

Alan Stolzer:

Hello everyone and welcome to Aviation outlook. We're glad you could join us. I'm Alan Stolzer, Dean of the College of Aviation at Embry-Riddle Aeronautical University.

This week across the university from 130 classrooms around the world and on campuses in Singapore, Prescott Arizona, and here in Daytona Beach, Florida, we are celebrating the history and accomplishments of aviation heroes, leaders, trailblazers, and dreamers during Aviation Week with special programs and events on our campuses.

Earlier this week on Monday April 12th, we celebrated the 60th anniversary of the historic flight of Yuri Gagarin, the first human to venture into space.

Monday was also the 40th anniversary of the very first space shuttle launch from Kennedy Space Center John Young and Robert Crippen took the world's first reusable manned spacecraft, Columbia, on its first test flight into space and back.

Tomorrow April 16th is the 154th anniversary of the birthday of American aviation pioneer Wilbur Wright who, along with his brother Orville, are generally credited with inventing, building, and flying the world's first successful piloted motor operated airplane on December 17th 1903.

We are celebrating Wilbur's birthday at both our Prescott, Arizona and Daytona Beach, Florida campuses as a wrap up to our Aviation Week festivities.

Tonight we are also talking to a record setter Bonny Simi is the Head of Air Operations and People at Joby Aviation, a leading aviation company that is developing an all-electric vertical takeoff and landing aircraft that it intends to operate as a commercial passenger aircraft ride sharing service, beginning in 2024.

Bonny leads the development of the operating service, including flight operations, maintenance, training, safety, air carrier certification, and sustainability.

She was previously the President of JetBlue Technology Ventures. She is also an airline pilot and engineer with 30 years in the aviation industry.

Bonny has flown Boeing, Airbus, and Embraer aircraft at both United Airlines and JetBlue Airways.

She has served an operational and strategic roles within flight operations, system operations, people airports, customer support, and prior to leading the venture arm of JetBlue she was the Head of Talent for the airline.

She holds master's degrees from Stanford Graduate School of Business and Stanford School of Engineering.

I mentioned earlier Bonny is also a record setter. She is a three-time Olympian and 10-time national champion in the sports of luge and bobsled.

She was a torch bearer for the 1980 Winter Olympics in Lake Placid New York and following her last Winter Olympics in 1992 Bonny retired and served as a color commentator for CBS sports there during their coverage of the Winter Olympics in 1994 and 1998.

Bonny Simi what a remarkable career, welcome to Aviation Outlook.

Bonny Simi:

Thank you, thank you I'm very honored to be here. I've been a huge fan and supporter of the Embry-Riddle Community for decades.

Alan Stolzer:

Excellent well we're delighted to have you spending the evening with us and I'm sure it's going to be a fascinating conversation, so thank you.

So, about two months ago, you were appointed as the Head of Air Operations and People at Joby Aviation. I mentioned Joby is leading the way in advanced air mobility as it's nearing the final stages of developing a fully electric vertical takeoff and landing, known as eVTOL, a piloted for passenger aircraft that you plan to fly commercially in 2024. Can you tell us about that aircraft and how it will transform aviation?

Bonny Simi:

Absolutely, and probably the one of the first points to make is that it's all electric. And we fundamentally believe that electric propulsion is going to transform aviation, just like jet propulsion did decades ago in the 60s. And so we're starting we're starting to see some emerging platforms for electric propulsion. We believe that that the Joby platform will be a true breakthrough because it also then has the added component, it is that it's not only electric but it's vertical takeoff and landing, but it can also land conventionally. So it's both VTOL and CTOL which allows us to have access into the existing aviation framework, whether it's airports or heliports and eventually vertiports. So ours is piloted, that's important I know that's quite important to the pilots who are getting their ratings at Embry-Riddle so it's piloted it will operate within the existing airspace.

Alan Stolzer:

Bonny I understand that you have a Joby video showing the aircraft in flight.

Bonny Simi:

Yeah so I'd love to share, you know to truly appreciate what the vehicle is you, you need to see it, and so we shot some video at our training base in central California, as I mentioned, we operate a fully scaled prototype vehicle and so what we're about to share is the aircraft on one of our test flights and also monitored by our ground control station. So you see, we have pilots involved, as well as a lot of engineers. Take a look.

Alan Stolzer:

That is indeed a beautiful machine.

Bonny Simi:

And I tell you, when you fly it, we have simulators that we're building. And you know as a fixed wing pilot, I have no helicopter time, as a fixed wing pilot the instructor said okay Bonny I want you to—I took off on an aircraft on top of a building in San Francisco and then to fly too San Francisco and fly the approach and land on the numbers used to landing on numbers that's pretty common but they said no, no, the land on the numbers so I'm flying the approach. It is about 140 knots coming down and slowing and slowing you just pull the speed back and slow and slow and slow and you know I'm watching the speed degrade down to 60, 40, 20, zero and I'm hovering. You just decelerate and it transitions automatically from forward flight to vertical flight. And then you just pitch the nose down and it lands. So that's quite an interesting experience.

Alan Stolzer:

I'll bet it is for a fixed wing pilot, like myself, that would feel pretty unnatural in the beginning I'm sure.

