CWT Podcast episode 23

Cleaner Skies Ahead: Is sustainable aviation fuel on the cusp of taking off?

Richard Johnson 00:03

Good morning. Good afternoon. Good evening wherever you are in the world. Welcome to the business travel on the flight podcast. My name is Rich Johnson, Global Head of solutions group and I'll be your host. Today we're talking about sustainable aviation fuel, commonly known as SAF. With the aim at looking at the future of South, and whether we're on the cusp of its use truly taking off on a significant scale. Sustainability has risen to the top of the CEO agenda with many companies already setting themselves ambitious sustainability goals and developing corresponding decarbonisation strategies. One of the key measures being discussed in the aviation industry is the potential of sustainable aviation fuel. For common understanding, SAF isn't a single type of fuel, but rather is a collective name for different fuels that are derived from two main sources, energy from plants known as biofuels, and energy from recycling or E fuels. The various sources of SAF from within these two groups have differing beneficial impacts towards carbon neutrality. Today, I'm excited to be joined by Heinrich Lange or Henry to his friends. Henry is both the Senior Director for sales in Northern Europe at Lufthansa and also the head of global account management for EMEA. So big welcome to you, Henry. Thank you very much for joining me.

Henry Langer 01:20

Thanks, Rich for having me. Very excited to be here.

Richard Johnson 01:24

Fantastic. Henry, why don't I kick us off. SAF still only really accounts for a small proportion of commercial aviation fuel. I think in 2019, only around 200,000 tonnes were produced globally, which for context is less than 0.1% of fuel consumed in the sector. We hear a lot about regulatory pressure being necessary in the form of increased cost of carbon and blending mandates as maybe being the catalyst for greater adoption of SAF. And indeed, earlier this year, President Biden backed incentives for sustainable aviation fuel, as the industry looks to cut emissions, do you think we're on the cusp of SAF truly taking off?

Henry Langer 02:06

Well Rich. One way to answer this could be: we have to be. The industry, as you rightfully say has committed to an ambition of net zero by 2050. And according to IATA projections, 65% of this reduction in 2050 will be coming from employing SAF. I guess the other and more elaborate way to answer this is that if we look at this year, I think we can witness how the topic of SAF and co2 reductions in aviation is further moving down from the overarching corporate level strategies. And

it is more and more materializing also very tangibly in the client supplier relationship. For example, this year, I see that for our SME platform partner plus benefit, for example, we started an MVP of offering our SME customers to use their points collected against the purchase of SAF. In an MVP setup, it was very manual process, including the account managers, et cetera, et cetera. In the meantime, we've implemented it as an automated request simply as other awards available on the platform. Similar example on the in the b2c space. We're currently trialing in Scandinavia, green fare bundles on our .com. So that besides you know, those usual bundles that all of us airlines have, and, you know, bag, no bag, etc, there's a green bundle that's rather focusing on do you want to invest partially in SAF or compensation. So I think what I mean with that is, I think this year, we truly see that we are making the topic much more accessible to the customer, and therefore driving the machine and change forward. Because in the end, as massive as the transformation is not only for the whole industry, but also let's say if we just focus on commercial relations and sales processes, et cetera, in the end, to me, it comes down to the very basics of fruitful business relationships. You identify a customer need so in our case now, a corporate for example, wanting to reduce the co2 footprint of travel and probably proving this to its employees, investors and potential tax authorities. And then a US supplier trying to find an offer that fulfills that need. And that would be SAF contracts. And, for example, externally audited scope, free emissions certificates that are quite important to corporates these days. And I think these are things we have not seen before as much as the topic of sustainability. Obviously, is, is with the aviation industry for quite some time.

Richard Johnson 04:49

And it's interesting you mentioned the targets that corporates have there. I'm interested to know your thoughts on whether there's a degree of impatience and ambition from within your customer base to achieve net zero, that is driving the momentum for greater adoption of SAF, as overall demand for business travel returns since the COVID pandemic.

