through the downswing where it mattered and see that these gains were real. Here we have a couple images of that turbulence that I mentioned that we saw behind smoke. We just see suboptimal airflow coming off that driver.

It's becoming detached, there's turbulence behind the heel section and by the time we were done working on Elyte. And this is in a downswing capturing just a couple feet before impact, you see just much more efficient airflow and just an overall faster head shape.

Zack: And I do want to go back to the biomechanics lab because one of the one of the things that when you're remaking a shape and re-engineering it, you can't just engineer it for impact like you were saying. You must engineer it to be faster throughout the entire downswing, which is where we really focused. You see on the overlays you saw between Smoke and Elyte there was a heel section on the on the crown side. That was lowered and that was because that's where a lot of that airflow was getting stuck.

Brian: That's the swings of one of our actual staffers down in the lab who picked up a mile an hour of head speed in the downswing just before impact.

Zack: So, let's talk about that in terms of you know what we're seeing with real testing. What is that number looking like and what do we traditionally see in a development cycle?

Brian: I mentioned when you get three or four iterations the margins for improvement are slim and typically our team would look for something like 0.2 miles an hour of head speed, that would be significant. That could translate to something like a half a mile an hour of ball speed and a couple of yards in distance. So that would be normally where we would set a bar and say, if we can get that, we know this price is going to be better. In this case, I think we did much better than that.

Zack: What we are seeing is up to 1.3 miles an hour more head speed. And all the numbers that you guys will see are done with a panel of golfers. We call it VOC testing, which is voice of consumer testing. And it's a range of swing speeds, a range of handicaps. Really trying to capture what the market in general looks like. And this is what we're seeing in that 80th percentile up to 1.3 miles an hour.

Brian: That's an exciting benefit for us to see with that panel of players because we don't have just specifically super-fast swing speed players. There are a lot of players that are hitting the driver under 200 yards. It's representative of the people out there. And it shows that really any player can benefit from this shape.

Zack: And that is before they've even gotten fit for the correct shaft and you know, this is done in a way that is supposed to be more generic.

Elyte Performance Through Materials

Zack: Let's shift gears here and let's talk about materials because we did talk about a shape change where we raise the ribbon.

Brian: Yeah, and that presents its own challenge in terms of that trade-off. So that shaping that would normally raise the CG and we knew we didn't want that, we didn't want to have a higher CG. We didn't want to increase any spin-off this product.

In fact, we wanted to push it the other way. We wanted to push for a lower spin, we knew that we couldn't do that with our current carbon fiber system. And so, we worked very hard, our R&D teams, engineering teams, and our manufacturing partners have stood up a new operation, Thermo Forged Carbon. It is a lighter, stronger and more precise material that offers us precision molding capabilities.

It's a material that's used in aerospace. And what it allowed us to do is it allowed us to wrap more carbon further down the perimeter. We're able to wrap it further down that ribbon section and displace titanium, and in doing so we were able to lower our center of gravity on this driver and lower spin. Which is good for pretty much every golfer that would be looking to buy this product.

Zack: I think where this really matters is we were able to make the shape changes and get the speed without having this penalty of you know higher CG higher spin. And we get to see that translate into distance ultimately and ball speed. What we're seeing here is up to 2.1 miles an hour more ball speed. This is the same test same group of same panels from the VOC testing that experienced that.

New Ai 10x Face

Zack: So, the first two things we talked about we talked about shaping, we talked about materials. And those have mostly been around speed and how we're how we're maintaining or increasing speed. We're going to talk about intelligence here and what we're doing with the face because this is where we feel like we really have a competitive advantage in the way that we're using AI.

AI, it gets thrown around like a buzzword, but it is an integral part of all our processes, and it really is what is allowing us to not have to pay attention as much to a number like MOI. We can focus on getting the real number as we'll talk about dispersion.