Well, I had the privilege of visiting Joby's headquarters in Santa Cruz in late 2019. I met you at that time, and I was astounded by what I saw: the innovation, the excitement, the passion.

You were on the Joby board at that time, but as, as I mentioned you're now part of the executive team. Can you share a bit about your role at the company?

Bonny Simi:

Sure sure. So as you mentioned previously in your introduction, I'm with JetBlue Airways as well, and we founded the venture arm for JetBlue Airways, so it's JetBlue technology ventures and the point of that was to invest in future technologies that we believe will transform aviation.

So clearly Joby fits into that category. So four years ago, a little over four years ago, JetBlue invested in Joby and my role at the time was to, was to support the company from the board perspective and help them think of commercial operations.

And then, over time, I became more and more and more active with the company and so JetBlue has asked for me to join the team to help them think about and actually bring us to commercial service, so my role spans currently our Operations team, a small but mighty team, because you know, as you mentioned it's not till 2024 that we'll be doing commercial operations. But you have to begin laying the groundwork now, building out a 135 operation, building in the manuals and processes, starting with part 91, building in the safety system. So we are building out an enterprise SMS so safety management system so in the 121 world, which of course I'm quite familiar with, SMS has mandated. It hasn't yet been mandated on the 135 side nor on the manufacturer side, but we look at this and we want to be leading in the safety space so we're building out- because we're not only going to be, we're designing the aircraft or getting it certified we're also manufacturing it so we're the OEM.

And then we're going to be the service so we're a great platform to create an integrated safety management system so we're laying that groundwork right now.

And the other areas are same thing on the sustainability side so safety and sustainability, when you start thinking about our manufacturing processes and working through our Green initiatives, the batteries, where do we, where do we, what do we do with our batteries, where do we source them, how do we dispose of them all of those items are areas that are falling within the early operations and the early manufacturing that we're doing.

And then of course the people. You know, coming from JetBlue and the culture, there's a very nice culture match between how Joby and JetBlue and we think in the value and the importance of our people so building in the people structures as we grow from a company from when, Joby first invested, many years ago, the company had about 50 people it's now it's about 700 and will be growing dramatically over time. So it's a lot, it's a great and it is a really good partnership between JetBlue and Joby as well.

Alan Stolzer:

That's a lot of growth, and it sounds like actually a lot of fun to be part of.

You had a very interesting journey that led you to where you are today and I mentioned some of that in the intro.

One of those interesting things was that you competed in three different Olympic Games and became a 10 time champion in the sports of luge and bobsled. There has to be a wonderful story about how you became a world class competitor in two sports, can you talk about that?

Bonny Simi:

Sure sure, well actually it weaves nicely into my into aviation as well because when I was in high school there was a speaker that came to our school and he was an adventurer. His name was John Goddard and he had come up with something like 100 things that he wanted to do when he grew up when he was 14 and he set these goals. And so we were in this audience and I was 14, and so our assignment, you know what school was to go home and make a list of goals, things you want to achieve in life and well I couldn't think of 100 things, but I could think of you know, I want to go to a good college. The timing of it happened to be around an Olympic year and I was watching the Olympics on TV, so I said, well, I want to be in an ABC TV commentator and I want to be an Olympian. So you know dreams of a 14 year-old are some people say they want to be, you know a football player or basketball player I just said, I want to be an Olympian.

And I also said, I wanted to be a pilot. Now, when I was 14 there were not very many female pilots at all.

And I hadn't even thought of it as a profession, I just, my mother used to take us the airport and we watched airplanes take off and land and I just thought it would be neat someday to do that and I was thinking small aircraft.

And then I wanted to build a log cabin, haven't gotten to that. But these weave, so this Olympic dream started early in high school I played in sports in high school in field hockey and got a scholarship to Stanford. So checked off the first one was to go to a good college, but very quickly I started thinking about well, what would I play field hockey in the Olympics? I thought you know, maybe I should first go, I came I grew up on a ski area, so I was thinking of skiing I was you know, on ski racing and there was an opportunity to be a torch bearer for the 1980 Olympics in Lake Placid and I, it was an essay so I filled out an essay, just like the essays for college and I went to Lake Placid and I saw luge and that's where I was just fascinated by the sport and I was able to do a beginners program and one thing led to the next and I think it's very similar to flying is you know you'll you know, back in the day was a flight instructor and you'll have a student and after three lessons, you can always tell, does as a student have the aptitude to be a pilot that's just the hands eye coordination.

It's the same thing the sports of lose your bobsled you can tell very quickly if somebody has that aptitude and enough people said, you should stick with it, that I did, and so I started spending all winters in Lake placid and then later in Europe, training and eventually made the Olympic team and in the sport of luge did that for gosh about 12 years. During that time, also was learning to fly in parallel, and, ultimately, you know worked in the corporate area flight instructed, corporate, and became a pilot and so that's where this is interesting I continued flying actually United, while I was still competing. So United gave me some time and then I finally retired, but then I decided to come out of retirement, to try to try bobsled. And so can those two things kind of paralleled and eventually I retired from the sports in 2002 right after the 2002 Olympics.