Henry Langer 05:13

I mean, it is definitely one of the big topics on both sides of the table, you can definitely feel that that the return to business travel after the pandemic has also brought up very prominently the question of, and how do we do it in a sustainable manner. I think, though, also what you still see is that a lot of companies, obviously, are also still in the development of how to maybe their overarching sustainability strategies, how do they operationalize it and break it down, you know, into their divisions and departments? And for us, obviously, you know, in aviation most important, then how does it break down into travel management. Do these departments, you know, still steer by, you know, cost optimization? Or do we suddenly have a discussion about travelers being steered, for example, by carbon budget. So I think this is indeed something that's also in the making, for both parties and where the conversation that we're having very intensively is so important, because we, our customers need to understand that solutions that we're working on at the same time, we need to exactly understand those processes that travel management departments are doing, how do they want to implement it within their organization?

Richard Johnson 06:37

Absolutely, that's a great point and thinking about SAF as a catch all solution for the industry. It's been said that when you think about the viable alternatives to flying, SAF is less impactful if you like, when as it relates to short haul, but when we think about medium and long haul flights, outside of offsets in SAF is really the aviation industry is only reduction mechanism available for decarbonisation. So the question I'd have for you there, is do you think that SAF is the only solution to deliver a cleaner aviation solution in the immediate term?

Henry Langer 07:19

Yeah, I think, specifically if you ask about immediate term, I think we still need to put a spotlight on the massive investments that are being done in new aircraft and fleet overhaul. So for the Lufthansa Group, that topic, for example, means that still until 2030, where we will be receiving 175 new aircraft, partially orders that we put down in the middle of the worst crisis during the pandemic. So, as we know, usually new aircrafts reduce fuel consumption, and hence, also emissions of you know, up to 30% compared to older aircraft, and actually in this timeframe, fossils of 50, older aircraft will completely leave the fleet. So I think this also is think about impact, you know, the 30% that I was referring to, but also in terms of simply money spent, this is still one of the key immediate term measures that are being taken. But obviously, as you will not be buying, again, a new aircraft, because probably there is not a completely new generation available in five years again, this kind of effect, you know, does not carry you through fine off. And I think this is exactly why there's so much focus indeed on on the topic of SAF. And maybe here, maybe it's a good point also to just briefly check on the, you know, the pros and cons of SAF. And I think you alluded to some of them already. I think what we also need to mention, here, I think the clear role argument of SAF is also the that it is a so called drop in fuel. So it uses the same infrastructure, it can be burned with the same engines that we're running today. So it is actually perfectly fit for this gradual increase of SAF availabilities. And then hence also will lead to this gradual reduction of co2 that we want to see. The current con is obviously and you mentioned, the figures in your intro, and current production is still very low, and hence also simply availability, but also price premiums are an issue because currently SAF is still significantly more expensive than traditional fuel. But I think here on that point, and on that con argument, it's I think, for me, especially here when we talk about business travel and let's say have commercial discussions, I would really say this is also where we as business travel community on both sides of the table play a key role to shape exactly these kinds of products and programs around SAF on what we want to do, and by that send a clear signal of demand. And I think, you know, just by the rules of economics, you know, this should be attracting investments into production, but also further innovation.

Richard Johnson 10:14

Yeah. And, you know, the cost is very interesting when, as you're probably aware, CWT released its global travel forecast for 2023. And within that, there were significant cost increases forecast for the sector, for the whole of this year, and also Internet and by a number of inflationary things.

And, you know, with the cost of production of SAF potentially influencing the price points that the airlines then have to make available. There is the argument, I suppose that companies would be maybe less demanding. But I'm sensing a general growth in appreciation of how contributing to sustainable initiatives such as SAF actually has much broader returns on investment for organizations as it relates to, you know, their contribution to their own supply chains and becoming suppliers of choice to their own customers in some respects as well. But the one thing that I'd like to pick up on is with regard more to the data and the reporting that comes out of this, one of the challenges that I'm hearing a lot about is people want to be able to know if they are booking a seat on a flight that that seat is going to be flown using sustainable aviation fuel to some degree. And I think that's because the targets around sustainable travel and more ingrained than ever into strategies and policies. So what would you say about our ability as an industry to transparently indicate SAF flight data point of purchase, and to be able to report clearly to enable customers to make those cleaner choices and measure their carbon footprint?

