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PODCAST

# How ABB Formula E changed the e-mobility landscape

## ABB Decoded

In less than a decade, ABB Formula E has gone from radical motorsport start-up to a driving force in the global e-mobility mega-trend. Series founder and chairman Alejandro Agag explains how it happened.

**Anthony:** Hello and welcome to ABB Decoded – the podcast that tries to press pause on our fast-moving lives and make sense of the technology and trends that are shaping our world.

We're joined for this episode – mid-way through the ABB Formula E season – by the series' co-founder and Chairman, Alejandro Agag.

He's the man widely credited with being the driving force behind the creation of an all-electric motor racing championship, of which ABB has been the title partner since 2018.

And while he is no longer involved in the minute-by-minute running of the series, he remains intimately involved in the business and has many fresh ideas for its future, as we will hear.

Agag started his career in politics, before becoming a motorsport entrepreneur, and he remains a passionate advocate of e-mobility and of the climate benefits that can be achieved via progress in sustainable technology.

He has extended his interests into off-road e-mobility, with the Extreme E series and onto water with a nascent electric speedboat championship.

But it's as the visionary behind ABB Formula E that he joins us, speaking just ahead of the Berlin E-Prix, from his hotel in the German capital.

Among several surprises in our conversation, is Agag's revelation that he's a science-fiction enthusiast and that perhaps the out-of-this-world ideas of writers such as Isaac Asimov, encouraged him to conceive a revolutionary form of motorsport. So, let's hear more from the man himself.

**Alejandro Agag:** I'm Alejandro Agag. I'm the founder and chairman of the ABB Formula E championship.

**Anthony:** Okay, great. Thank you. Thanks for joining us today. I'd like you just to cast your mind back to more or less eight years ago, maybe even a little longer, when you founded the championship. And it was just a drawing on a paper napkin or a cotton napkin. Can you really believe how far the championship has come in those eight or 10 years?

**Alejandro:** You know, when I look back, and really you see where we are today, it's really far beyond what we expected. The interesting thing is when I look back, and I remember how I was seeing the future,

then, I didn't really know what to expect. So, the way we built this project and this championship, was basically step by step. Surviving to fight another day, basically. We had so many of these times where it was really, really tough, and it was looking like everything was going to collapse. So, we just kept going. So, we didn't really make any big plans. We didn't make any big designs, we didn't make any kind of drawing of how we wanted it to be. We just kind of kept going to see where we got to. And we got to a fantastic place. Of course, the first years were a lot more unstable. Now we have a lot more stability, we have a lot more capacity to plan the future in a way. But yeah, in the beginning, it wasn't like that. It was just ,let's survive another day to keep to stay here.

**Anthony:** So, does it feel still like a crazy adventure? It must have done at the start.

**Alejandro:** It feels less like with a crazy adventure now. Now it feels more like an enterprise. Now it feels more like a solid project, which is what we wanted. So, you know, you can only survive crazy adventures for a certain amount of time. You keep going like a crazy adventure, you probably will crash and burn. And we almost did it a few times. So, it feels very good. It feels very good. It feels like really we have created something that is going to survive the founders, you know. It's hopefully going to stay here longer than us, longer than we are working in it. So, yeah, it's a good feeling that finally, we brought Formula E to a stable place.

**Anthony:** And you mentioned you couldn't really have imagined where the championship would go when you started. But where you are today, looking ahead to season nine, has it exceeded your expectations or met those expectations or gone in a completely different direction?

**Alejandro:** Well, it has by far exceeded my expectations in terms of what we have achieved in terms of the technology also, in terms of the impact that it has had. Having said that, I'm not happy. We need to do much more. Always there is a lot of space to cover, always there is more room to grow. And especially on the reach, on the impact of the championship, on the number of fans that follow us, with the fan base growing. I think we have many priorities that we have to keep pushing. But you know, we have to be super happy of where we are. I mean, I don't think any other championship in the world after seven seasons is in a place where Formula E – the ABB Formula E championship – is today.

**Anthony:** So, we're in Berlin as we speak, which has been part of the championship since the very beginning. And we're just two weeks on from the Gen 3 launch. So, what was it like seeing the Gen 3 car and seeing how far the e-mobility technology has come from those early prototypes, which couldn't even do a spin because they didn't have enough power?

**Alejandro:** I think you always tell the story about motorsport being a laboratory to develop technology and so on, so on. But you need those moments like the Gen 3 launch to really understand that it's true, that you are really achieving technology breakthroughs. And if you compare Gen 3 to Gen 1, it's a completely different galaxy of car. We are in a different dimension. The Gen 1 couldn't even finish the whole race. It was going – the power was 150 kilowatts. This car is going to go at top, I think at 350. The leap forward in power is huge. The weight is less. I mean it's incredible the progress in the technology that've done in only a few years. So yes, this confirms that Formula E – the ABB Formula E championship – it's a laboratory, it's a platform to develop technology for electric cars, and we really deliver.

