The Social Radars

S5: Blake Scholl, Founder & CEO, Boom Supersonic

Released December 8, 2025

Jessica: Carolynn, we are so lucky today to have Blake Scholl, the founder and CEO of Boom, the supersonic airliner company. Welcome, Blake.

Blake: Thank you for having me.

Carolynn: Welcome Blake.

Jessica: Oh my gosh. I cannot wait to catch up on your company. There's just so much progress since Y Combinator funded you in Winter '16.

Blake: It's been a minute, hasn't it?

Carolynn: It's been a minute.

Jessica: It really has. I want to go back even further though. Before YC, you had a startup, right? You had a startup that was sold to Groupon.

Blake: Yeah. It's a little bit of an embarrassing startup, but it technically was a startup and it technically was sold.

Carolynn: I doubt it's embarrassing.

Jessica: It's not embarrassing.

Blake: I haven't told you about it yet. I think I made the mistake the first time around of working on what my resume said I should work on, not what I wanted to exist in the world. So my first real job out of school was at Amazon in 2001 as a software engineer, which was an amazing experience in a lot of ways. I was very lucky to be there. I was very lucky to work on stuff that Jeff Bezos cared about.

Jessica: In 2001, there was exciting stuff happening there.

Blake: There was. Yeah. I was something like engineer number 200. The dotcom bubble was imploding. I remember going there and my friends at college were like, "Does that company still exist? Are they even real?" It's bizarre to think today, but that was very much the narrative around Amazon. And yet everybody I talked to there was amazing. And I was like, "I want to go work on things that are the intersection of software and business." And at Amazon, you could do that.

Every software engineer was effectively owning a piece of the business, is how it felt. So I was very lucky to get to build what turned out to be one of the first scalable customer acquisition things on the internet. We did Amazon's first ad buy from Google before there was an ads API. We had this Perl script that was screen scraping Google and clicking buttons in order to buy ads.

But anyway, I figured I knew eCommerce from my Amazon time, and then I joined this other startup that was one of the very first iPhone app companies. So I figured I knew mobile. And I looked at my resume and I said, "Well, I should work on mobile eCommerce. Surely that will be a thing." And I had basically no product vision, so we ended up building this thing called Barcode Hero that was at the intersection of my resume and everything that was trendy at the time. So it was this gamified barcode scanning, theoretically would help you when you're shopping in a store.

But if you made a list of the most important things in the world to the least important, you'd have to get out a backhoe and dig a hole to find where a barcode scanning game would live in the hierarchy of importance.

Carolynn: Honestly, I don't think that's that embarrassing.

Jessica: Yeah, you were young.

Carolynn: Yeah. It's like you had an idea, I don't think it's that bad.

Blake: Well, you're very generous.

Jessica: You proved you could execute.

Blake: We shipped a large amount of quality software that didn't matter.

Jessica: Okay.

Blake: And my personal experience of it was kind of horrifying. I felt like we were going to lose all of our investors' money. I would wake up in the morning super actually depressed and thinking that I'd tanked my career by doing this thing. And my escape fantasy was just like, "I just want to get out of this and have a job again, because I don't know what the heck I'm doing here."

And so, when we had a chance really to acquihire the company to Groupon, we did. We went back and we redid all the investor documents to up the liquidation preference so investors would make money in the deal, and I got my escape fantasy to go-

Jessica: In this fantasy, did you make any money from this acquisition?

Blake: Yeah, I did. A little bit. It was a lesson in failure because I'd been very afraid of failure and my stress level dropped by a lot. I was making more money than I ever made before. I

was able to save some money, and mostly I was able to really reflect on that experience and what I'd learned. So I spent two years at Groupon, almost like-

Jessica: In Chicago?

Blake: No, in the Bay Area.

Carolynn: How long was the Barcode Hero journey from start to finish?

Blake: Two years.

Carolynn: Okay. So two years there and then two years at Groupon?

Blake: That's right. That's right. Yeah. Comparatively quick compared to Boom. But what I really learned from that was that I wanted to find again. There's a certain amount of getting to create something in the world and that bug had bit me. I guess I'd done my first baby company in high school in my parents' basement. It wasn't really a startup. It was a lifestyle ISP business, in a way. But I knew I wanted to go create things.

And what I learned was I think the difficulty of startups is actually set by the founder, not by the startup, because there is a certain level of effort we're willing to put in. There's a certain level of pain we're willing to endure. And no matter what I do, I'm going to put myself at that same red line and the effort's going to feel the same, but the motivation is absolutely not going to be the same. So I wanted to go get back in that state, but I never wanted to ask myself, is it worth it, personally? So I ended up, after two years, I just couldn't take it at Groupon anymore and fired myself. And I thought, okay, I want to put all my startup ideas in order of how happy I would personally be if it worked and neglect everything else. It doesn't matter whether I'm qualified for it. It doesn't matter whether it's a good idea. And initially, I'm not even going to say, is it physically possible? We can work that out.

And I loved flight since I was a kid. I've been flying for fun since I was in college. And in my mid 20s, I'd gone and toured the really amazing Museum of Flight in Seattle where they have an SR-71 Blackbird, which is the most amazing military jet ever made. And they have a Concorde, which is the most amazing commercial jet ever made. And I remember looking at them and thinking, "This is insane. How is it that the most amazing things in aviation are in museums when there's nothing better in the skies?"

Carolynn: Right. Great question.

Blake: And the internet back then was full of plausible sounding answers for why you couldn't have supersonic travel. And I thought, "I just want to understand this for myself." So I never want to be 80 and look backwards and think, "What if I'd had the courage to look at it?" So I want to understand for myself why it's a bad idea. And so, I started digging in and I got this book that NASA had published and what you needed to do to solve supersonic passenger flight and it just didn't make any sense. I don't mean technically, I mean the claims didn't make any sense.

They're like, "Well, there's really only two paths forward. You could do a supersonic private jet for the ultra wealthy, but for that to work, you have to solve sonic boom, which is going to be technically next to impossible and regulatorily next to impossible." So that's impossible. Or you could do a supersonic jumbo jet and that would need 300 seats on it, but no one knows how to make a supersonic jumbo jet efficient enough that you can find 300 people who could afford the tickets at the same time, so you can't do that.

Jessica: What made you question it? As you're reading this book, what made you say, "This doesn't seem right."

Blake: It just didn't seem right. How could those be the only two possibilities?

Carolynn: But when you're like, "It doesn't seem right." Were you thinking there's a conspiracy? Or more like, why are these... You must have been wondering, why are these super smart people discouraging this?

Blake: Yeah. So there is actually a conspiracy and it took me years to realize that. I just thought they overlooked it.

Jessica: What's the conspiracy?

Blake: The conspiracy is... Oh boy, people are going to love this, or hate it. If you are NASA, you have to make every problem you want to work on really hard, otherwise it doesn't justify your existence. This is why... So we're skipping way ahead in the story. We actually did solve sonic boom, it turns out it's trivial to solve, it's software.

Carolynn: Oh, really?

Blake: You can solve sonic boom with software and you don't need decades of R&D. You don't need these impractically difficult to build airplanes with complicated economics. But by the way, if you work at NASA and you need to justify your job, you do need it to be really hard.

Carolynn: Oh, wow.

Blake: So there's an incentive to make the problem outrageously hard.

Jessica: We're putting a pin in sonic boom, Carolynn, because that's important.

Carolynn: Yeah, I was going to say… back to that.

Jessica: ... part of the later story. So okay, you were thinking, "This just doesn't make sense." So then what did you do?

Blake: Well, I was like, "This doesn't make sense, but I don't know what I'm doing." And so I thought, "Okay, I got to get way smarter on this." So the first idea I had, this literally took

two weeks to have the idea that turns out to be the key idea, which is there's something between a supersonic private jet and a supersonic jumbo jet, which is an all business class supersonic airliner. So you wouldn't do it for everybody, you'd do it for the people who are flying first in business internationally.

And the idea would be these passengers are already paying five, 10, 20 grand for a flying bed, because they want to sleep through the flight. By the way, if the flight's faster, they don't need a bed, and you could fit maybe three times the seats in the same space as a bed, so what would you need to do?

Jessica: Let me repeat that because that is a key insight, right?

Blake: It's the key insight. Yes.

Jessica: Yes. If the flight is shorter, you don't need to sleep on the flight and therefore you can fit more seats.

Blake: Yes. I think this is at a certain level, this is obvious, right? If you're on a cruise ship, you have a whole suite. If you're on an overnight flight, you really want a bed. If you are on a short flight, a normal size seat is totally fine. The amount of space you want is inversely proportional to flight time.

So then the next question was, "Okay, well, so how would we make a supersonic seat have the economics of a flatbed in business class?" And in a way, the first failure on Concorde was a bad fuel economy that started a vicious cycle that led to just outrageously high fares that no one was willing to pay for, particularly for a very uncomfortable seat. So the question was, "Okay, how much do we have to beat Concord by in order to make the economics match a flatbed?"