Alan Stolzer:

Okay, well, I knew there was an interesting story.

Bonny Simi:

Yes

Alan Stolzer:

So maybe a little bit more about the about your attraction to aviation, though I mean.

Bonny Simi:

Yeah.

Alan Stolzer:

So, you mentioned that you know talk about that a little bit more what really kind of lured you into aviation?

Bonny Simi: Well, like I said, um in fact airplane was one of my first words as a kid and I think many of the folks in the audience it's very similar and a similar path, the only thing that was dissimilar perhaps is that I was a young girl, and not a young boy. And you know we're talking in that you know, in the in the 60s and 70s, and so my mother was a school teacher would bring us to the local airport, Cable Airport in southern California. And there was a little cafe there that had a window and you could watch the small aircraft and Cessna 152s take off and land and I remember going up to one of the aircraft, and I was you know I don't know four or five years old, wee little kid and one of the pilots, let me sit in the in the in the cockpit, and I don't remember what site what aircraft, it was probably like a Cessna 132 and I just remember the things that parents can introduce their kids to, just how it can spark and it.

It really put that interest in me I didn't think of it as a career because of the time that it just I didn't wasn't I didn't know any other pilots. I didn't have, I didn't, it just didn't occur to me, but it was something that I wanted to do as a hobby.

And once I graduated eventually from college and was working in the television industry and for the local TV station, I was finally earning enough money to learn to fly, so I literally went to the local airport, and took three lessons for the sake of everybody's—I always tell people take three lessons, after three lessons, you can see. And I very quickly became attached to it.

Over the course of several years enjoyed that, realized that I enjoyed flying. I became a flight instructor while I was still working on the TV station, and although I would make much more at the TV station in my job than I would as a flight instructor I much preferred flight instructing. And I always believe that people should follow their passions, follow their heart.

And so I you know switched careers, you know sort of pursuing it went into the corporate world and and eventually went to United. So that was that was the path it was a perhaps accidental initially, but then became very purposeful once I realized the path was possible.

Alan Stolzer:

I didn't realize, you were you were flying and competing simultaneously that's a hectic schedule.

Bonny Simi:

Yeah yes, it was it was I would, although it was kind of fun and that you know I went and got checked out in in Salzburg, Austria, so you know got a license there and I also during the breakup of the Soviet Union back in, back in the day in the 90s, I had had befriended one of the pilots that used to fly our luge teams around and he was from Aeroflot and they divided into 30 something Aeroflot divisions, one of which was for Latvia, and so I helped help them think through becoming their own entity. And ultimately, I got a pilot's license from Latvia as well, so yeah it's just woven in throughout time so it's been a fascinating journey, and I do believe you know, following your passion, both from an employment perspective and in a hobby perspective, I think you know those who are pilots know that it's just embedded in our souls.

Alan Stolzer:

Absolutely, you mentioned corporate, you did fly corporate for a while and then eventually joined United Airlines, you were a captain flying the 737. What made you decide to leave to join a smaller carrier and JetBlue?

Bonny Simi:

Well, I think you know, obviously, that was probably the hardest decision of my life.

I thoroughly enjoyed my time at United and suppose there for 13 years, went obviously through tough times at the time with United when we've had challenges and after 911 and etc.

I did see, I have an innovative spirit and I felt that I saw what the what JetBlue was doing and I just thought that this was again—follow your, follow your passion, it is hard, though, to walk away from the security number to start, I went from being very senior Captain down to you know junior first officer on reserve in New York, but that's how the airline industry is. So I really, and I enjoy, I enjoyed the time at JetBlue it's, I have no regrets across the entire career and it's enjoyable now to help with the blessing of JetBlue as an investment to help Joby scale and Joby will be going public here soon, so it's not only a good investment for JetBlue but it's being on the leading edge of innovation, which is something I enjoy doing.

Alan Stolzer:

Absolutely, it is all about the number in the airline industry isn't it.

Bonny Simi:

Well yeah I you know said I know I'm a believer in the seniority system, so you know that is what it is, but it does it does make it a hard decision to walk away from that.

Alan Stolzer:

Absolutely. Well, you did have an amazing career at JetBlue. You were Captain on the Embraer 190, served in operational and strategic roles within flight OPS, system OPS, people airports, customer support and the head of talent for the carrier, you are an industry leader, no doubt. What sorts of experiences prepared you to have success and lead so many different parts of an airline?

Bonny Simi:

Well, I think you know and as a pilot, I think the unique thing when in the air in the airline industry, you know the pilot does touch many, many different departments and knows what is going on and I am very, very curious so having the opportunity first I came in as a first officer on the Airbus and then upgraded and was when the first class when JetBlue first got the Embraer so really the class right behind the check airman because, again, I decided to wait and instead of upgrading on the Airbus, I would go the Embraer, because it was a new aircraft because, because JetBlue was the first airline to operate the 190.

And just to you know yearning and desire to be curious, and there were challenges we had at the company in our in our system operations, we were growing very fast in the mid-2000s.

Opening I think we were getting 35 aircraft a year and opened 16 cities or something which is growing very, very fast and so helping them to scale system operations put in new technology there. That was that was very rewarding helping our operation our airport operations and putting more processes there as you scale.