**Anthony:** Do you think the championship has helped to reframe the narrative around E-mobility and accelerate manufacturers to change their model lines, bring charging technology up to more up to speed, help infrastructure, all these things?

**Alejandro:** I think the championship definitely has had an effect on the landscape of mobility. And I think today would be different if we didn't have a championship like the ABB Formula E championship in the world. We have it; people can see it; people can watch it. And that's in the back of their mind, in the back of the consumer that is going to buy a car and has to make a choice between a car that is electric or internal combustion. So, definitely we have achieved that. But of course, we can achieve a lot more. This championship has a huge potential to keep promoting e-mobility. E-mobility is in a very interesting moment, finally, on an inflection point where numbers are really, really escalating, but at the same time, with huge challenges on the supply chain, on the raw materials, which have been, on top of it complicated even more by the war, by the invasion of Russia to Ukraine, because a lot of the nickel and other raw

materials for batteries come from Russia. So, we have many challenges, but we have the opportunity is huge. And we still have a lot to do. So, there's still a huge role for the ABB Formula E championship.

**Anthony:** But when you see something like what you call an inflection point, do you feel proud? Do you feel like you've helped that happen? Does that give you a good feeling? Or do you just see the work to do?

**Alejandro:** I feel very proud, but not because I take on myself the credit of the explosion of sale of electric cars. I feel proud just to be here to exist and to manage to create something that that goes on, because many racing car championships have started and disappeared; started and disappeared. We created one and there was a big consensus we were not going to stay for long. And we're still here after eight seasons stronger than ever. So, yeah, I feel proud of that.

**Anthony:** Why do you think that is?

**Alejandro:** I think we had the right concept, the right idea behind. I think the idea is what's powerful behind the ABB Formula E championship. The promotion of electric cars in the right moment in time. If you were going to promote electric cars 20 or 30 years ago, this championship would have died after a few months. But we came in on the right time, even a little bit early, which is good. We came just before the big wave of electrification of the motor industry, but it was already brewing. So, I think the timing was right, the idea was right. And that's why we're still here.

**Anthony:** And you mentioned challenges. I mean, you had two major ones along the way. One was sort of manufacturers that come and go. I'm interested to know how you how to deal with that. But then also, we can speak about this in a minute, the whole COVID-19 situation, which almost cancelled season six, but didn't in the end. So, two separate things. How did you deal with these scenarios?

**Alejandro:** Yes, we had these challenges. Actually, they came almost together – COVID and the manufacturers that left. Now we have some others that join. And it's interesting. You see everything goes in cycles. And I know that some of these manufacturers are already regretting the decision that they took. But you know manufacturers have their own timings, also their own decision-making processes, which are not strictly linked to motorsport. So, a manufacturer has to look at a very big picture. And sometimes motorsport fits and sometimes it doesn't fit. So, of course, there are no hard feelings. On the contrary, these manufacturers were very grateful because they joined the championship and they supported the championship when they did come in. And if they leave, we hope they will come back again. But this was mixed with COVID also, and we had to cancel a lot of the races. And for us COVID was a big challenge because we race in city centers. And you know, to put together a race in a track, with quarantine conditions and lockdown conditions, it's feasible. But to put together a race in the heart of a city is just basically impossible. So, we had to cancel a lot of the races. We did six races here in Berlin, which was not ideal for the championship. And I think we suffered during that period more than other championships. But I think we have, you know, so much potential that it's not a problem at all to come back from that. We are seeing the rebound already. We saw the announcement of Maserati, which is a great brand join the championship. We're going to see very soon another big brand joining the championship. So, yeah, I think we're in very good shape.

**Anthony:** Another challenge that you face. Not always your own fault. But races get cancelled sometimes – they come and go off the calendar. We had an unfortunate one this year with Vancouver. I mean, how do you deal with that? Because sometimes there's an emotional aspect as well, because this year for example everybody wanted to go to Vancouver, suddenly we can't go, so how do you deal with those sorts of situations?

**Alejandro:** Be careful, you have the person who most wanted to go to Vancouver behind you, which is my wife, who really wanted to go to Vancouver. I really wanted to go to Vancouver. And of course, it's my fault, too. I'm part of the management of the company. And we should have probably done things differently to make sure that we were able to go to Vancouver. But we trusted the local promoter there. And the local promoter, unfortunately didn't do his job the way he should have done it. You know, it's very challenging to race in cities, but I think we really need to push now for a more stable calendar. And there are different ways to do that. But we're working on it and the Vancouver situation should not happen

again. Definitely. And we need to have more direct contact with the cities. So, if a local promoter suddenly collapses like it was the case, we can take their place and still deliver the race.