And all the data you need to answer that question is in Wikipedia, and it's literally a three line spreadsheet. You don't need to know anything about aerospace engineering to ask and answer this question. It's literally how much fuel, how many passengers, divide. And the answer was with a 30% improvement versus 1960s technology, you could match the fuel burn per seat mile. But reality is when you go faster, you save on a bunch of other costs. You don't have to match fuel bird per seat mile, you have to match operating cost per seat mile. And that would only require a 10% improvement versus 1960s technology, so long as you could also design the whole thing so that you would have good asset utilization.

And I remember thinking, "I don't know what I'm doing. All I have here is my pilot's license. I can fly a Cessna, but 10% versus 1960s doesn't sound impossible. So how much better is the 777 versus the 767? And how much better is the 76 versus the 75, blah, blah, blah?" And like, oh yeah, typically it's 15 to 25% improvement per generation of airplanes. Okay, it's been 50 years. We should be able to find the 10%.

And at that point I'm like, this is sort of surreal to me, how is it that I'm the human having these insights? Because I have nowhere close to the resume for this?

Jessica: Because you're a computer science major undergrad, you worked as a programmer, and you have a pilot's license and that's it.

Blake: That's it.

Jessica: In terms of being qualified to address this problem, right?

Blake: Right. I'm wildly unqualified, at least on paper.

Carolynn: Just fast-forward for a minute. You must have met some people now that looked at the same thing you looked at and had the same insight you had, but just... So have you met any people and they were like, "Wow, I should have done that too. I just didn't."

Blake: I think I'm approximately the only person who asked the questions.

Carolynn: Wow. That's amazing.

Blake: There was one, 10 years into this whole thing, there is one research paper published by DLR, which is the German NASA, that was like, "Hey, maybe you could make an all-premium supersonic airplane work." And literally there's one research paper written by academics in Germany, and that's the only precedent I can find for-

Jessica: That's it?

Blake: ... what to me seems like a very obvious idea.

Carolynn: Well, and also such a desirable one. Everybody hates air travel the way it is now, unless you are flying in private jets, so I'm just amazed.

Jessica: Even if you were flying in private jets, you'd want them to be quick flights.

Carolynn: Faster. That's true.

Blake: If Gulfstream increases their speed by 0.001 mach, everybody upgrades, even though it's five minutes faster. Particularly at the high end speed sells. The people whose time is most valuable value their time.

Jessica: Okay. So you had this data and said, "This seems like this could be done." What did you do? Did you go talk to people in the industry?

Blake: I was too embarrassed to, because I'm like, "I don't know what I'm doing. And I think I would sound stupid very quickly." So I imagined... Okay, Blake, get your own ego out of this story. Because I couldn't even wrestle with me in this. So I was like, imagine it's 2050 and I'm on the beach sipping mai tais, and I don't know, I did another SaaS company or something, and I'm just reading the aviation history books, how do I think they go? Do I think we're still flying subsonic in 2050?

No, I certainly hope not. I'm too much of an optimistic person to believe that. Okay, we're now going supersonic. How did that happen? Do I think that after 150 years of not doing it, Boeing suddenly did it? No, that never happens, right? Big companies don't suddenly get enlightened. Okay, so it's going to have to be somebody new. They're going to have to come from outside the industry, because nobody inside the industry believes in this.

Jessica: Which is crazy. Oh, sorry. Doesn't it seem insane?

Carolynn: It seems so insane.

Blake: It is. By the way, we can come back and talk about how that and why that happened, because I think there's some really deep insights that it took me years to understand about why it didn't come from inside the industry and why nobody else asked the questions.

Jessica: Okay.

Carolynn: I do want to hear that.

Blake: Yeah. I think there's some important lessons for founders in there. Yeah. Okay, so I have to imagine that it's somebody outside the industry, and what would the attributes of that effort have to look like?

Well, you'd obviously need a dream team, because it's not going to be easy technically, so you're going to have to get great people to want to come. How are you going to get great people to want to come? Well, whoever's running it is going to have to know what they're talking about and be technically credible. They're going to be really good at persuasion. They're going to have to be incredibly good at taking this thing that's going to take a long time and telling the story in such a way that it seems real and concrete and inspiring, because otherwise everyone's going to give up along the way. You're going to need airlines to work with you and regulators and suppliers. You're going to be this total minnow that needs sharks to fly in formation with you.

And I look in the mirror and I'm like, "Am I that person?" The answer was obviously no. And then the question was, "Can I become that person?" And I wrestled with that question. And at first I sort of put it aside and I just started trying to learn more. I bought every textbook I could find for college aerospace engineering courses. I couldn't understand them, because I hadn't had any physics or calculus since high school, so I went back and I did calculus and physics and Khan Academy.

Jessica: Wow.

Blake: So I could understand the books. I had to totally be willing to be a beginner again.

Jessica: Yeah.

Blake: And in a certain sense I was able to do this because I'd saved enough from Groupon that I told myself that I could screw around for a year on savings and then decide what I was really doing. So I had a little bit of financial freedom to wander, and I think that was really important in the journey.

But it got to the point in the middle of 2014 where I'd read a bunch of these books. I'd built a spreadsheet model of the airplane, and I built a spreadsheet model of the market. Both of those are really important. One of the fundamental things in Boom is you got to keep the product model and the market model in sync. And so, I had this like spreadsheet effectively with two tabs, and one was about airplanes and it was what would the engine efficiency be and the aerodynamic efficiency and the structural efficiency and the flight profiles, and what assumptions do you need to make in order to have this thing pencil out?

And then the other was this, my Amazon Perl script and screen scraping skills came back and I had screen scraped a bunch of flight data off of FlightAware so I could model how much passenger traffic there was and what routes, and asked the question, if you could fly at some speed and you were still restricted by sonic boom, how big would the market be? And is the juice worth the squeeze? Because people claim, oh, the market's not big enough. I'm like, "Okay, is it? Measure it." And I concluded that the end market was like $25 billion a year in passenger travel that you could do with an all premium supersonic jet, with no premium to what people were already paying, no solution to sonic boom.

Jessica: No brainer.

Blake: It seems really obvious, right? How could this be right? So I took it to a professor at Stanford who had done some research on supersonics, and I basically got these meetings in cold emails. I'm like, "Would you help me out? Would you look at this thing? I've got an idea." And he took the meeting and he like looks at my assumptions and he's like, "Blake, if you're going to do this, you should really push the team harder, because all of these assumptions are conservative." And I remember leaving his office in this what felt like a drunken stupor, because it all seemed unreal to me.

And I remember thinking like, "Okay, if any of that is true, either I have no courage, or I'm going to go find some people and we'll see how far we can get with this."

Carolynn: By the way, you said that your assumptions included that sonic boom was still illegal, right?

Blake: Right.

Carolynn: You couldn't do sonic boom? Okay.

Blake: Right. People think that the whole company was created to solve sonic boom. And in reality, we called it Boom for a bunch of reasons, including that we thought the boom was just not going to be a blocker to getting off the ground.

I should tell the story about how we actually solved it. It was very much a lucky thing. We had discovered, not discovered, other people knew this. There's known physics called mock cutoff that basically under certain conditions, the boom makes a U-turn in the atmosphere and never reaches the ground. And people had talked about it theoretically for a long time. We didn't invent those physics. And when we were outsourcing our engines to Rolls-Royce, we looked at whether we can make the airplane do it and the answer was no, we couldn't. The engines didn't have the power to fly the required flight profile.

So we put it aside, okay, it's an idea for another day. The spreadsheets say we don't have to solve this to have a minimum viable product. And then we went and did our first supersonic demo flight this year, January, and in the lead up to that I was with a team and I was like, "We're going to go to supersonic. The world's going to be watching. We should really know what the sonic boom is going to be like so we can set everyone's expectations. If it's going to be really bad, we should know." And the team was like, "No, no, no, no. It's going to be in the boomless condition." And I was like, at first I was disappointed because I kind of wanted to hear it. And I was like, "Can we make a Sonic boom? I kind of want to make a sonic boom."

Carolynn: It's been a while since anyone's heard that.

Blake: Right? And so we went and did it and the team had the insight to have a bunch of microphones set to capture and confirm this. And this was not strategy, it was just what we were doing. And so we go do it, the world really noticed. The overall event massively changed our profile as a company. And then I'm on Twitter and Twitter's like, "This company is all about solving sonic boom." And I'm like, "No, we're not." And I couldn't convince people that we weren't about solving sonic boom. And then I thought, "Wait a minute, we broke up with Rolls-Royce years ago. Now we're optimizing our own engines."