Also very interesting, but I have to say I have a huge my biggest passion is around the people and talent and thinking about you know the airline pilot shortage that would be coming, the demographics, we know. First it was age 60 then a little bit of a reprieve when it changed to 65.

But building in programs and JetBlue has been a leader in this space and we began thinking about this for well over a decade to build out our gateway programs, and you know Embry-Riddle is a partner of our gateway programs, there are many, many graduates that have gone from Embry-Riddle to our partner at Cape Air and then on to JetBlue.

And so, helping to build out those when I look back you know and the contributions I think of those programs and then also helping to inspire the young kids you know that that we do programs at the various at Sun and Finance and Oshkosh and such. So these are the things I think it's again it's just following passion and intense curiosity.

Alan Stolzer:

Yeah and we're really proud to be a part of that partner with JetBlue and that it's a, it's a, an important thing and you're right a lot of Embry-Riddle students have taken advantage of that and have now found themselves at the airline with the very productive careers.

Bonny Simi:

And I don't know what the stats are now it's been a while you know I, I, after I finished the job Head of Talent I moved over and founded our venture program, but I do remember at one time and it probably is still the same that we had more graduates of Embry-Riddle in the pilot ranks than any other university out there.

Bonny Simi:

Maybe I'll cause a little bit of a rivalry, by saying that, but if I had that data point, it was only about five years ago, so we'll see over time, if that remains but we're just so passionate. I mean the students coming on the program just do so well at JetBlue.

Alan Stolzer:

Excellent happy to hear that and we'll take that as a point of fact.

One of the issues you've worked on Bonny, during your career at JetBlue, is workforce diversity.

That's something we're working hard on here in the university and in my college, Aviation. I'm interested in hearing your thoughts on how we can create and increase awareness among girls and underrepresented minorities about career paths in the aerospace industry. You focused on this for a long time, what are your thoughts.

Bonny Simi:

Yeah I truly truly believe it's about exposing kids to it. And like I said I would not be a pilot had I my mother, not just brought me to the airport and I just did, and then I didn't even think of it as a career until I, I, ran into someone who to talk to me about this is how you go about doing it. I always thought you had to be just in the military and back in when I was becoming a pilot, most of the pilots of the airline in the airlines were out of the military.

But so it's, it's, it's teaching and, and getting out into the, into the schools, and so this is, and it's, it's really around fifth grade. Fifth grade is an incredibly important age because this is where the girls, girls and boys have equal passions and tend to do equally well in science and math but then there's the social network that kicks in around fifth grade. And so exposing the girls at that age is incredibly important whether it's through Girl Scouts or it's through Young Eagles or Chapter, and so I guess my call to action for everyone in this audience is, is to think of girls in in fifth grade. This is this is girls that are around you know 10, 11, 12 and that age. And find someone to bring them to the airport engage with them just show them and if we all reach out to girls, I know I would not be here had had I not had that exposure and it was and it, it is through that. And, and then defining the career path so you know, helping the girl, so I was exposed to it as a young age.

But I didn't really think of it as a career until somebody sat down with me and said, this is how you do it. Here's how you build your experience. You know you get your you know here's how you do it if you don't go into the military now there are a lot of people also young girls as well if they, they see role models and they see moving into the into the into the military and so we're seeing an expanding diversity in the military as well, so I think it's a, it's really about exposure and I've always said, you know the airplane doesn't know if you're a male or female, is so they're equally talented, it's just about getting exposure to this exposure to the career, exposure to the joy, and taking that first flight.

Alan Stolzer:

Yeah and it's interesting we used to think that exposure needed to happen in high school.

And then we realized, it needs to be much earlier, middle school or even earlier, the research suggests it's even earlier than that isn't it.

Bonny Simi:

Yes. And one of the other things, I think, and this is where you know I'm passionate about we start thinking about advanced career mobility and urban mobility is one of the areas that are a challenge for women, if they choose, it is, it is hard, I mean I'm a mom so I raised my daughter. She grew up in the family of an airline pilot, and it is a challenge, you know take the time off to raise it a kid and then, and to be gone, you know, I was fine the I was flying the triple seven and the 727 I'd be gone for two three-day trips and how do you manage that, as a mother.

And so, urban air mobility, by definition, is in an urban area so you're not going to be flying a Joby aircraft on multi day trips so it'll be located in one urban area, so we can I imagine this as a very attractive opportunity for people who want to stay in one location and be home every night. And so I think that that will also allow a nice work life balance for those who wish to raise a family, while also flying.

Alan Stolzer:

That's a great point.

Yeah I would imagine that would be very appealing to kind of a large segment of the folks we're training here so that's a good point.

So Bonny prior to joining Joby you are part of a team as we mentioned that founded JetBlue Technology Ventures.

Just to be clear for our audience that's a corporate venture capital firm focused on investing in early stage startups who are dedicated to improving the travel hospitality and transportation industries. The company invested in proof of concepts as a method of trying out promising startups with JetBlue. One of those companies that receive funding is ClimaCell that's a weather technology company that generates minute by minute weather predictions at near pinpoint accuracy.