**Anthony:** What sort of things can you put in place? Would that be like promoting races directly as the championship for example?

**Alejandro:** Yes, we can promote races directly. We can have a direct relation with the government of the city. So, what happened here is that we were not in contact with the City of Vancouver. So, we didn't know what was going on between the promoter and the city. And the promoter was telling us everything is fine, everything's fine. But everything wasn't fine. And we realized what was happening too late, once he got the notice of postponement of the race. So, for the moment it's a postponement but we need to have a lot more control on those situations. And you know, we have to probably be able to take the place of the promoter if we need to.

**Anthony:** So, far Formula E has been a championship in growth. Some people at one point thought it would just overtake Formula One. But Formula One is currently doing very well. I know the two championships don't compete directly. But where do you see Formula One versus Formula E in, say, five years? How can those two championships sit alongside each other?

**Alejandro:** So, you know I have to be very careful with this question, because I answer it always very openly. And everybody gets very nervous with my answer because I'm the only one who has this opinion, apparently. I think Formula One and Formula E should coordinate, should have some kind of cooperation in some way or another. I think we're very, very compatible. I think we don't compete with each other. I think we're very complementary. And if it was up to me, I would do something quite strong together with Formula 1. I think eventually the technology, electrical technology – and this is a very known opinion of mine – will be more performant than internal combustion. And the Formula 1 is the pinnacle of performance. So, understand that however you want. But yeah, I'm pretty lonely on this, on this crusade, if you like, because everyone else seems to be doing their own thing. And happy with their own thing. I have to say Formula One, is doing amazing. They, you know, we just saw the race in Miami with the whole vibe that there was behind and the numbers are going up. They have a big fanbase growth, so congratulations to them. It's a great job. That's good for motorsport in general. So, it's not that when Formula One goes well, Formula E goes bad. No, no, I think that we compete with other sports. We compete with tennis. We compete with football. We compete with American football. So, it's good for motorsport. But of course, we have to take it into account when we look at the future.

**Anthony:** So, what would like an ideal race weekend be? Would you have an E-Prix in Berlin and a Grand Prix in maybe not Hockenheim, but you know, down the road somewhere in Germany?

**Alejandro:** Well, for me, ideally, they wouldn't be on the same weekend. So, you could have an E-Prix in Berlin, and a Grand Prix in Berlin. Consecutive weekends. So, you have a whole week of racing, technology, festival, the two technologies that are most sustainable. And you create a huge buzz, you use the same facilities, you have economies of scale, you save money, you make profit, you make people happy, you know, so many good things.

**Anthony:** And do you have conversations in these directions?

**Alejandro:** No, I don't – and if I did, I wouldn't tell you... but yeah, I don't.

**Anthony:** Okay, good. I mean, you have a very entrepreneurial spirit, otherwise, you wouldn't have started this championship. How do you feel about the risks that you must have taken to launch ABB Formula E?

**Alejandro:** I feel okay, actually. You know, I got this question also the other day. I was thinking, like, for me, when I was in high school, and thinking of my future, you know, there was a lot of unemployment in Spain. So, I was happy with just getting a job somewhere, you know, hopefully in a bank, you know, being an employee in a bank. My father was doing that. I would have been happy with that. So, that's kind of my baseline. So, whatever happens now, I can, I'm happy to take risks, because I'm never going to go below that baseline if you like. So, I have always that kind of like, low base where I would be happy with and everything else is a bonus. So, I live in my bonus in a way. And if the bonus one day disappears, okay, the

bonus is gone. But you know, I've enjoyed my bonus for a long time. So, that makes take risks not so difficult.

**Anthony:** Is that why you've done other electric motorsport experiments if you like... well, not experiments, championships... You've got P-One boat racing, Extreme E. Perhaps you could tell us about those briefly.

**Alejandro:** Yes. Yes. So, that is that is true. I like the launch of the project. I like building the projects from scratch. So, once Formula E was already built and solid, I think my direction went to create new championships, which is what I had learned how to do, the hard way through Formula E. We started with Extreme E off-road, very far away. Extreme E is very, very challenging, but it's fascinating because you go to places. I just came back, for example, from the Aral Sea, from Uzbekistan. When would I have done that? I mean, how when you know, impossible, you do things that you never do. I've been in Greenland. We raced in the Arctic. I've been exploring the Amazon rain forest. I mean, this championship was taking me to places that I would have never gone. But it's very challenging. But it's good. It's going good. It's going forward. Of course, with a lot of challenges, a lot of pressure, a lot of risk, but it's good.