And every time I go to technical meetings on the engine, I keep hearing we're optimizing the transonic performance. It means our acceleration altitude keeps going higher. And for this to work, you have to be able to reliably break the sound barrier above 30,000 feet and Rolls couldn't do it above 26. And every engineering meeting, it's a thousand feet better.

Carolynn: With your own engines?

Blake: With our own engines.

Carolynn: Yeah, okay.

Blake: It turned out to be the most controversial decision we ever made, but it will be the most important decision the company ever made, and in fact I think we wouldn't be here without it. But yeah, so it's slowly creeping up, and I had in the back of my head, "Well, maybe we should rerun the math and see whether the boomless is actually practical." And I realized, okay, we have to do that-

Blake: See whether the boom list is actually practical. And I realized, "Okay, we have to do that right now". So I called an emergency Saturday engineering meeting and I was like, okay everybody, we have to rerun the math with our engines. Does it work unmodified? Is it a bridge too far? Would we have to do something unnatural to make it work?

And it was a 90-minute, hit refresh on the spreadsheet kind of conversation. And the team was like, "We don't have to change anything. It just works." And I was like, "Okay, would you tell me why this is not practical?" And everyone's like, "Well, you'd have to get realtime weather data, but that exists." I'm like, "Okay, so why is it not practical?" And everyone's like, "We think this works."

And I'm like, "Okay, this is nuts." So then I called the marketing team and I was like, "Okay, we're going to relaunch the company around boomless." And everyone's going to think it was the plan all along, but totally it wasn't.

Carolynn: Wow. Can I ask a dumb physics question?

Blake: Yeah.

Carolynn: Is it boomless because you're so high, you're 30 or above, that down on earth you can't hear it? It's like the tree falling in the forest. Is it actually making a boom but we can't hear it or is it not making a boom at all?

Blake: It's making a boom that we can't hear but for a different reason.

Carolynn: Okay.

Blake: So yes, the higher you are, the more just attenuation there is just from the distance. But this is actually different physics.

There's something called refraction. If we all remember back to like, I don't know, junior high science class, waves bend as they go through different media. So there's that sort of famous demo of like, take a straw, drop out in a glass of water, the straw looks broken. Why? Well, as the light goes from the air into the water, the waves bend because the speed of light is different in a liquid than it is in air.

And so sound waves similarly bend, they refract, and the speed of sound is not constant everywhere. It's a function of temperature. And the first 36,000 feet of the atmosphere, it's colder up high, warmer down low, which means the speed of sound is lower up high and higher down low.

And waves bend, they refract towards lower speed, which means that the boom curls upward. Any sound curls upward. And so the angle at which the boom comes off the airplane is a function of speed. If you're like right at Mach one, effectively the energy is projected forward. The faster you go, the more the energy is projected downward.

So if you are, let's call it lightly supersonic, the temperature gradient in the atmosphere refracts the boom and it makes a big U-turn. And the art is that the bottom of the U doesn't touch the ground. So there's nothing to hear on the ground.

And this is, again, like well-known physics. You just have to have two things. One is that you have to have the software to calculate this. And by the way, it's all computer graphic software. This is ray tracing. There are like multiple things in like, unlocking supersonic flight where it turns out algorithms out of computer games are important.

Carolynn: Hmm. Interesting.

Blake: Yeah. So you have to have software that basically says, given today's weather, here's how fast you can fly such that the boom comes off at a sufficiently shallow angle that there's enough altitude between you and the ground for it to complete the U-turn. And then you have to have engines that can actually fly the required flight profile. So...

Carolynn: So coming back, that's what you meant when you said software actually solved this.

Blake: That software.

Carolynn: It wasn't a hardware issue.

Blake: The software is, effectively, it's autopilot software where the input is weather and the output is, for the altitude you're at, here's the speed you can fly such that no boom will reach the ground.

Jessica: So by the way, we've skipped ahead to like my last page of questions.

Blake: Maybe we should go back.

Jessica: Can we go back, because I'm a linear person. And I have to understand a little bit more before we talk about that exciting January 25th, breaking the sound barrier and everything. First, can you sort of briefly remind us why the Concord failed?

Blake: Yeah. So there's a superficial reason and there's a deeper reason. The superficial reason is, this is something that never had product market fit. Here's a hundred seat airplane that's pretty cramped. The seats, you could be mistaken for coming out of Southwest or Ryanair. And yet it's $20,000 a pop, and there are 100 seats in the airplane.

And one of the things I did in the very early days, I had a hard time convincing myself, like I should have the courage to look at supersonics. I looked at starting an airline. So I modeled airline economics. And if you understand airline economics, one of the very first things you know matters is the fill rate on the seats is critically important. If a seat flies empty, it's all the cost and no revenue. So getting the seats and the price, the seat count and the price, has to be in alignment with the market. So 100 seats at $20,000 each in the 1970s or '80s really doesn't work. There's not that much demand, especially for a product experience that's not that comfortable.

So through almost 30 years of flying, Concord flew half empty. Even New York to London, which is like the best route on the planet for a premium supersonic jet. So there's no product market fit. And yet it was like an in of one product, and the world sort of generalized from Concord to all of supersonic, and drew all the wrong conclusions. Almost as if like, imagine we stopped building computers after the Univac, and then everyone would tell Steve Jobs you couldn't possibly make a pocket computer because computers are affordable to banks in the size of a room.

Jessica: Yeah. Ridiculous.

Blake: Ridiculous.

Jessica: To think that.

Blake: Yeah. So there was no product market fit, and that was sort of the superficial piece.

The deeper piece was really about the birth and death of entrepreneurship in an industry. And there had been entrepreneurship from 1903 from the Wright brothers forward, really through the '60s. In the '60s, the last founders retired. All the companies that we think of the great aviation companies, Boeing, Lockheed, Douglas, they were all founded in this sort of golden period from 1903 through to 1921. And they all retired. The last ones retired in the '60s. It coincides perfectly with the introduction of the first jetliner. Literally the first jetliner was introduced by De Havilland while De Havilland himself was still chair of the company.

And then, that stopped and we went from a commercially led, privately led model of innovation to a national prestige Cold War era. So in 1969, we landed on the moon and we flew Concord supersonic, and now... And at the time, everyone's like, "This is amazing. Supersonic space exploration," blah, blah, blah. But I have a fairly controversial view, which I think is both were terrible ideas. I think Apollo destroyed space exploration, which is like sacreligion, this industry to believe that. And I think Concord destroyed supersonic.

And to make this slightly plausible, remember we can't go to the moon anymore and we can't fly supersonic anymore. So these things that were supposedly about progress, something went wrong. And the thing that went wrong was, we dropped the economics. And so we had these like government spec projects with effectively unlimited budgets, that had no incentive to create product market fit, and they caused the entire supply base behind them to get used to unlimited money.

So all the economics dropped out. And then, the worst thing happened, which was now aerospace became a competition between nations. Oh shit, now we've got politics and protectionism. And the American competitor to Concord, which was funded by taxpayers, specked by the FAA, was going to be worse at product market fit than Concord. That gets canceled, nominally a good thing, but it wasn't yet obvious just how DOA Concord was.

So now we try to block it. And in 1973, we put in place a regulation that extensively was about protecting the public from sonic boom, but it wasn't a noise limit. It was a speed limit. It was a ban on supersonic. And that regulation, which was-

Jessica: Judged by speed, not sound.

Blake: Judged by speed, not by sound. It could suck noise out of the atmosphere. You could design a supersonic jet that cancels out Harleys and it still wouldn't be allowed. So it's totally nuts. It's literally like a ban on innovation.

And what it did is it banned the actual correct minimum viable product, because the actual correct minimum viable product is a supersonic private jet that can carry five people and it could fly coast to coast in the US. That's the minimum viable product. Had that not been banned, we'd all be going Mach five by now.

Jessica: Oh my gosh. Okay. So let's go back to your story though, because now that we have a little bit of the background. You are questioning things, you're crunching numbers and thinking I can make this work. We left off, you said, I either give up, I'm not the right person or I go assemble a kickass team. You obviously went and assembled a kickass team, right?

Blake: Yeah.

Jessica: How'd you find these people? You didn't have contacts within the aerospace community.

Blake: So it turns out one of the key enabling technologies for supersonic flight is LinkedIn. I remember going to LinkedIn back in '14 in my basement in the Bay Area and industry equals aerospace, connection equals first degree, and it said no results. I literally didn't-

Carolynn: You didn't know anybody.

Jessica: You didn't know anyone.

Carolynn: Nobody.

Blake: Not a single soul in the industry.

Jessica: Oh man.

Blake: So okay, what could I do? I was like a second degree, and there was this guy who worked at SpaceX who was connected through one of my direct reports at Groupon, and I sort of emailed my Groupon friend and I'm like, "Hey, how well do you know Jamie?" And he's like, "Well, we played hockey in college together. I could email him for you."