That technology can certainly help airlines and corporate aviation entities minimize operational disruptions, can you talk about that?

Bonny Simi:

Absolutely, and then ClimaCell is another great success for JetBlue Technology Ventures, I remember meeting the team, there was a gentleman for who is it went from the Israeli defense force he was a fighter pilot and he went to, it was either Harvard or MIT or MIT. And I know that people will get upset when I say, but his other partner came from the other school. So there was a Harvard graduate and MIT graduate one was in computer science and one was aviation, and the two of them got together and we met them, and they were the team itself, I think, was four people.

And they had this idea and that that cell towers, the signal between cell towers, and cell towers are ubiquitous now, that the signal attenuates differently depending on the type and intensity of precipitation.

And they discovered and then patented that they would be able to pull this data into a database and determine what was the at the ground level outside of airports outside of where there's radar coverage, what the weather the type of intensity of precipitation. Now that type of, of knowledge is useful for not just aviation, but for insurance industries for major league games so, for example, is, are you going to shut down a game because of rain or not.

And so, but because one of the founders is a pilot a pilot he knew where the value was in the aviation side, so he a fellow classmate works at JetBlue, and so we just made the introduction and they first came in and he was thinking of, just from the pilots perspective, but not from sort of the regulatory side, where we, you know, we have to take approved, whether you can't just take it.

You know, from a startup so we help them think through that structure and we said look why don't we start using it as an additional data point for situational awareness, for ramp operations so, for example, they could they were very, very good at predicting when lightning would hit.

And so that's a safety factor, so we started implementing at JetBlue this platform, we help them build out what is the, what does the user interface look like what do the airport operations folks need. So we weren't using it for dispatching or anything like that, but more just situational awareness, for the ramp ins for safety and it helped identify times when we didn't need to shut down the ramp and identified times, where we did without just kind of looking out the window and seeing where lightning was or using the weather system, so I, we, that's where it started and then gradually and they've been working with our dispatch team to get even certified as well is embedded across our network and now other airlines are using it as well. And then they've even grown even more, they too are looking to potentially go public so that could be a very interesting investment for JetBlue. They're now in satellites so it's become it's now called Tomorrow, the company is a switch from ClimaCell their new name as of about a month or two weeks ago is called tomorrow-tomorrow.co—and it's just amazing to see these tiny companies that were only two or three people with this great idea and to partner with corporations. That's what corporate venture capital is it's more about the ideas.

We don't invest a lot of money, but the more we invest time and effort to help these companies grow. And that's what, that's what we did with ClimaCell. We've done it with several different other companies like Joby.

And it's invigorating also for our crew members at JetBlue to interact with these innovative companies and to learn, you know we get sort of in our day-to-day business and to see new ideas coming out of whether it's Silicon Valley or Boston or any of the any number of the new, Austin is now a growing area where there's some amazing technology, New York City.

We're actually helping out because Florida is such an important market for JetBlue, but it is also now emerging as a new technology center for new innovative ideas, and so I think even Embry-Riddle is doing some partnerships with some innovation and you know startup boot camps and things like that, because there's so many neat ideas now, yeah.

Alan Stolzer:

Absolutely that sounds really like a really interesting proposition for a company and for you in that business at that time to listen to these great ideas and try to understand the great ideas and maybe the not so great ideas.

But how they can be given guidance to be successful, so really interesting. Well, let me turn back to Joby a little bit. Joby has been on an amazing run.

The company has raised hundreds of millions of dollars through investors, including Toyota, JetBlue it acquired Uber Elevate in January.

And last month announced it intended to merge with a special purpose acquisition company, which provided Joby another 1.6 billion of capital so. I read somewhere that the total valuation of Joby will be something around \$5 billion and you're going public, but there are dozens of rivals in this market. My question is, you know what makes Joby special and what will ensure its success going forward?

Bonny Simi:

Well, you know we, we Joby's been heads down for 10 years and we've built an amazing team, the, the number of engineers and world class experts that are here at this company I'm incredibly humbled so I.

You know I won't go into common doing about competitors. Our approach is to really focus on where we are and where we are in, in our development process. We are the first two were to achieve the means of compliance approval from the FAA. And what that means, because we're using Part 23 process is- we work very collaboratively with the FAA it's been a long journey together.

And to identify here's, what are the regulations and rules, we will follow to certify our aircraft. This is a huge milestone, because when you think about it, prior to if you go back 10 years when you certify aircraft and propulsion systems, think of propulsion systems there wasn't, you either certified as piston or turbojet turbine. right there's just there wasn't electric at all so there's a whole new regulations that are built up around this. So we've achieved our means of compliance, the first to do so.

We are operating and flying a vehicle full scale vehicle now that is operated in partnerships with the Department of Defense so we've also achieved the US, the first US Air Force Airworthiness approval to operate these vehicles on military bases, which we will be expanding on over the course of time, prior to our certification, it gives us that experience so.

Really, at the end of the day, it comes down to our team our technology and our partnerships, the partnership we have with Toyota is absolutely tremendous you think about this one of the, you know because we're designing and we are arming also manufacturing our aircraft to have a partner like Toyota they're fully embedded with us, so we have quite a few Toyota team members that are partnering with us on a daily basis as we've been building out our programs and we've hired amazing talent and you know, on the on the OEM side we have folks that have come from Boeing, we have folks from Airbus from Pipistrel lot of airframe.

