



EMBARK EPISODE #8: TRAVEL DATA IS HIDDEN TREASURE

AUDIO TRANSCRIPT

[00:00:00] **Jonathan Sullivan:** Hello everyone. And welcome back to the Embark podcast, where we talk about travel, technology, and trust. Today, we're talking about data. Well, today's theme is travel data is still a hidden treasure in many travel companies. And with me today, I have two special guests. First is Kiomi Spriestersbach from Lufthansa Group, where she's the head of data quality and data governance. Um, after building an amazingly successful career across very data-driven domains within the business, including programming, schedule management, fleet assignment, and ground operations performance management. And also have Sergiy Nevstruyev, who is a managing director in Accenture's travel business, who has focused on technology and data for his full career and technology and data in travel. And is also a good friend of mine, who I call on probably once or twice a day to ask some sort of technology question too. So thank you both for being here.

[00:01:04] **Sergiy Nevstruyev:** Thank you, Jonathan.

[00:01:06] **Kiomi Spriestersbach:** Yeah. Thank you, Johnathan.

[00:01:07] **Jonathan Sullivan:** So we spend a lot of time talking about data and travel, but most people -at least most of our listeners don't have a view as to how much data is out there. And especially for an airline group, the size of Lufthansa Group, Kiomi can you orientate us and give us some sense of the scale and the volume of the data that Lufthansa Group is trying to manage on a daily basis?

[00:01:31] **Kiomi Spriestersbach:** Yeah, sure. Well, I'll be limiting my answer to the airline operational data of the Lufthansa Group airlines. So this includes not only Lufthansa, but also Swiss, Austrian Airlines, Eurowings, and some other airlines. We have approximately 2,500 flights that are operated per day with approximately 350,000 passengers.

And to handle all the operations, which means check-in, boarding, fueling, and any other processes around the operation. We are processing over 3 million messages per day. So you can imagine that this is just a small part of the airline business. We have a lot more data, but this already can give an impression that we are really dealing with a lot of data every day.

[00:02:21] **Jonathan Sullivan:** Wow. That's like 46 messages a second. If my math is right, every day.

[00:02:27] **Kiomi Spriestersbach:** And only for operations, I mean, we have other areas like if you look at the booking area we're getting about 60 million passengers bookings per year. Every booking generates a lot of messages. I mean it's the initial booking, and then you have changes. You might order a special food. You might order special services, you might change your reservation. We have a Lufthansa Technik that is also storing a lot of parts. So they have a great inventory of tiny little pieces. And here, I don't have the exact figures, but you might imagine that it's a really, really large number of data that we are dealing with in the complete Lufthansa Group.



[00:03:12] **Jonathan Sullivan:** Yeah, I guess that brings me to your role, Kiomi. Many travel companies and airlines have set up specialist data departments over the last 10 to 15 years. And your role focusing on data quality and data governance is super interesting because of course across all of those messages, decisions are being made.

And the data has to have high quality and the right providence and governance around it for effective decision making. Can you tell us a little bit about the culture of setting that up and the collaboration requirements internally to ensure you keep high data quality and high data governance standards?

[00:03:52] **Kiomi Priestersbach:** Yes. Well, this data department has been set up beginning of 2021. So it's relatively new. We had all the data bits and pieces around in different areas, mainly also in IT. But now we decided to have this data department, especially to tackle all the issues on data. And it's a group function, that is responsible to set a clear target picture for the data strategy and the strategic roadmap for the transformation and the positioning of the Lufthansa Group with respect to data towards different stakeholders, for instance, suppliers and data providers, and also manufacturers. And, well, we have many different tasks to tackle. And it's a very interesting role because it, you need to deal with stakeholders all over the Lufthansa Group in the different business units on the business side, on the IT side.

And, the very good thing is that in the meantime, everybody has recognized that you can't work with, data without having governed and high-quality data. Data per se is there, but, if you don't really govern it, then you really run up in a mess. And, we have set for us different, objectives, which I would like to mention. One thing is to break silos. Because, it's happened in the past, that data has been somehow hidden because you felt it's your own treasure, but actually it becomes a real treasure if you start sharing it. You need roles and responsibilities like the data owner and the data steward in order to feel really responsible for your data, ensure that it has a high quality.

And when sharing data, it's also good to have some data experts who can give you insights into the data. So how you can really make good use of the data and analyze the right thing or do the right things when doing artificial intelligence. So really, it's a good thing to have this position for me personally. It combines my two passions aviation and data.