That is where we feel like we're making big strides ahead of the competition. This year or this this past year, we launched AI smoke where we had real golfer swings introduced into the AI process for the first time. If you've ever used any of the AI materials out there or engine search all those things chat GPT if you give it a bad prompt, it spits out bad data.

This was another step for us getting better data into our AI process to get a product that was going to perform better and give you sweet spots across the face. The new process has 10 times more control points. We've got more swing data than we did last time which is really increasing the amount of forgiveness we're able to produce while still having a fast head shape and lower spin, which can get squirrely at times if not controlled and that's what AI does for us.

Brian: I'm proud of the effort of the R&D team to just continue to push the envelope in this AI and modeling space. The team didn't quit and created a new system here that just gives us a step change and control over the face. We really own and control every spot here, every detail and we see that the details matter and when we came up with this and started running our early prototypes, we were prepared knowing that we had a faster shape.

We were prepared to see the distance that you mentioned and if we had only delivered that it would have taken a number one driver even higher but when we saw the impact of the AI 10x face and we saw that we could actually get better downrange dispersion even as we added speed into the equation, that's when we knew that these details mattered and that was how you take a good driver and make it elite.

Zack: Yeah, so from a number standpoint, I think we touched on it a little bit. Dispersion is the real number that we care about. MOI is important but what does that really mean for the golfer? How do they digest that? What does that mean for performance?

Brian: We tend to look at it a little bit differently and we look at that front, back, side, side dispersion and what we're seeing is up to 19% tighter dispersion than the AI Smoke Driver which was already incredibly forgiving and already tighter than we were with Paradym, which was tighter than we were with Rogue ST Max. We're just honing in and creating a super consistent driver. Through shape, materials, AI, that's how we're going from a great product to an elite product that doesn't have really any weaknesses.

Elyte Driver Models

Zack: Let's walk through the models quickly. One thing that is a neat added value here is we are partnering with Arterra. It is a new premium shaft maker, and we are going to be exclusive launch partners with the EC1 shaft. So, this is normally going to be a shaft that carries a \$300, \$320 upcharge in the aftermarket. And with any elite driver, we're allowing that consumer to

get it for just \$100 upcharge versus where you would have to pay in the aftermarket. So elite performance doesn't just stop at the driver head, it also continues into the components.

To walk through the models, we'll start with Elyte. This is going to be the model that fits a majority of players. It's fast, it's high, it's low spin. It's going to have a new APW, a discrete weight system there where you have neutral fade and draw settings. The Elite X will replace what was the Max Draw, I think this in totality is just going to be a better offering for that player. Can you just touch quick on the performance difference between Max Draw and the X platform?

Brian: This X driver is going to be a nice addition to the line in the heel weighted setting. It's going to test something like four to eight yards more left than the AI Smoke Max D in the neutral set setting. It'll test maybe two to four yards more, right in the neutral setting. So, it really gives golfers the opportunity to dial in the shot shape that they're desiring and that they're looking for.

Zack: It just it broadens that market a little bit. I think you know for the player that needs something that is a little bit more forgiving, needs a little bit more help, and a little bit more launch that player can get it in the neutral setting and for the player that needs the draw. And then we'll have the Max Fast which is for that moderate swing speed player with adjustability this year for the first time.

We didn't get rid of the Triple Diamond. It's still our #1 driver model and users across global Tours, our number one driver model in wins for six straight years, and even has the gold medal in the Grand Slam of golf. We've seen this platform really take off in recent years, and it's good for not just your better stronger player but in some cases, we're seeing players that really struggle with high spin see some benefits here.

Triple Diamond is going to have that neutral ball flight and the interchangeable weight screws that that we've had in that previous version. So, stability in the back, lower spin in the front, and we continue to be excited about this product becoming more and more accessible to more and more players. This product we've made quite forgiving and as you mentioned you can start to get into even higher index players now. And there isn't that fear of a right miss this product is testing longer and straighter than the Smoke Triple Diamond and then our own internal player test.