In the conventional air aircraft space, helicopters, Bell, so really we're embedding this company with some people who have decades of experience in aircraft certification. So these are these are areas that in the end it's going to be our people.

Alan Stolzer:

Excellent.

Bonny Simi:

Well, I would I would be remiss if I didn't mention our founder JoeBen and at the end of the day, you know, every great startup has an amazing team, but also is led by someone with amazing vision and JoeBen Bevirt dreamed of this when he was eight years old.

You know, he lived in the Santa Cruz hills and wanted to it was a long school bus ride to work or to work to school and he wanted to fly a helicopter there and then he realized but it's he, he, he's has a deep passion around sustainability and taking care of our planet.

And in his mind helicopters were noisy and they burned, a lot of fuel and smelly and you know when you're an eight-year-old kid these are the things you think about and he said he wanted to make it electric. You know he's eight years old. Well unfortunately batteries weren't capable at that time, but it did define his career path he you know he got his EE, I think he went to UC Davis.

And then continued to study and build out until he did a bunch of other startups to raise money over time, it was very successful entrepreneur, until the point where it looked like battery technology was where it was going to be. And so he founded Joby in 2009 with a small team and has been building very methodically along, always with this vision of where we are headed now and where people can see, I encourage people to go check out what it looks like on our website at jobyaviation.com and you see the aircraft flying it's truly remarkable.

The aircraft does take off what allows us to have more range is it does take off vertically transitions to horizontal flight so flies like an airplane so it allows us to have longer range when you have a lift off the wing, as opposed to just vertical lift.

Alan Stolzer:

I only met him for maybe 30 minutes on my visit out there, but seemed like a fascinating individual and huge huge vision and and he's executing it.

Bonny Simi:

Yep it's all about the execution, milestone by milestone. We're not a flashy company we don't we just like to heads down bring great people together and we're it, this is a, this is a challenging project right, this is something has been a decade in the making. And when you see the vehicle and, more importantly, when you hear it or don't hear it it's absolutely remarkable. 65 decibels or less, and which is 100 times quieter than a helicopter so it's truly, truly remarkable I'd encourage you to come back and visit, so you can see it, you can see it fly.

Alan Stolzer:

I'd love to. The vehicle has a pilot and for passenger seats, we mentioned has 150 mile range and a top speed of 200 miles per hour, and in Joby's words is as quiet as a conversation.

talk a little more you mentioned, this is going to be certified under FAR part 23. Talk a little more about that, if you would what that means what that entails, to get that certification.

Bonny Simi:

Sure part 23 is a new way of certifying aircraft was a collaborative with the FAA to define what are their criteria by which to certify the aircraft and more consensus based, as opposed to here's the rules and you have to fit within them. And when you're doing new technology the existing rules that were written didn't because I mentioned, for example, don't cover electric propulsion and so the FAA recognized some some time ago and developed part 23 which is this collaborative process and which, because how we will certify our aircraft will be different than another aircraft in this space. So part 23 allows allows for the innovativeness while also adding the appropriate structure that is that is required to safely certified aircraft, so it's a it's really a partnership.

Alan Stolzer:

Very good, so I'm I know my I'd be remiss if I didn't ask this question, I know my students would love to know. How long do you anticipate that it will be that it will have a pilot aboard before going fully autonomous?

Bonny Simi:

Well, I will it's it's incredibly important for us to point out that we are certifying this aircraft as a piloted aircraft to fit within the existing framework of regulations have to be a commercial it's an airplane it will be airplane pilots not powered lift my helicopter is airplane pilots, with special training. It will be special designated training from Joby. And autonomy is a, is a, very, very long process, it is not something I mean you can look at what's happening in the automobile industry there isn't a fully autonomous out on out on roads.

It's a long journey, you know we are focused now on the piloted side and the piloted side for quite some time.

Who knows the timeframe for autonomy.

In our focus will, I mean at the scale and again through our public documents, I have to be mindful of you know what is publicly available our public documents show the scale of how rapidly we're growing and how many pilots we'll need.

So it's it will be a great place for pilots to come.

The initial certification so to go into commercial operations as a part 135 carrier is 500 hours so it's a great place to come to build, we're building out some flight training programs as well, because, as we all know in this industry, you know you can't, you can't fly an airplane without pilots and you need the pilots and you need to build a nice strong pipeline that is crucial to our business model.

And so, building collaborative partnership, not unlike we did with JetBlue with the various universities and also building out our own pilot training program. So our focus particularly the operation side is very much on piloted.

There will someday be autonomy, whether that, who knows how long that will take.

Alan Stolzer:

Understood. So Bonny you know the aviation industry really well you've been around us for a long time, what makes you optimistic about the future of the industry?

Bonny Simi:

So I think you know once, particularly companies like what we're doing at Joby where makes it much more accessible, and accessible for the industry, for pilots, accessible for passengers.