Jessica: Yikes.

Blake: Nice. And I'm like, okay. So I got that intro, and I had no cred, and that my only way to be semi-plausible in any of this is at least I could show up to a meeting in an airplane I'd flown myself. So I'd rent an airplane out of Palo Alto, and I'd like fly to wherever the talent was and then have people meet me at the airport.

Jessica: In a small aircraft, because flying out of Palo Alto, you have to be small aircraft. Were you like showing up in a Cessna?

Blake: Single engine propeller plane. Yeah. I think back then, I think I'd upgraded to a Cirrus, which was like a nicer version of a Cessna. So I'd fly, and I did a bunch of sororities from the Bay Area down to Hawthorne where SpaceX was, or kind of out to the Mojave Desert, where all the crazy experimental airplane people were.

And they would kind of take meetings with me. And there was this lore down there that they're always these internet guys with airplane ideas, and like all the airplane guys that have done anything, they're all used to getting pitched by internet people who don't know what they're talking about.

Carolynn: I can see that.

Blake: And in fact, there's a term for it. They call it fruitcake.

Jessica: Really? Why?

Blake: I don't know, like that idea is fruitcake. It doesn't make any sense. No one wants it.

Carolynn: It's like benignly pejorative, something like this.

Jessica: No one actually likes it.

Blake: No one actually likes it that everyone... People try to get it.

Jessica: There you go. Okay.

Blake: So I remember the first meeting I was in where someone said, "That's not fruitcake."

Jessica: Oh, compliment.

Blake: And so I sort of explained what I was doing and why. And I sort of showed the... At this point, I had a first principle spreadsheet model that I could show the engineers. And the usual reaction was, "Well, this kind of makes sense."

And so I basically searched my network recursively. So that first meeting with a SpaceX guy, the question I asked him was, "If you could get anybody on the planet to come work with you on this, and you wave a magic wand, forget whether they're available, forget where they live, forget whether they want to do this. Think only about, is this the person

you want in the trenches with you on this problem? Who would you get? Can you give me five names?"

And I would get the five names and then I would talk to those five people and I'd ask them the same question. So it was sort of this recursive tree search of the social network, and pretty soon I was actually talking to the best people on the planet.

Jessica: Oh, wow. That's clever.

Blake: So yeah, this technique works quite well.

Jessica: And were they keen to join forces with you?

Blake: They were intrigued. I remember the guy who ended up being our first chief engineer, I remember talking to him and we met outside SFO at the subway in the airport, and I showed him the spreadsheet and he's like, "Oh, I didn't think you'd be this far along." And then we talked more and he's like, "I'm used to these airplane pitches, but this one actually makes sense. It seems like actually practical."

And he's like-

Carolynn: High praise.

Blake: "I want you to hire me as a consultant." And I'm like, "I'm not doing that. Either you come and you work here or we're not doing this. " And he sort of grumbled about it. He's like, "These things burnout chief engineers," which by the way, he was right about. But he couldn't help himself but to work on it. So he's like, "Oh, I built a more sophisticated version of your spreadsheet." And it kind of gives the same answer.

And so, I got to a point where I had a half a dozen candidates for the first few jobs in the company, and I was still early enough on my own journey that I'm like, "I don't know how to interview these people, so what can I do? Well, maybe if I could get them all in the same room all at the same time and facilitate a conversation, maybe I could figure out who knows what they're talking about just from listening to them talk to each other."

So I was like, "Okay, I'm going to fly them all out at the same time. Okay, where are we going to have this meeting? Are we having this meeting in my basement?" Oh, that's not going to inspire any confidence. So I called a friend up at Sequoia and I was like, "Can we borrow a conference room for a couple of days?"

Carolynn: Couple of days.

Jessica: Bold move.

Carolynn: That's a big favor.

Blake: Yeah. He's like, "Sure, of course." And so a thing I've come to believe is one of the core jobs of founders is to solve chicken and egg problems. And one of the ways you solve chicken and egg problems is to basically recruit the chickens and the eggs in parallel.

So the idea was, we had these actually fairly impressive people in aviation that would be bopping around the Sequoia people, so that would be impressive to the investors. And the fact that I was able to get Sequoia to give me a conference room might make me plausibly sound like maybe I could raise money for this thing.

Carolynn: Right. Because you hadn't raised any money at that point. Is that right?

Blake: No. I haven't raised any money. This is all funded off of my savings.

Carolynn: Right.

Jessica: And you are by yourself. You don't have a co-founder in this venture?

Blake: No.

Jessica: No. Okay.

Blake: Yeah. We ended up hiring two people out of that room, and I ended up calling them co-founders, but they were really first employees and I was paying them out of my savings.

Jessica: Oh, Wow. So when did you meet Sam Altman? Because he was integral in your story as it relates to Y Combinator, right?

Blake: Yeah. I mean, Sam's been integral in the story in many ways, but yeah. So I hired a couple of people out of that room. I moved to Denver, because it was like, where are we all going to go move to do this? And sort of the consensus in the room was Denver'd be a good place. So I was like, "Okay, I'll move to Denver." And now we're actually working out of my basement in Denver, and we're hiring people out of this recursive network search thing. And I think we got up to like eight people or something. And I'm just funding all of this literally out of family savings.

Jessica: And when you say family savings, were you married with kids at this point?

Blake: Yeah. I had three kids under 18 months when I started.

Carolynn: Three?

Jessica: There's some twins, Carolynn.

Blake: There's some twins.

Carolynn: I was going to say that you had twins. Okay.

Blake: They're functional triplets.

Jessica: Wow. Wow. Wow. Oh my gosh. And you decided to do this. Okay.

Blake: Yeah. I just kind of, I don't know, set everything to 11 and didn't totally realize that's what I was doing. Yeah. The most supportive thing my wife ever did was be willing to move to Denver. But I remember when I told her I was doing this, she rolled her eyes and she was like, "Okay, you've got a year to screw around with this thing and then I expect you to get a job."

Carolynn: Okay. Fair.

Blake: Yeah.

Carolynn: That's pretty fair.

Blake: Yeah. So nobody actually believed back then. I remember when I was first talking to my friends about it, I would tell people I'm going to go work on supersonic jets, and I could just watch their eyes roll back. And some people would say, "Call me back when you got something less pie in the skies."

And one guy told me to go for it. It was actually a vitro garg, who I'd gone to high school with and he sold a couple companies and he was out in the valley. So he told me to go for it. And by the way, years later he said, "Yeah, I thought you were crazy, but I could tell you were really passionate so I couldn't tell you not to do it."

Carolynn: So supportive.

Blake: Yeah. So it was actually zero people believed. But anyhow, we get to the point where I've collected enough people with grid resumes that I'm paying out of savings and I'm like, "Okay, I got to quit playing chicken in my bank account. I got to go raise money for this thing."

And so, I called the people who had made money in my first company and some of them had said, "We really respect how you handled that. Obviously we'll invest in anything you ever do." And then they'd say, "But we didn't think you'd do this."

Carolynn: We were looking for some sass.

Blake: Yeah. So there was about a 50% conversion rate from investors in my first company to seed investors in Boom. And then I tried to find other people who were-

Jessica: That's pretty good.

Carolynn: I was just going to say, that's a higher percentage than I thought.

Blake: Really? I don't know. I expected it to be like 100% or 200%.

Jessica: You're an optimist, obviously.

Blake: Yeah. I think you have to be an optimist to go do this. But then I was like, "Okay, I got to just find other people who are excited about this." And one of them was Sam.

Jessica: Because he was into playing... Does Sam have his pilot's license?

Blake: He does.

Jessica: Okay. Okay.

Blake: I remember talking to Sam on the phone, and we'd met each other when he was doing Looped, because I was working at the Kleiner funded competitor to Looped back then.

Jessica: Oh, wow. Okay.

Blake: Yeah. So we'd sort of bumped into each other around the time he got the pop collars on stage. The startup I was at was supposed to have that stage slot, and he had scooped it.

Carolynn: Oh, wow.

Jessica: No way.

Carolynn: That's a good little piece of lore.

Blake: Oh yeah.

Carolynn: It is. What do you mean he scooped it?

Blake: So there were two companies with approximately the same elevator pitch. One funded by Sequoia, one funded by Kleiner, and Sam was running Looped, which was the Sequoia company. And Jeff Holden was running Pellego, which was funded by Kleiner. And I'd been first employed at Pellego. And Pellego, virtually identical timing. And Pellego was slow to realize how important the iPhone was. But we'd gotten through John Doerr, we'd been walked around to the back door like, okay, when the app store launches, they're going to be like three featured apps and we were going to be one of them.