And we saw it test so straight that it made us stop and ask the question of Tour players still being able to do what they need to do, and we had our Tour players come in and hit it great results. Good players can still work the ball as needed with this product, but for other golfers out there, the more casual golfer, they're going to be able to take advantage of the speed and the low spin and just get a ton of distance out on this with even more forgiveness than we've had ever before in the Triple Diamond product lines.

So that is the driver, you've got a driver that really breaks that trade-off between speed and forgiveness but the Elyte, going from good to elite theme doesn't just stop there it also continues into the fairway wood.

Elyte Fairway Woods

Zack: We've been on a real incredibly strong run with fairway woods number one in market share number one in global Tours for a couple years now and so, it's always a great challenge to have to go and make that product better. And so, to do that, we focused on two key areas where golfers tend to struggle the most, misses low on the face is one of those especially if you're hitting off the deck. It's hitting it thin that happens, and then just making solid contact in general can be a challenge for a lot of players when it comes to fairway woods.

So, we have two technologies to really address that the first being the Tungsten Speed Wave Which is designed to improve those low center strikes.

Brian: This is an exciting technology, great job from our woods team in developing this. We've used almost double the tungsten that we had and save 35 grams, and we've removed it from the sole which removes any stiffening effect that it can have. And so, it's allowing for more deflection low on the face while maintaining a very low and very forward center of gravity. So excellent for ball speed, excellent for spin and allowing just a lot of deflection low on the face and we've seen some exciting test results of this one too.

Zack: So, if you do hit it low, we've got we've got you covered. We're going to see more speed on that low that low miss but how about we try to Prevent those low misses from happening and that's where the Step Sole design comes.

Brian: Yeah, and this is an effort that our team took on working with our tour staff Through the line of Apex utility woods. We just saw such a great result there and what we saw is that less sole contact area was allowing players to get the leading edge of this product down into the turf. Without any kind of bouncing or skipping back up off the turf, we took the same approach with the fairway.

So, 57% less sole contact area on this and it's allowing golfers to get that face down into the turf without it starting to bounce or skip back up and improving our impact locations. We're seeing a 25% reduction in low center impacts.

Zack: I think you touched on it being the Apex utility where we were drawing some inspiration and design cues from that product, maybe not quite broadly and mass appealing as what will be the Elyte fairway wood. But I do know that there's a cult following, people who absolutely love the utility wood, me included. And you never want to pull that club out of the bag. And I think one of the real reasons why is how easy it is to hit and how easy it is to hit squarely in that step sole design, bringing that into the elite product line is going to be a home run.

So, we'll talk quickly through the model. Just like the driver, you're going to have your Elyte, which is your sort of neutral ball flight, mass appealing, fairway wood, has that sort of shallow face design, easy to get the ball up in the air. We'll have three woods all the way up through your heaven wood, your 11 woods. The Elyte X, just like driver, going to have a slight draw bias, little bit more, a little bit larger footprint, little bit more forgiving.

And then we'll have the Elyte Max Fast, which is that moderate swing speed player type. We will also have the Triple Diamond, which will have that Tour preferred shape, slightly deeper face, really made for that better player, players are hitting off the tee.

And then new this year, we have the Elyte Titanium Fairway Wood, which is a new shape that really taking the blend of the standard model and the Triple Diamond model. So, it's going to have the deeper face that the Triple Diamond has, but in the footprint of the standard.

And this thing, Titanium Face, Titanium Body, lot of discretionary mass to play with. It's going to be low spin and just an absolute bomber, lots of ball speed. So good addition here to the line. That is the Fairway Wood. You've got a Fairway Wood that really is made to be very versatile and easy to hit. That was the design target. And when you guys get a chance to hit these, you guys will experience that as well.

Brian: Really can't wait for folks to get out there and see the ball speed low on the face. We're seeing ball speeds as low as 200 thousand below the impact line that are just about as fast as if you're hitting it at center.