People that the price point we'll be bringing the price point down to make it much more accessible for people in urban areas to be thinking about even on the commuting side of things, I think it will take time, but the adoption over time in our urban environments, it truly opens up the what we'll call the third dimension.

Right now, and if you think of, you know, cars and yes COVID has made a big change with a lot of people working from home.

But we do have our major metropolitan areas and people will come back and congregate in the cities and you end up with traffic jams, and you end up with wasted time, and this allows people to be much more efficient, one of the you know the visions of Joby is to save a billion people an hour a day, and doing so sustainably, so I think it, it shows where innovation can truly unlock more in the human potential, but also do it in a way that is incredibly sustainable.

I think you're seeing in the industry, I mean the entire industry talking about being a carbon neutral aviation industry by 2050. How are they going to do that? Part of that is through electric propulsion and you know, there are other technologies out there as well.

I think electric propulsion will serve as the foundation.

It will take a long time for electric propulsion to be in larger aircraft just because of the battery to weight ratio and there's other technologies that might be good, hydrogen in the future for long range.

But I think that as we move it, you know the eVTOL initially is what works and the power to weight ratio it'll gradually be moving and more regional travel, perhaps regional aircraft, seven and nine there's there several companies out there, very excellent companies in that space, so I see that transforming aviation.

Alan Stolzer:

How, we mentioned this a little bit earlier people you looked up to, or people who are influential to you and your career. How have mentors played a role in your career?

Bonny Simi:

Well, I think, and I'll go back to you know the story I started early at earlier on, with you know the person who came to my school and inspired me, and I think you know, there are some people who are maybe it's their parents who introduced them to to aviation, but for those who did not grow up in aviation family, the first thing is that exposure. And so John Goddard. He, he was the first and then the next is meeting someone who helped with, with thinking through the career path a gentleman, and yes, most of my mentors have been men in the aviation industry, it is mostly men.

But I so somebody took the time when I was in college to map out, I was learning just or it was just as I was graduating from college, I was learning to fly.

And I literally just thought of it as a hobby it, I did not think of it as a career at all, and I suppose, if I had thought about it maybe I would have been more purposeful initially but I sat down with someone, he said, you know I see the light the twinkle in your eye every time you come back from flight lessons. Have you thought about that as a job?

And you know that he to this day and I, big shout out, his name is Peter Bing and he's someone that's very involved in at Stanford and he, he's a pilot himself, he owned a 414 and then a Cessna 421. I still remember when he took me flying in it and that's when he sat down. So he has been has been one of the biggest mentors for me over time and he kept reminding me, you need to follow your passion and I think this is something that- a career as a pilot is not an easy one, a career in aviation, in general, is not an easy one, people can yes, you can go make more money in other spaces.

But I think, in the end of the day, it's where's your passion and your passion is an aviation, it was it was Peter Bing that helps me see through that. And then, as I moved on to the airlines, I you know I had a wonderful mentor at United.

At one of the two pilots in my local local base who he was he was very, very supportive and then at JetBlue.

You know Joanna Geraghty, who is now our COO and President. She was when I came to JetBlue she was many levels down the organization, but you know she took time out to spend time with me, she was on the legal team at the time, to you know, introduce me to various folks when I came into headquarters, I was just I was a pilot and so.

I didn't know the people in in corporate so she would introduce me. She was a woman leader in the company and I think to see someone rising up as a woman leader, she took it took an interest, so we spent any, an hour, where she was explaining you know just the very structure of the airline and such and then she moved up through the organization and was one of the first female officers at JetBlue and now as COO and President. It's been it's you know she's been a big advocate for JetBlue, she's been an advocate for our gateway programs, the JetBlue Foundation, and she's also a mom to, so this is really neat. So these are some of the mentors that I have.

And you know it doesn't, a person doesn't have to be too far in their career to be a mentor and I'm just going to keep coming back to those girls who are in, as you mentioned middle school.

And if we can all commit to finding one girl in middle school that we can mentor just for a little bit to introduce aviation, we will truly transform this industry and in 20 years because those school girls will then become pilots or engineer—aeronautical engineers, or I mean this industry with the urban area mobility and advanced air mobility. When you asked about transforming the industry, the demand for skilled people in the space as engineers, as pilots as air operators is just exploding, so this is just a great time to be in the industry and.

I do look forward to the day, where we can bring an aircraft down, you know down to Daytona and maybe another one over at Prescott, my daughter went to Prescott so to show our aircraft it's truly remarkable.

Alan Stolzer: Very well, said I Bonny I know you have a lot of demands on your time.

I think we'll we'll wrap it up there, this has been a really, really fascinating discussion you've had an amazing career, which just continues, and best of luck to you and to Joby for the future.

Bonny Simi:

Thank you.

Alan Stolzer:

Thank you very much.

You can watch a recap of any of our previous webinars on Embry-Riddle's YouTube channel by going to our web page and clicking on past presenters.

That web addresses erau.edu forward slash aviation hyphen outlook, or just google Embry-Riddle Aviation Outlook.

Our last two programs one with Eric Lindbergh on April 13 and Jared Isaacman on March 29 were really extraordinary and our Aviation Outlook team highly recommends them to you.