And long story short, we did a crappy job of the project, and the app was not in good shape. It was not ready to launch. And it was like basically Pellego's to lose and we lost it. And there were a bunch of organizational dynamic lessons learned and co-founder dynamics that I think were part of that story that the CTO kind of went off and ran the project in a silo, not successfully, with the CEO kind of like, "Okay, okay, I'll let you take it." And then it was like, I remember going to the CEO's office like three weeks before the WWDC and I'm like, "This app isn't ready. We're going to get screwed." And then we tried to fix it in three weeks. It just wasn't enough time.

Jessica: And so did they choose Looped at the last minute?

Blake: They chose Looped at the last minute.

Jessica: Sam told that story on this podcast and he's like, "I thought I did a really bad job when I was trying out for this." And then they called me the next day and say, "No, no, we liked you. So maybe there's more to this story."

Blake: If Pellego had shown up well, what would have happened? I don't know. I kind of think John Doerr had the influence to make it happen, but I think what happened is like our app just sucked.

Jessica: Okay. Sorry for the digression. It was just everything-

Blake: No, these things were fascinating, right?

Jessica: ... Little tidbits are so interesting.

Blake: And there are all kinds of lessons learned there. When you get these big shots at important moments, you can't miss. And also there's a founder mode lesson in there. This whole, trust your team thing, is often mistaken. If Jeff had micromanaged that project, history might have gone differently.

Jessica: So back to Sam, before we digressed, you met Sam and was he interested in? Did he offer to invest or did he say you should do YC?

Blake: He offered to invest. He didn't like the valuation. So he was like, "I'm only going to give you like 21K or something." He thought we were overprice-

Blake: He thought we were overpricing it. But then he invested and so we scraped together, it turned out to be almost exactly the same dollar amount I'd raised in the seed round for my first company. It was 770,000.

Jessica: Weird.

Blake: And then Sam kept saying, "You should do YC." And I kept thinking, I don't get that. This seems to be for mobile social apps, not for supersonic jets. What am I going to learn? And he must've told me five or six times to do it. And what I realized... And we tried to raise an A round, but failed. And I was like, "The most likely outcome for this company is we come and go, never having to raise money, never having done anything. It'll be born and die at the idea stage."

And so my single biggest risk is capital and I should just do anything to try and solve that. And I'm like, "Okay. If I do YC and it's not helpful, I won't really care about the percentage on the cap table, but if I don't try it and then we die, I'll think, why didn't I do everything I could?"

Jessica: Right. Yeah.

Blake: So I went into it with that premise, and then it turned out to be the most important thing we ever did.

Jessica: Tell us why. What happened in that three months?

Blake: It forced me to learn how to tell the story in a way that made sense to investors, and how to think about de-risking it. I was very much in an engineer mindset. I sort of hoped that we'd find somebody who would just give us a bunch of money and they would quietly develop the supersonic airliner. And then my fantasy was we would tell the world with a press conference that would be conducted on a three and a half hour flight from New York to London, and that that would be the reveal.

This is wildly unrealistic. I remember a couple of weeks into YC, I was like, "Okay, what are we going to do on demo day?" I'm like, "Well, we're not going to have an airplane." And it was also like you have to have sales. I'm like, "I've got eight weeks." And my sales pipeline is like United, Lufthansa, Delta. Like, "I'll be lucky to sell to these guys in eight years, let alone in eight weeks." Like, "What am I going to do?" And so the meta lesson, there's tons of detailed lessons in there, and I think Jared Friedman saved us by just coaching me to be more aggressive with Richard Branson.

Carolynn: There's a story with Richard Branson, right?

Blake: Oh, yeah. Yes.

Carolynn: Do you want to tell that story, because he-

Blake: Sure. Why not?

Carolynn: Okay.

Blake: Okay. So the group partners were like, "Come to demo day with sales or your goose is cooked." And I'm like, "What am I going to do? Who is possibly going to do a deal with a supersonic jet startup in my basement in eight weeks?" Okay. It would have to be a startup airline, or maybe Virgin would do it, because I knew the Virgin story. Richard Branson had actually tried to buy Concords when British Airways were shutting them down. They wouldn't let him have it. And he would always talk about his vision for Virgin Galactic that one day it would do high speed passenger travel, so I knew he cared.

And so I pursued Virgin in parallel with a startup airline. So at first it was like, "Okay, what startup airlines would do this?" Well, it'd have to be anybody who'd done all business class, because they would understand the economics. So I found everybody who was either doing or had done all business class airlines. And I remember flying to this conference. And at the hotel bar, meeting this founder of an all business class subsonic airline, and I convinced him to give me an LOI.

And I remember going to the practice demo day pitch and my slides were not good. And I'm like, "And we've got a $2 billion LOI." And Michael Seibel, bless his heart, is like,

"Who is it from?" And I'm like, "Well, this thing you've never heard of." "Okay. Well, how many airplanes do they have?" "Actually, none yet." "How much money have they raised?" "Actually, I had to write the guy a check in his seed round to convince him to work with me."

Jessica: Oof.

Blake: So Michael says, "Blake, do you have anything that's real? Because you sound like you're completely full of shit." And one of the many things that I think is wonderful about the culture that you've created at YC is just this culture of telling the unvarnished truth, and even if it's unpleasant. PG at one point told me I needed to lose weight. He was right.

Jessica: Oh, boy.

Blake: Yeah. He was right. He's like, "You don't look intimidating enough. You need to be formidable." Like, "Go to the gym." He was right.

Carolynn: That's funny.

Blake: So I realized, okay, we have to solve this somehow. We completely changed the pitch. We got rid of almost all the renders and only showed pictures of the hardware that we had, and I kept going after Virgin. And so the Virgin story was, I think Ron Conway's group had introduced me to Mark Kelly, who back then was Astronaut Mark Kelly and now he's Senator Mark Kelly.

Jessica: Yeah.

Blake: And Mark would hang out with Richard. And so if I wrote emails from Mark Kelly to Richard Branson, Mark would send them. And so at this time, Virgin Galactic was about to roll out their second... They'd had their catastrophic crash and they were about to roll out the replacement airplane in the Mojave Desert, and Richard was going to be there for the ceremony.

And my chief engineer was actually invited because he was in all these circles. And I wasn't invited. I figured I'd solve that somehow. And so Mark Kelly said to Branson, "Hey, the Boom guys are going to be in Mojave for your event. You should really meet them while you're there." And so Branson said, "Okay." And so we got a 15-minute, kind of a breakfast meeting. And truth be told, I never got on the invite list for the rollout. I had to talk my way into the rollout, not being on the list.

Carolynn: Geez.

Jessica: Oh, poor thing. You must have felt like such a loser.

Blake: Oh. It was such a random set of persistent effort combined with every little bit of lucky break we could make, but we got the 15-minute meeting. And it was me and my CTO and Richard and Richard's mom. And Richard's like, "Do you guys want anything to

drink?" And I'm like, "No, no. I've got plenty of coffee." And then I realized shortly after that, he's drinking scotch.

Carolynn: And this is a breakfast meeting.

Blake: This is a breakfast meeting. We had like one model of our airplane at this point. There's this wooden model that my CTO had made in his garage. And we'd found a model-maker who had painted it in Virgin's colors. And we deeply prized this thing, so we brought it with us and we showed it to him and Richard said, "Oh, this is brilliant. I love it. It actually makes sense." But he leans back in his chair and he's like, "Guys, I'm already doing one of these crazy things. I don't know if I have it in me to do two." And I said, "Well, we're not asking that you give us any money. We're asking whether you want the product, because if you'd be willing to raise your hand and say, when this flies, 'I want the first few to be for Virgin,' then we'll get all the money somewhere else."

Jessica: Right.

Blake: And he said, "Oh." So we left that meeting, and then that was like four weeks to demo day. And we were sort of working this deal through our friends at Virgin Galactic. And Richard would not reply to the email, and the Galactic guys would not reply to the email. And Jared saved the company. I remember he said in group office hours, "If you're not being so persistent that you're worried about being annoying, you're not being persistent enough." And I was like, "Okay, I'll just email him again." And we were on... So the week of demo day, we planned to come out of stealth mode on Monday. And we were on the second demo day. Demo day was Tuesday and Wednesday, and we had nothing. We had an old engine. We had a model of the airplane, a 3D model of our engine, engine system, and we had this LOI from something that basically didn't exist.

But we got Ashlee Vance, who had been Elon's first biographer to write the coming out of stealth mode story for Bloomberg. And in my head, this was going to be brilliant because the narrative would be Boom is the SpaceX of airplanes. And we had no self-awareness for just how early we were. So Ashley had come out to Denver and he'd brought the Bloomberg photographers with him, and we just let him take a picture of anything he wanted to. But the lesson: Don't ever let anybody take a picture that you're not okay being the headline picture.

Jessica: Yeah.

Carolynn: Good lesson. Good lesson.

Jessica: Yeah.