Henry Langer 11:50

Yeah, important point, let me maybe briefly reached us on the point of, you know, price sensitivity and developing, let me just comment on that point, again, because obviously, you're right with the with the costs, and that this could be you know, also deterring factor for some, but that's why I would come back a little bit to the principles I mentioned earlier in basically in sales with, with anything that you sell and discuss with a customer. If a company has identified for themselves within their own sustainability strategy, that it is of value, and of importance to reduce the travel and air travel related co2 footprint, I think, then, then you you might actually, isn't it great that we can deliver to that need already today, because even if the overall numbers of SAF sound small, in those case by case developments of talking to a specific corporate customer and saying I can deliver enough SAF for you to compensate your specific footprint, and you'll receive a certificate for that, that you can use, for example, towards tax authorities, your investors, whatever it is, that's again, I feel, you know, I rather would like to see it a little bit positive as much as I see the price discussion, in issue for the for this upscaling, but on the bilateral individual, you know, relation, let's also celebrate that we can have those discussions already today in 2022. So, you know, I think that that's just maybe a comment on that while obviously the price development, like you said is completely true. Now and let's stick in that scenario. So you had the discussion on Yes, the value is there on both sides. There is a commitment on let's do something on this and now the question like you say, it's like, well, how do you get it in because suddenly you have completely different parameters in the game, like calculating co2 footprints of certain travel and then linking the corresponding compensation product to it, for example. And I think the good thing here in my eyes is that this question again, is not unique to aviation. Right? I think we all know from the past couple of years that the term of carbon footprint of pretty much anything we do nowadays is all around us. So I think we see also when it comes to calculations, etc, that this is not, we don't need to rely on aviation knowledge only but also the tech and and startups in connect can come into play. So again, for for us. In Berlin, we have a Lufthansa Innovation Hub since a couple of years and the guys there also developed for us our own compensation platform with an algorithm behind it was a collaboration with Mike climate as a provider behind but in the meantime, we actually founded an own company from this which is called Squake. And they

basically, their business model is exactly, they offer an API with an algorithm that does calculation of co2, not only on average of air travel, but any type of travel, also, including hotel stay, can also calculate the footprint and also have access and link it directly to a vast amount of different compensation options, including also the procurement of SAF. And they can implement it via an API to a customer's system landscape, however, they want to do it quite flexibly. So these guys are not, you know, aviation Lufthansa experts, since 20 years. And I don't want to discredit our expertise there. But what I'm just trying to say is, there is innovation ideas outside and we really need to tap those minds also outside of the aviation industry to deliver solutions to some of our challenges.

Richard Johnson 16:00

Yeah, what a fantastic point. And it leads us very nicely into the next thing I wanted to ask you about actually, Henry. So I think from the discussion so far, we can agree that there is a very strong role that SAF needs to play, and we can probably expect an accelerated growth trajectory for the next few decades, certainly. But beyond that, this technology in an innovation which is going to play a more prominent role in the longer term. So thinking, for example, about aircraft, technology improvements, new generation aircraft, and how early retirements could could increase technology contribution. So beyond SAF, there are several broad opportunities for carbon reduction across the industry, such as more efficient aircraft design, as I mentioned, but also smarter operations, the development of technologies like electrification, from what you see at Lufthansa and in your role, what's your view in terms of what will succeed SAF? So what comes after or in parallel to SAF?

Henry Langer 17:06

Yeah, I think maybe before we jump to the software alternatives, let's briefly touch on the top topic of SAF types again, and I think in your intro, you also already came to that, but I think it's also now a little bit when you ask about a time, you know, the development over time in the next year. So I think it's still important to look into this because this will change. Current SAF types as you say, I mean, mostly come from, you know, some sort of feedstock biomass use cooking oil, etc. And I think it's also they're quite important to also familiarize yourself with, for example, the EEO red standard that certifies certain providers that produce their SAF without causing any other issues like deforestation or competition with food supply. So obviously, again, like everything in this world, we see the complexities of you know, topics like this. But the next big step is power to liquidate. So we're also you know, investments and research is being done. And one example that I always really like to use, because I just find it so also technically fascinating is that we, with Swiss International Airlines, we will actually be launching customer offs in Alien, and they are developing the technology to bring the production of synthetic fuel to industry scale that is produced just with carbon, water, and sunlight. So nothing else is needed to produce fuel. Which by the way, also, I think there are projections out there that would say that SAF based on biomass would simply not be available enough to really reach those targets that we or usage that we foresee for 2050. So I think that's maybe just something to highlight again, you know, that really, like you already said in the beginning SAF is not equal SAF. And already there, the differentiation and kind of future