Elyte Hybrids

Zack: So, we're going to talk hybrids now. I think when we're talking hybrids, the thing that our theme here is top of the bag versatility. We know that golfers from the Tour player to the weekend warrior have almost unlimited options in terms of how they construct that part of the bag whether that's a fairway wood, a hybrid, a utility iron, a utility wood. And so, we really wanted to make sure we had something that really was versatile and innovative in that space. So, this will have the AI 10X face.

We didn't mention it on the Fairway Wood, but that will be there too. But we really focused on adjustability here. And so, for our first time, we've got heel toe weights that are interchangeable to really help with shot shape. In this position, with the 13 grams on the toe, it's going to play more neutral. If you want more of a draw bias, you can swap that 13 into the heel and you'll see up to 12 yards of shot shape adjustability.

And then for the player who's really struggling with the lefts on a hybrid, which we know there are a lot of players out there who do struggle with that, we've got the new OptiFit 4 hosel system, which has seven unique loft and lie combinations, where you can go flat.

And really straighten out and neutralize that ball flight. So, you've really got a hybrid here where you're not struggling to get the player into it, you can fit the product, and the player doesn't have to adjust their swing.

So, we're going to have three different hybrid models, you've got your Elyte which is your more the most neutral flight of the three. It's kind of that mid-sized profile that will complement the elite and the HL iron models, which we'll get in to get into here shortly.

The Elyte X, which will be your forgiveness platform, a little bit more oversize a little bit more draw bias, built in in the neutral setting and that'll complement the X and then we'll have the Max Fast, which will have that slightly larger profile, but shallow so it's going to sit a little bit lower to the ground and be really easy to get up in the air for that moderate swing speed golfer. I think this is a space where not a lot of people are innovating and that you guys really did a great job here in terms of really focusing on more golfers need help.

Brian: This is meaningful adjustability to a hybrid that can make a very material impact to the golfer in terms of how they hit their hybrids and the types of shot shapes and trajectories that they're looking for.

Elyte Irons

Zack: So, we're going to close out with irons here, this is a this is a product that we're really excited about. The work that you guys did here and when it comes to irons I mean if you go to any driving range, imagine where you're going to hit golf balls on a Sunday afternoon and you're going to see a very wide variety of players out there. You'll see players out there who are just trying to unwind, have a drink hit some balls, you'll see players out there who are grinding trying to get better.

You'll see players that are that are new to the game that are trying to learn. And the different swings you'll see on those players are going to vary quite broadly and so for us to provide the best product, the best fit to deliver the best performance we need to approach a little bit differently. And so, we're looking at this kind of bucket of needs, right modern golfers demand modern solutions and so we're doing that through all the things we did with AI, but also some construction things which we're going to get into here.

But there are some players who need long distance, they need consistency, some players need that higher launch and maximum carry, some players are just looking for something that's easy to hit that will give them some confidence. And then you've got the player who needs that that easy to swing lightweight type of product and so with the Elyte family of irons this is how we got here. And we've got four different models that cater to each of those player types and those needs, kind of a tailored custom solution within Elyte for all those players.

So, let's dive into specifically what we did to make this product Elyte. We've got a Speed Frame construction, which really is helping us not only deliver speed, but the best in class feel in terms

of the game improvement category. We've got the AI 10X face, and then we've got a Tri Sole design, which is really an underutilized tool in game improvement irons. So, let's start with Speed Frame.

Brian: Yeah, something that we've continued to learn ever since we brought out a Speed Frame technology with the Paradym Irons. We saw how we could stiffen and reinforce the top line and have a very stable and very strong chassis to drive ball speed through the face. So, it is helping us drive more ball speed but as you mentioned, it's also dampening sound and vibration that's coming off that top line.

So really a two for one benefit from this technology that makes these irons sound and feel great and continue to have industry leading ball speed.