Carolynn: Was there something in the background in it?

Blake: Oh, there was something in the foreground.

Carolynn: Oh.

Blake: Ashley wrote a very nice story, but then the editor picked the picture and wrote the headline. And the headline was something like, "This Colorado Company Thinks it Can Build a Supersonic Jet." And the picture, all we had was this cardboard mock-up. And so there was me, awkwardly standing... This was before PG had told me to lose weight, so I was not the smallest guy. Me awkwardly standing on this orange chair, this orange, plastic chair, stepping into this cardboard mock-up. And it's like a joke.

Carolynn: Oh no.

Blake: And it ends up-

Carolynn: Wait, can we find that on the-

Blake: Oh, yeah. It's still out there. But Boom, our internal Slack has an orange chair emoji. So this joke has gone on for a decade. So this story ends up being on Monday at the top of Hacker News and the comments like-

Jessica: Okay. This is all sounding good, Blake.

Carolynn: Yeah, this doesn't sound bad.

Blake: Oh, but it's so not credible. It's brutal. It's like, "Ha-ha, what a stupid company. Don't they know the airplanes aren't made of cardboard? What idiot runs marketing and would name a supersonic jet company Boom?"

Jessica: Yeah.

Blake: And so we're just shredded. So that's Monday. Tuesday is demo day one. Thank God we're not in it. And I'm in the Airbnb in San Jose tweaking the slides, practicing, and up pops this email from Virgin. And it said, "We're in. You can announce it tomorrow."

Carolynn: Oh my god.

Jessica: Oh my god.

Carolynn: That's so amazing.

Jessica: No way.

Blake: Right?

Jessica: I don't think I knew this story.

Blake: But for the grace of Richard Branson, we would not exist today.

Carolynn: Wow.

Jessica: At the 11th hour, Virgin says, "We're in," essentially an LOI. Not, probably, legally, but you can claim it.

Blake: You can claim it. Literally this is done on an email. There's nothing but an email.

Jessica: Yeah.

Blake: And we didn't actually have any legal paperwork for months afterwards. But I remember calling... Oh, man. Who was it who was running press stuff at YC then?

Jessica: Kat?

Carolynn: Kat.

Blake: Kat. It was Kat. I called Kat and I was like, "I think I've got some news here, and I want to relaunch the company. And would you help me do this?" And so this was the like... We ended up, I think I was up till midnight that night doing embargoed press interviews, relaunching with, like, "By the way, there's a $2 billion deal with Virgin," from this email.

Jessica: Yeah.

Blake: And I think we had the good wisdom to actually... Virgin said, "You could put out a picture of the airplane with their logo on it," and we actually deliberately didn't do that because we knew our own brand would get lost if we put Virgin's brand on it.

Jessica: Yeah.

Blake: So we let Virgin be in the story but we didn't put their logo on it in the story. I think that turned out to be really important. But anyway, so Kat helped me stay up till midnight doing all these embargoed press briefs and we relaunched the company the next day. And now we're back on top of Hacker News for a second time.

Jessica: Wow. And you presented at demo day that day?

Blake: I presented that day. Right.

Jessica: And how was your investor response? Because let's just face it; investors think that they're bold and rational, but they must've been scared by a supersonic airline.

Blake: Oh, they were totally scared. 10 years on, they're still scared.

Carolynn: Yeah.

Jessica: Yeah.

Blake: Yeah, I was very nervous about it. I remember standing in line to pitch. And people told me like, "Oh, the signal you need is the group partners to write checks." And none of the partners-

Jessica: Oh, God. I hate that. I hate that. This breaks my heart.

Blake: This was the lore. Nobody at YC said that, and none of the group partners had asked to invest. And so I remember standing there thinking, I'm a loser. I'm a loser. I'm a loser. Like, "This is going to be a disaster." And I'm like-

Carolynn: Well, Sam invested, so you had-

Blake: Pre-YC.

Jessica: Can I also just say, Carolynn, didn't we used to have a rule that partners shouldn't invest because we did not want to send signals to the investment community?

Carolynn: Yes. 100%.

Blake: Right.

Carolynn: Yes.

Jessica: Okay.

Blake: So the partners all behaved.

Jessica: Yeah.

Carolynn: Yeah.

Blake: But I was internalizing this very negatively. And I remember I was nervously behind stage, hitting refresh on email on my phone as this nervous tick. And then up popped an email from PG, who I'd never met at this point. And the subject was-

Jessica: Oh, because he had retired by this point. Yep.

Carolynn: Yep.

Blake: Right. And the subject line was, "Can I invest?"

Jessica: Oh my god, Blake.

Blake: God, this is a story of 11th hour saves.

Jessica: I know.

Blake: Totally.

Jessica: And he said, "Can I invest?" I'm crying. I'm about to go downstairs and give him a huge hug later.

Blake: Oh, please do. Please do. Give him a big hug, because that was the confidence boost that I needed to actually show up well on stage.

Jessica: Yeah.

Blake: The whole thing, I felt like we went from being the biggest losers to the biggest winners but in the blink of an eye. So then-

Jessica: So you were literally backstage and hit refresh, and you get this inbound offer to angel invest from Paul. And I have to say, I'm really surprised he didn't meet you because, even though he had retired, he always met companies that he'd be interested in. And let me just tell you, airplanes he's interested in.

Carolynn: Well, and also, but you had changed your demo day presentation, I'm assuming, to add a slide about Virgin.

Blake: Yes.

Carolynn: So you had that going for you.

Blake: Yes.

Carolynn: But you were still, a little bit, feeling sad about not other investors coming in.

Blake: Yeah. And Virgin had given us no dollars, right? This was an email.

Carolynn: Right. That's true.

Jessica: That's true.

Blake: I sort of had a sense that, actually, this is going to go well. But I was still feeling very one down-

Carolynn: Fragile.

Blake: Yeah, and fragile about it. But then, after demo day, I think we raised money. We raised seed money as quickly as I could reply to emails.

Jessica: Oh, that's great.

Carolynn: And did you raise a good amount?

Blake: Single digit millions. Yeah.

Carolynn: Okay.

Blake: Not like build-an-airplane-money, but enough to live another day and figure out how we were going to do what was next. And I remember that my favorite thing was their Hacker News comments that day. One was like, "This is how you launch a company, the one two punch." Like, "Whoever runs marketing at Boom is a genius."

Jessica: Oh, those Hacker News users. They're so fickle.

Carolynn: Brittle.

Blake: Right? And there was another one that was like, "Monday: haha. Wednesday: Oh, shit." And so I enjoyed that.

Jessica: It just goes to show you how quickly things can change at a startup. And the highs and lows are so high and so low.

Blake: That's right. They're so high and so low, and they're like milliseconds apart.

Jessica: Okay. So Blake, you've raised a round from YC. You're feeling focused. Tell us what happened next.

Blake: Yeah. So long story short, we embarked on an effort to build a prototype airplane that would really only have a test pilot on it that would show the world that we could actually do this and, for us, learn how to do it. Because you couldn't go hire a supersonic airplane design team off the street. They didn't exist. The Concord team, if they were even alive, was retired and the Military supersonic guys were used to unlimited budgets. So we had to create the team, and the only way to create the team was to find the best people we could and just put them through Supersonic Airplane 101 by just doing it. So that was really the genesis of XB-1. And in parallel with that, we are working on the big airplane that we ended up calling Overture. That's the one that we'll all get to fly on.

Jessica: Can't wait.

Blake: And in the early days, at the moment of founding, my assumption was that we would, just like SpaceX built their own engines, so would we. And one of our first hires was an engine guy. And then we got lost for years on this path that, oh, actually Rolls has an engine that could be modified and shoehorned in.

Jessica: Rolls-Royce?

Blake: Rolls-Royce.

Jessica: Okay.

Blake: And it would be so much more credible if Rolls-Royce was building us an engine. And during COVID we got them to announce that they were working with us. And so the world's expectation was that this was going to be a Rolls-Royce-powered airplane. That was a big part of our credibility. And some of the worst decisions I ever made along the way were these fighting for cred through traditional eyes approaches. And that was basically always wrong. But so we did this thing with Rolls-Royce. And then we sort of get further down the path with them. The engine sort of works. We could have done the Boom-less Cruise thing. It had a lot of economic issues because it came with legacy business models. And they wanted us to pay for all the development but the engine wasn't going to be exclusive to us. It was going to be a disaster of a deal.

And we were still trying to get them to do it because we didn't think there was any alternative. And then the CEO got fired, and then it got political within Rolls. Do you want to be associated with this or not? And we're like, "Crap. We've got to figure out a plan B." And this is like, I think, 2022 now. And Boom is on a tear. We've rolled out XB-1. We're getting it ready to fly. United has put an order in, remarkably. That was huge.

Jessica: Yeah.