technology starts. But coming back to the actual question of alternative designs, yeah, I mean, hydrogen, I think super interesting technology because it could be true no emission flying, but I think the big challenge here is simply and again, that's why I think it's still something that we cannot avail so quickly is that it? It requires completely different infrastructure because of the storage of hydrogen, not only in the aircraft actually. So it's not only aircraft design issue at hand, but also you know how to store it at an airport for example. So again, you know, the main difference to the pro that we set on SAF for SAF being dropped in for hydrogen that's not the case. But also their Lufthansa rotation it gets in Hamburg, there is a trial also with the city of Hamburg and other players, you know, that are starting to look like how could that look like and where we have old decommission in a 320, that is used for, for exactly these, these were the exploration of this technology. And I think electric, I mean, also here, I think the clear statement, electric app, crowd and electric flying will come. But it will be again, in the short or in the in the timeframe until 2050, where we will look at becoming carbon neutral. It will simply be a viable for short haul flying. So, current battery technology is the limiting factor there in terms of weight and volume. So, I think these will all be topics, right that are relevant for us. But you're completely right, the focus is still that's why very much on SAF. But apart from those things on, you know, aircraft design, so really the big innovation, I'm really also always intrigued by all those small innovations that are out there. And all those ideas that in the end, you know, in some all contribute their bit. My highlight there, for example, is that together with BASF, all of our cargo triple sevens are equipped with Aero shark. And aero shark is a foil that is inspired by real Sharkskin and improves the airflow around the aircraft and hence, reduces the emissions. And that's actually, you know, reducing emissions equivalent to over 100 flights between Frankfurt and Shanghai a year. So, I really liked those examples as well, because sometimes we talk about those big scale investments, but it's really also about the multitude of innovation in the sector. And also they're just to exactly bring that together in 2021. The Lufthansa Group has founded the clean tech hub, and which is a Competence Center for Climate Protection technologies and is aiming to bring our own aviation and know how together with impulses from the global startup and science scene and this, for example, you know, regularly performing pitch days for innovators and hear from them and potentially collaborate with those ideas over the years. And, you know, really this multitude of ideas in the end, in mindset, the moment is at least what what is doing the trick and is moving us forward.

Richard Johnson 22:20

Wonderful, wonderful. And it's great to see Lufthansa really seems to be taking a lead role in that. So thank you very much, Henry. So we've heard their synthetic fuel has a big future, hydrogen as an alternative emission free fuel source, but there is a requirement for different infrastructure which which needs to be taken into account there. We think electrification of aircraft is, is on the way, but primarily that's going to benefit more of the short haul due to battery limitations. And what a wonderful story about aero shark, the airflow taken from from shark skin. So I agree with you, the small innovations are sometimes the most exciting. So thank you very much, Henry, I'm going to ask you a couple of quickfire questions. Put you on the spot a little bit. So first and foremost, what would be your top travel tips for listeners to this podcast to be as sustainably conscientious as possible?

Henry Langer 23:14

Oh, yeah. I'd say try to pack lightly, even though it's difficult sometimes, but every garment kilo counts and reduces the fuel burn. Travel to the airport on a train, maybe even not on the same ticket. If your airline has a good intermodal partner. Well use compensation products as they come out and compensate your footprint in whatever shape or form and maybe choose the plant based food option while flying or at the airport.

Richard Johnson 23:49

Excellent. Thank you very much. And I would imagine in your role, you probably have to the fly quite a lot. So I can't let you go without asking what your best Honor Flight story is.

Henry Langer 24:00

Yeah, yeah, indeed. Obviously in this industry, we also spend some time in our own product and I think what I'm saying might sound a bit cheesy, but I think despite sometimes you know, using Wi Fi options, I usually really simply enjoy this feeling of disconnection that the flight can still provide you with so whether it's you know, just working on something that you know, without emails continue pouring in, or you know, this is a little bit of conversation that you have with your seat neighbor without you know, the feeling of either you or him or her being in a rush to get to the next meeting. I feel in the meantime that hasbecome quite a unique surrounding in place and that's what I what I still like about being in an aircraft.

Richard Johnson 24:50

Fantastic. Well, Henry, that about wraps it up for us. Thank you so much for the excellent conversation. For everybody listening if you're keen to find out more all about the future of travel and work from experts around the world. You can subscribe to business travel on the fly. It's available on Spotify, Apple Google Play or wherever you get your podcasts.