Our thanks once again to Bonny Simi with Joby aviation and thank you for joining us for tonight's webinar. For everyone here at Embry-Riddle, stay safe and good night.

IMPORTANT LEGAL INFORMATION

Forward Looking Statements

This document contains certain forward-looking statements within the meaning of the federal securities laws with respect to the proposed transaction between Reinvent Technology Partners ("RTP") and Joby Aero, Inc. ("Joby Aviation"). These forward-looking statements generally are identified by the words "believe," "project," "expect," "anticipate," "estimate," "intend," "strategy," "future," "opportunity," "plan," "may," "should," "will," "would," "will be," "will continue," "will likely result," and similar expressions. Forward-looking statements are predictions, projections and other statements about future events that are based on current expectations and assumptions and, as a result, are subject to risks and uncertainties. Many factors could cause actual future events to differ materially from the forward-looking statements in this document, including but not limited to: (i) the risk that the transaction may not be completed in a timely manner or at all, which may adversely affect the price of RTP's securities, (ii) the risk that the transaction may not be completed by RTP's business combination deadline and the potential failure to obtain an extension of the business combination deadline if sought by RTP, (iii) the failure to satisfy the conditions to the consummation of the transaction, including the adoption of the Agreement and Plan of Merger, dated as of February 23, 2021 (the "Merger Agreement"), by and among RTP, Joby

Aviation and RTP Merger Sub Inc., a Delaware corporation and a direct wholly owned subsidiary of RTP, by the shareholders of RTP, the satisfaction of the minimum trust account amount following redemptions by RTP's public shareholders and the receipt of certain governmental and regulatory approvals, (iv) the lack of a third party valuation in determining whether or not to pursue the transaction, (v) the inability to complete the PIPE investment in connection with the transaction, (vi) the occurrence of any event, change or other circumstance that could give rise to the termination of the Merger Agreement, (vii) the effect of the announcement or pendency of the transaction on Joby Aviation's business relationships, operating results and business generally, (viii) risks that the proposed transaction disrupts current plans and operations of Joby Aviation and potential difficulties in Joby Aviation employee retention as a result of the transaction, (ix) the outcome of any legal proceedings that may be instituted against Joby Aviation or against RTP related to the Merger Agreement or the transaction, (x) the ability to maintain the listing of RTP's securities on a national securities exchange, (xi) the price of RTP's securities may be volatile due to a variety of factors, including changes in the competitive and highly regulated industries in which RTP plans to operate or Joby Aviation operates, variations in operating performance across competitors, changes in laws and regulations affecting RTP's or Joby Aviation's business and changes in the combined capital structure, (xii) the ability to implement business plans, forecasts, and other expectations after the completion of the transaction, and identify and realize additional opportunities, and (xiii) the risk of downturns and a changing regulatory landscape in the highly competitive aviation industry. The foregoing list of factors is not exhaustive. You should carefully consider the foregoing factors and the other risks and uncertainties described in the "Risk Factors" section of RTP's registration on Form S-1 (File No. 333-248497), the registration statement on Form S-4 discussed below and other documents filed by RTP from time to time with the SEC. These filings identify and address other important risks and uncertainties that could cause actual events and results to differ materially from those contained in the forward-looking statements. Forward-looking statements speak only as of the date they are made. Readers are cautioned not to put undue reliance on forward-looking statements, and RTP and Joby Aviation assume no obligation and do not intend to update or revise these forward-looking statements, whether as a result of new information, future events, or otherwise. Neither RTP nor Joby Aviation gives any assurance that either RTP or Joby Aviation or the combined company will achieve its expectations.

Important Information for Investors and Stockholders

This document relates to a proposed transaction between RTP and Joby Aviation. This document does not constitute an offer to sell or exchange, or the solicitation of an offer to buy or exchange, any securities, nor shall there be any sale of securities in any jurisdiction in which such offer, sale or exchange would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. In connection with the proposed transaction, RTP filed a registration statement on Form S-4 with the SEC on April 2, 2021, which includes a document that serves as a prospectus and proxy statement of RTP, referred to as a proxy statement/prospectus. A proxy statement/prospectus will be sent to all RTP shareholders. RTP also will file other documents regarding the proposed transaction with the SEC. Before making any voting decision, investors and security holders of RTP are urged to read the registration statement, the proxy statement/prospectus and all other relevant documents filed or that will be filed with the SEC in connection with the proposed transaction as they become available because they will contain important information about the proposed transaction.

Investors and security holders will be able to obtain free copies of the registration statement, the proxy statement/prospectus and all other relevant documents filed or that will be filed with the SEC by RTP through the website maintained by the SEC at www.sec.gov.

The documents filed by RTP with the SEC also may be obtained free of charge at RTP's website at <https://www.reinventtechnologypartners.com> or upon written request to 215 Park Avenue, Floor 11 New York, NY.

Participants in the Solicitation

RTP and Joby Aviation and their respective directors and executive officers may be deemed to be participants in the solicitation of proxies from RTP's shareholders in connection with the proposed transaction. A list of the names of the directors and executive officers of RTP and information regarding their interests in the business combination will be contained in the proxy statement/prospectus when available. You may obtain free copies of these documents as described in the preceding paragraph.