Blake: A year later, American puts an order in. And we announced that right after the Paris Air Show. The press is amazing. All the suppliers that would previously not call us are wanting to work with us. And we had sort of known in parallel with this that things are falling apart with Rolls. And we're working on our alt plan.

And I had a handshake agreement with a senior guy over there, like, "Look, we'll stay friends until the end of this year. Boom is going to go another way, and I'm incubating that now. And at the end of the year we'll announce what we're doing, and maybe you guys will be a part of it. We'll license something from you. And so we can smile and hug, and it's all sort of fine."

Carolynn: Yeah.

Blake: But we announced American Airlines and then Rolls freaked out.

Jessica: Why?

Carolynn: Why?

Blake: Well, just one airline is doing this crazy thing. Maybe they did it for PR. But United and American are ordering supersonic jets? Like, "Wait a minute. Maybe this is actually happening." And then, after the world thought they were Rolls-Royce-powered, now they're not going to be Rolls Royce powered.

Jessica: Okay.

Blake: And this is all happening during a CEO transition, where the old guy's been fired but the new one's not been picked yet.

Jessica: Okay.

Blake: So Rolls freaked out. I was out to dinner with a supplier that we were courting, and my phone starts blowing up because Rolls has gone to the press and told them they're not working with us.

Jessica: Without telling you?

Blake: Without telling me.

Carolynn: Whoa. Wow.

Blake: I found out when my phone blew up at a supplier dinner.

Jessica: Oh my word.

Carolynn: That's so weird.

Blake: Basically they shivved us. And so we weren't ready yet to announce what we were actually doing. And the company went from being high-flying to instantly not credible, and-

Jessica: Because it doesn't have an engine, basically.

Blake: It doesn't have an engine. It's like, "Boom is building a glider." Like, "Roll's says the supersonic market's not interesting." And the press would call Pratt & Whitney and GE and say, "Are you guys doing it? " And they'd say, "No."

Carolynn: But that's so weird. This is on the heels of American and United giving you a vote of confidence. So did American and United freak out, too?

Blake: Oh, yeah.

Carolynn: Okay.

Blake: Everybody freaked out.

Carolynn: Okay.

Blake: The employees freaked out, I freaked out, the press freaked out. And it was one of these, like, "Oh, this company's on a big high so now it's more interesting to tear down." I remember giving a talk and getting off the stage, and it was like a paparazzi moment where the industry press was shoving microphones in my face. And they're like, "Who's building your engine? You don't have an engine, do you? " And I remember going, around this time period, to a talk that Brian Chesky gave where he was telling the story about how he had led Airbnb through COVID.

And he said a line that was something like, "In a crisis, what you need to do is become more deeply who you've always been." And I felt like he was speaking very directly to me because what that meant is, we need to go all in on the own engine thing. Because I had known, sort of, in my heart of hearts that that was the right path. That it did not make sense to outsource the most important thing. So we figured out how to do it and we found a way to bootstrap it with a contract engineering team.

Blake: ... found a way to bootstrap it with a contract engineering team that we were able to scoop up with... We got the entire former Pratt & Whitney supersonic team on this.

Jessica: Wow.

Blake: And then, we announced that at the end of '22, like semi-credibly. And then, we've been fighting our way back from then. And it turns out this is the most important thing we ever did. Doing this the way we're doing it now, it's a quarter of the development cost and we get a fully-custom engine that's actually optimized. So, it makes the product better in two really meaningful ways. Number one is it can do boomless cruise when the Rolls engine never was going to.

Jessica: Oh, my God.

Blake: We didn't even do it for that reason, but it turned out to be the case. The other is that it enabled a breakthrough in passenger experience. Along the way, one of the things I've come to believe is you want designers to think like engineers, engineers that think like designers. And we had this breakthrough in the passenger cabin, that I can't share yet, that is radically better than anything ever done in a narrow-body jet before. But it cost 1,000 miles of range and we knew we couldn't afford a lost 1,000 miles of range. We had to re-optimize back 1,000 miles. And long story short, we did it by jointly optimizing the airplane and engine. And I remember there was a key meeting where the head of aero and the head of engine were hugging each other and they're like, "We can only do this because we work together in a way we never could have if the engine was made by a different company."

Carolynn: Oh, my gosh.

Jessica: I have a question. What kinds of things can you do if you're designing both the engines and the planes? Check.

Blake: Check. Yes. And by the way, there's another thing you can do that I also can't talk about yet that's more important than anything I just said by a factor of 10.

Carolynn: Wow.

Jessica: Can you give us a little hint?

Blake: It solves the biggest remaining problem that Boom has, and we could not do it if we did not own the engine.

Jessica: Oh, my gosh. This is so exciting. We're going to have to have a part two with you after this, but this is really interesting. So, this situation that was like a bowl full of lemons that you were handed by Rolls-Royce, getting, as you said, like shived, all of a sudden turns out to be the most important thing you've done and has these three stupendous benefits?

Blake: That's right. I love that you said a bowl full of lemons because the effort at Boom to solve this was called Project Lemonade.

Jessica: No way. No way.

Carolynn: That's funny.

Jessica: Wow, that's extraordinary. I want to talk lastly about the Mojave Desert flight of the XB-1, when you broke the sound barrier for the first time with a privately-funded supersonic airliner. Can you just tell us that story? Because Carolynn and I both remember, it was all over Twitter. Everyone was talking about it.

Carolynn: I watched it. It was like a great excuse to just-

Jessica: Did you watch it live?

Carolynn: I watched it live.

Jessica: Okay.

Carolynn: I did. Remind me, what was the test pilot? I want to call him Jackal, but that's not his name.

Jessica: Geppetto.

Blake: Geppetto.

Carolynn: Geppetto. I knew it was something like that. Okay.

Blake: Yeah, Gepetto's a hell of a human.

Carolynn: He seems great.

Blake: Yeah. No, he is better than he looks on TV in every conceivable way. As a human, as a pilot, he's just really remarkable... He's humble. Don't think Maverick. He's got the courage of Maverick and the skill of Maverick, but balanced. And then, no one's more invested in this than the test pilot, right?

Carolynn: Oh, sure.

Blake: Right? So, at any rate, so we built XB-1. The purpose of it was really to learn 100% of the lessons that you need to build a supersonic jet out of airliner technology. And after 11 subsonic flights, the next test point was supersonic, and we decided to live stream it. This is also a relatively last-minute decision. And we called our friends at SpaceX and we're like, "Will Starlink work supersonic?" And they were like, "Well, we'll give you a unit that you can unlock for that." And so, we got this Starlink Mini that the team figured out how to install in a T-38, which is like the...

So, when you do a test flight, you get the airplane you're testing, then there's another airplane that will fly in formation with it called a chase. And for the first supersonic flight, we actually had two chase planes. We had one that was a T-38 and then we had a Mirage F1 that had like an IMAX camera on it, but the T-38 was our chase for flight test safety purposes. And we got the Starlink Mini with this 3D-printed bracket installed in the T-38. And then, we had one of our engineers in the backseat with an iPhone. And so, the supersonic flight was live-streamed from an iPhone camera over Starlink.

Carolynn: Oh, my God.

Jessica: Oh, my gosh.

Blake: And the internet just lit up in a way that was well beyond what I had expected. And my personal experience of it was... So, the flight test is not very predictable. This is not like an all-weather operation. When you're doing something for the very first time in a new airplane, you are rationally very conservative about the conditions under which you will do it. And so, you have to have good weather. And we had to call the shots like two weeks ahead of time based on an imperfect weather forecast when we were going to tell everybody to show up in Mojave, knowing that if the weather changed, we'd have to disappoint everybody.

And we're waking up that morning, and of course, the first thing I did was check my aviation weather app and it was like, "It's cloudy." I was like, "Ooh. Are the clouds going to clear?" Literally, are the clouds going to clear? And I'm driving to Mojave and it's still kind of cloudy and I'm like, "Oh, man. What's going to happen?" And one of the hallmarks of our safety culture is the go, no-go decisions are made by the flight test team in a closed room with no senior leadership in the room because it's really important that they can make that decision and that we trust them to make that decision and we don't second guess it.

Jessica: Yeah. It's their lives at stake after all.

Blake: It's their lives at stake, right?

Carolynn: Yeah.

Blake: So, I'm standing in the hangar looking out thinking, "Oh, it looks like it's getting a little bit better. I'm not sure." And then, the team comes out of the brief and I could tell from the way they were walking that it was a go. It was there in the body language and the crew

chief was walking over the airplane and he's hooking up the tow-bar, so we can pull it out of the hangar. And I'm going to tear up as I tell this story because it was a couple hours later that we broke the sound barrier and my friends are jumping up and down, the internet is jumping up and down and everyone's hugging me. And that moment I was like, "Of course." But for me, the moment happened when the tow-bar got hooked up to the airplane because that's when I knew it was a go and I knew if we flew that day, we were going to go supersonic.