Zack: Yeah, when we show these irons to people, the first thing they say, which we didn't even touch on was the look, which we can touch on here in a few minutes. But the second thing they say is, wow, these don't feel like a cast game improvement iron. They feel like a premium performance iron. And that is all because of the speed frame and what we're able to do from the use of, it enables us to use more urethane, too.

Brian: Yeah, it gives us a little bit more fill perimeter. And so, we've got about 20 percent more urethane in these, and you really can feel the difference.

Zack: The second area we touched on is that AI 10X face. And like driver, having more swings, really focusing on how we're using shape in conjunction with the AI process to improve performance. And I think the key thing here on the AI Face is that we're trying to deliver speed forgiveness and optimal launch conditions for all players. Some players need a different level of each of those and that's what the AI face really is, right?

So, we're looking at someone who's in maybe the HL product that needs a higher launch and a little bit more spin, that face is tuned to help that player get the ball up in the air and keep it up in the air. For that player who uses more of the face in the X iron line there's going to be a little bit of a higher You know attention to detail on the forgiveness across the face And so that's what AI is allowing us to do for these different swing types.

Brian: We made a nice change with our HL line this year just having more and more data that came in from the field and from our fits, we saw that we were optimizing at swing speeds that were too high for the players that were fitting into HL. And so, we refined our approach and lowered the swing speeds that we optimized around and that allowed us to have a more active face there. So just a nice example of where we've continued to push the envelope on our data inputs and with our precision AI process, able to get a nice outcome there and that should be a product that's a good fit for a lot of players.

Zack: And then lastly here, the Tri Sole Design where you see a lot of it on better players irons, chamfers, sharper leading edges, trailing edges. But you don't really see it as much in the game improvement space. But from what we've seen this is hugely important for this player too.

Brian: Totally right. We keep talking about this that we learned from Tour players, they do this for a reason right? There is a reason why Tour players are grinding the leading edges of their wedges and short irons. And we went and tried it in our game-improvement irons, and we saw immediate benefits. It's helping players get in and out of the turf more efficiently.

It's like an accelerant effect through the turf and something we saw when we had it in there, we had speed. When we took it out, we lost speed, and we saw that was true for all golfers. So, it's something that we're really bringing to that core segment, and we know that will help players that are sometimes hitting it a little bit behind the ball. This is something that will help people have better turf interaction and better impact.

Zack: So, we're going to walk you through the four models here starting with Elyte, this is your best-in-class game improvement iron. It's for that player that's looking to hit it further, looking to maybe reel in dispersion a little bit, be a little more consistent. We say average to fast swing speeds. This is for the player who really is already close to optimal launch conditions, they might need some fine tuning through shaft and maybe a lie angle adjustment or something. But for the most part they're swinging it fast enough to activate the face and get the ball up in the air and stop it. And so that is who Elyte is for.

The HL is the higher launch model, for that player who doesn't get the ball in the air enough to stop it on the green they need to maximize carry and stopping power. We've got a shape, an Ai face that's really designed to help that player get the ball up in the air, keep it up in the air and stop the ball on the green, which is typically your moderate to average swing speed player.

New to the line this year is Elyte X, it's going to be that oversized shape, power spec package, it's going to have more offset, thicker topline, longer blade lengths, and still be a refined shape. This isn't a shovel, it's a very nice look to an iron that's going to provide a ton of forgiveness and confidence. And then lastly our Elyte MAX Fast, easy to swing for that player who isn't generating enough swing speed to get the ball in the air. And more so than that player on the HL side, this is really that moderate to slower swing speed player.

Brian: We really wanted to commit a premium look and finish to these. They are chrome plated, the badge itself is plated, that gives us a stronger finish. They're very durable, very high quality – these are going to look really like some of the more premium, more expensive irons on the rack. And I think it gives them quite a bit of appeal here. They came out very clean with great sound and they feel great. So, an exciting offering for us to be able to bring in the middle of the market.