The boat championship is still at an earlier stage, but I think it's also fascinating. It's a new area where there are incredible potential. And also, it's an area where we can expand the electrification, also our activity not only to sport, but also with the sister company that we are creating, called Seabird. We can expand that to manufacturing actual electric recreational boats for the general public. So, it's a really interesting area also there. So, I think I have kind of an area of focus, which is electrification and kind of sustainability environment. We're getting into hydrogen, too, which is fascinating, with Extreme H. But within that space, I'm very happy to kind of start new projects. And I like everything that comes together with that, if the risk, the sleepless nights, the pressure. I enjoy that.

**Anthony:** And just looking ahead perhaps to Gen Four, which is obviously a long way off, because we've only just seen Gen Three. But I guess those drawings are already on a piece of paper. What can you tell us about what might lie in the future?

**Alejandro:** Yes, Gen 4. I mean, you know, we have a group with, with the car manufacturers that we met for the first time in Monaco, at the last race weekend. I think Gen 4 will be a massive leap in performance. I think in Gen 4 we will start looking at things that we haven't looked until now. And what I'm going to tell you just kind of general possibilities, not what we're going to do. But we could look at, for example, something around the battery. We could look not maybe opening completely, but maybe the cells or the cell is common, but the packaging, you know, different combinations there. We could look at allowing some kind of freedom on the look of the car for the teams without going into aerodynamics. So, controlling the downforce levels, but you know, we could look something into that. Of course, the materials, so the light weight of the car, with different materials. We could look at ultra-fast charging, where we're going already to look at season three, could be even more relevant on Gen Four. So, there are many, many, many areas where we can really take this to the next level. So, I think Gen 3 has been a huge step, but it's still not perfect. I think Gen 4, we can be, I'm not going to say we can be beat the internal combustion engine. I think Gen 5 will beat the internal combustion engine cars. But Gen 4 is the step before becoming the fastest race cars in the world.

**Anthony:** And what will you be doing by Gen 5, which could be, I don't know, 5 or 6 years away?

**Alejandro:** I have no clue. I think I'll probably be doing the same. Very, like very likely. Honestly, I love to still be involved with all these projects. So, I don't see myself changing career or anything like that. No, I mean, probably I'm still involved in Formula E, Extreme E, E1. Maybe we have come up with some aeroplane championship or something or drones or rockets or what do I know?

**Anthony:** Obviously, you're a person with a lot of restless energy. So, when you're not channeling it into racing, or boats or something else, what do you do? What do you do with all that energy?

**Alejandro:** Well, my passion, actually, which not many people know, is writing. So, I would love to become a writer actually. I'm writing my book, but I'm a bit stuck at the moment. But that would be, if I had to do something else, I would probably go and write books. Science fiction books.

**Anthony:** Okay, and you write in Spanish?

**Alejandro:** No I write in English.

**Anthony:** You write in English?

**Alejandro:** So, as you can imagine it's not very high-quality literature, but I will need someone to correct my book when I finish it. But yeah, I write in English.

**Anthony:** So, is this a place where you can put all your imaginative fantasies into?

**Alejandro:** Exactly.

**Anthony:** And some of those become reality, I guess.

**Alejandro:** You know if you look at science fiction, if you look at science fiction of the '50s and the '60s, many of the things that are in those books are reality today. So, science fiction, and if you look at for example, The Foundation, or some of the big, big science fiction books, there have so many interesting ideas and lessons that are applicable now. So, I guess if we write science fiction now, maybe those things can be reality in 50, 100 or 200 years.

**Anthony:** Do you have a science fiction hero?

**Alejandro:** Yeah, Isaac Asimov, definitely. He was the best. Yeah. Foundation is kind of the best for me. The best kind of general guide of what's going on in the universe.

**Anthony:** So, in a way we have science fiction to thank for what you've done with forming Formula E.

**Alejandro:** Probably. Probably because science fiction helps you think out of the box. So, you don't stay on the limits of reality, but with the science fiction you can go outside the reality and then try things that are not, you know, in the normal day to day.

**Anthony:** Okay, that's really interesting. Anyway, we don't have any more time, sadly. It's always fascinating, but thank you very much for your time

**Alejandro:** Thank you

**Anthony:** And thank you Alejandro Agag for joining us – it's been a fascinating insight into the mind of a sustainability entrepreneur and we look forward to hearing about your next adventures.

And if you've enjoyed this episode of ABB Decoded, why not like, share and subscribe to the series wherever you get your podcasts.

Until next time.