Jessica: You're going to make me cry.

Carolynn: Aww.

Blake: So, that was one of the better days of my life.

Carolynn: Well, it all came through on screen. You could tell how awesome it was. It was, I think, visceral for most people watching.

Blake: It was. We had an amazing co-host for the livestream. This guy, Mike Bannister, who had been chief Concord pilot for British Airways. And Mike is, in one human, at the intersection of supertonic jet pilot and sportscaster. You would think this was like the World Cup the way he talks about it. So, he was really, really incredible. And I think a lot of people told me, "Oh, we thought we'd tuned in for the livestream for like a minute, but Mike was so awesome, we had to watch the whole thing."

Carolynn: Yeah, it was good. Those guys were good.

Jessica: I remember you gave Geppetto a big hug when he got off. I mean, you just must have been so happy. Gosh.

Blake: It was a really happy day. And one of the things that I've struggled with as a startup founder is just, by the time something happens, I've priced in the success in my own emotions and then I'm onto the next big problem emotionally and I find it really difficult to actually enjoy the successes. And I told myself, "Make sure you slow down. Make sure you really enjoy this one," And I think I succeeded in that.

Jessica: Good.

Carolynn: Good.

Jessica: I have one last question for you. Back to the sonic boom thing and supersonic flights being banned over America. Did you guys have something to do with getting... Didn't the ban on supersonic flights get reversed?

Blake: Did we have anything to do with it? Yes, that was entirely a Boom effort. So, 52 years of bad regulation was reversed in 115 days, which, to me, felt long, but probably set some record for speed of regulatory change. So, February 10th, we flew supersonic for the second time. We announced boomless cruise and I was flying to DC that night on this

awful flight that would be way better if it were supersonic. It was like this four and a half hour overnight flight, which is just miserable. And by the time I landed in DC, I had an invitation to the West Wing. And I'd tweeted about this terrible regulation.

Jessica: No way.

Blake: Elon had responded and said, "Obviously, this administration will fix it." And so, I had meetings at the White House the next day. And that week, Thursday that week, I was having breakfast with the secretary of energy, who is a friend of the owner of the building I'm standing in. We'd met him through our landlord and turns out we're neighbors in Denver.

Jessica: Oh, gosh.

Blake: And I'm having coffee with him and he's telling the story and he's an entrepreneur, so he's like totally one of us. And he's like, "This is great. You should get an airplane model made in the president's new Air Force One colors." I said, "Well, we did. How do we get it to him?" And he's like, "Well, I'm seeing him later today. I'll give it to him." And I'm like, "Well, hang on..." By the way, we're now 45 minutes into a 30-minute meeting with a cabinet member." And I'm like, "Well, it's in my hotel room. Do you have five minutes? I'll run and get it."

By the way, the airplane model was key to getting Richard Branson and the airplane model was key to getting this regulation reversed. So, I sprinted to my room, grabbed it, brought it back, gave it to him, and then I flew to New York that night for other meetings and out pops this text from Secretary Wright that's a picture of POTUS with the airplane model in the Oval Office. And I was like, "Can I use this?" And he's like, "Let me ask the president. I'll get back to you."

Carolynn: Oh, wow.

Blake: Because I'm like, "The last thing I want to do is post a picture that I'm not allowed to post of the president." And he's like, "Okay, you can use it." And so, I posted it and of course it went huge. And then, it went viral a second time because people zoomed in on it. And if you look at that picture very carefully, there's a mirror behind the president and in the reflection is Elon.

Carolynn: Oh, interesting.

Jessica: No way.

Carolynn: Wow.

Blake: So, it went viral once for the picture and once for the photo bomb. So, then we went to The Hill and we got a bipartisan bill introduced to repeal the speed limit. We've been working on this in the White House, but then it was like Congress is actually going to do this quickly. And the White House was like, "Well, we can't be scooped by Congress. We

can't let the slowest thing in the world do supersonic." So, then I think it was something like 10 days before the executive order was signed. And then, I think we're still going to get the bill through Congress because everyone wants to be associated with this.

Carolynn: Yeah.

Jessica: Amazing.

Carolynn: Everybody wants it.

Blake: Everybody wants it.

Carolynn: Everybody-

Blake: Supersonic flight with no boom, forward compatibility, sustainable fuel, no net-new noise. Everybody wants this.

Jessica: When are we going to be hopefully riding on it, taking a flight?

Blake: If all goes according to plan, in about four and a half years we'll be ready for the first passengers. And then, it'll be a race to see how quickly we can build enough airplanes.

Jessica: C. Levy, let's have a girls trip.

Carolynn: Definitely. Where do we want to go?

Jessica: Somewhere fun and far away.

Carolynn: Yeah.

Blake: The nice thing is when flights are faster, you can just decide on the fly. You don't have to pre-plan it.

Jessica: I love it. I want to thank you, Blake, for coming on our show and sharing all these great stories about your journey and Boom's journey. It's so interesting. I wish you the best of luck over the next four and a half years, and I can't wait to take a flight on the Supersonic Airliner.

Carolynn: I'm just looking forward to the next test flight that we can watch online.

Blake: Yeah. Well, thank you. Very grateful to YC, even in a whole bunch of ways this company would not exist without. So grateful to both of you and to Paul, because without you, there would be no YC, and without YC, there would be no Boom.

Jessica: Thank you. That's so nice. And I know our listeners are going to love this episode, so thanks again for coming on the show.

Blake: Thank you.

Carolynn: Thanks, Blake.

Jessica: All right. Bye.

Carolynn: Bye.

Blake: Bye.

Jessica: Wow, Carolynn, this is one of those episodes where I feel like my mind is just blown and I need time to recover from all the stuff that we learned.

Carolynn: Yeah. No, it's such a good story. I wonder if people will go back and listen to the portion of the Sam podcast where he talks about getting that slot at the Apple Developer Conference.

Jessica: Oh, yes.

Carolynn: That was such a funny full-circle moment.

Jessica: I love when stuff like that happens, when we can reference an old podcast with Sam where he said, "Oh, gosh. I thought I muffed the presentation and they called us back and said, 'We'd love to have you.'" And then we found out from Blake that it's because the other company shot themselves in the foot and blew it.

Carolynn: Yeah, that's so funny. One of the things I thought when Blake was telling his story was how he went back to his Barcode Hero investors and thought that 100% of them would want to invest in Boom. And we were all like, "God, the fact that 50% of them wanted to do it is great." But I think actually the takeaway from there is that it sounds like he went the extra mile to make sure that they got treated well. And so, the obvious lesson from that is do not ever burn bridges. Don't ever burn bridges because you just never know what you're going to do next. So, just such a good lesson there is to always be really good to people, as good as you can.

Jessica: That's like lesson number one in Silicon Valley.

Carolynn: Totally.

Jessica: Always treat people the right way.

Carolynn: I see on a daily basis, it doesn't always happen and a lot of times no one can do anything about it. You can only do what you can do, but that stuck out to me.

Jessica: I wished we were able to have more time to talk a little bit about his experience with investors. And maybe that's something that he talks about 5, 10 years from now. I think raising money for a supersonic airliner is hard.

Carolynn: I think raising money for any moonshot type of idea, it's probably just so different from raising for a SaaS company or right now, an AI company. You're doing something really unusual. And people are going to really like, "That's so cool. I wish I could," but the practical side of them is going to be like, "I can't put money in this. It's just too much of a moonshot." So, that's just a whole other thing for people, for entrepreneurs.

Jessica: Right. Let's agree though that supersonic flights are inevitable. This is going to happen. It's just a matter of time and it's just a matter of can Boom execute? Which they clearly are.

Carolynn: Right.

Jessica: And just so many things blew my mind in that conversation, the biggest one was how they were forced to make their own engine, which they didn't want to do, which was a big PR problem for them at first and shook everyone's confidence. And it was one of those things where you're like, "Oh shoot, how are we going to handle this? " And it's turned out to have resulted in three incredible innovations for Boom. That is so cool.

Carolynn: Yeah, I feel like we've heard versions of this story from our other guests before too. It ends up being this thing where if you just bite the bullet or take the plunge and do the really hard thing yourself, it has all these benefits. And by the way, there's probably tons of stories where the reverse is true too, obviously, but I feel like that's a theme here.

Jessica: Well, I think that that is going to be such a good episode and I can't wait to see what happens to Boom in the future. And I can't wait to book our girls trip in, what is it, four and a half years.

Carolynn: Four to five years.

Jessica: Four to five years. Let's do it.

Carolynn: Maybe the timeline will accelerate and it'll be faster than that. We'll see.

Jessica: Awesome. All right, C. Levy, I will catch you on the next one.

Carolynn: Okay, bye.

Jessica: Bye.