[00:06:09] **Jonathan Sullivan:** That sounds really interesting. And as you start to work through this and you've gone around the organizations and you're talking about breaking silos, and freeing data from within the silos, how are you driving the culture towards collaboration on data? What are some of the tricks that you use? What are some of the techniques?

[00:06:30] **Kiomi Priestersbach:** Well, interestingly, I don't really need tricks because all the employees already have noticed that working isolated on your own doesn't really bring you forward. I mean, to really create value from your data, you need to combine it. And if you're just, a swimmer in your own pool, you won't get any new insights. So you need to get to your neighbor's pool and then you'll get new insights.

And this is actually, something that is already happening within the company. So it's not that hard a task to get people to share data. Sometimes they are reluctant to do so if they don't feel that others are doing the right things with their data. So, it's good to have a data steward, for instance, that can give the information, how to handle data if it's really complex data.

But this is something, I think that's not that hard to overcome. It's sort of convincing people. There is already a lot of intrinsic motivation within all the data employees.

[00:07:38] **Jonathan Sullivan:** And Sergei when I've been around these kind of data projects in the past...



as soon as we start to evaluate and write down what happens when you start to combine this data in some of those use cases, eyes get very big, pretty quickly. How do you balance out the desire to get there fast with the roadmap required to build a strong data governance culture that allows repeatability and growth?

[00:08:10] **Sergiy Nevstruyev:** I think it's a very good question. And I think Kiomi mentioned it already. Everyone understands, let's say the importance of data and the strategic direction that goes with the data. What we see regarding your question. What we see is typically almost the opposite. Yes. People do understand let's say everything they can do with data, but a lot of organizations tend to see data as a binary thing.

And if I call it binary, what I mean by that is a misconception that you need to bring all the data together before you can actually start extracting any value from it. What we see happening, um, as a result of that is a number of big data platform programs that last forever, that cost a lot of money, and do not bring business value to the organizations that they actually expect.

So, as you mentioned previously, our experience and our advice to our customers is mostly, let's take a look at the data on a use case by use case basis. So yet let's put together the data that we need to achieve a certain business objective, let's think a little bit, but not too much about what we call the target picture.

So where should it be going uh in the future, in terms of the architecture, in terms of the processes, in terms of the governance, but only to the extent that is required to actually implement the business use case that we are looking at. And once we implemented it and demonstrated its value to the organization, things get much easier because people understand that, okay, I can achieve certain business results within a limited amount of time with a limited amount of money. I don't need to wait for years until my data platform is ready and I can actually start delivering the value, um, to my company. And I think, um, Lufthansa group is a good example of that as well.

We had a conversation with Kiomi and I believe there are a couple of very interesting use cases on how the Lufthansa group is doing that in an iterative manner as well. Right, Kiomi?

[00:10:13] **Kiomi Spriestersbach:** Yeah, absolutely correct. Okay. As you mentioned, it's essential to find the right balance between a well-defined and detailed concept with a long implementation time and actionism with no clear target on the other side.

So, what we do is identify valuable business cases, where we are able to act impactful. So, we have set up a data accelerator program, to speed up the output while we are measuring the success and value of these use cases, to reflect the outcome. And it's, very important then to invest sensibly, yeah. And, for instance, we had very interesting use cases that are helping on the other side to save costs, but also to generate profit or even to help to support sustainability.

For instance, we had a use case where we explored how much potable water do we need to carry on aircraft? It resulted that at the end of the flight, we had a lot of potable water left. So, we analyzed, can we maybe carry less portable water, thus save kerosine and CO2, save money, and then also help the environment? And in the end, it came out that with a machine learning forecaster, we were able to better forecast how much water is really necessary on what aircraft and on what route. And this is an example of a very good thing that can help us. And combining data from different areas can really bring up good and interesting insights. And it really helps us in our business, but also in our sustainability.

[00:11:58] **Sergiy Nevstruyev:** Thanks.

[00:12:00] **Jonathan Sullivan:** Interesting. Interesting. And when you start talking about a use case like, like that, where you're mixing together, operational data, some sort of demand



data around the customer loads, aircraft routing data where you've got catering, touchpoints and, and other things to, to refill the aircraft.

I imagine there's lots of different people that need access to the data and the pieces to pull that together. Can you tell us a little bit about how you manage that and how you help pull it together?

[00:12:29] **Kiomi Spriestersbach:** Well, it's not only about accessing and owning data. Also first, you need to create transparency about existing data, actually. And promoting then the data sharing attitude that I mentioned before because if it's not transparent which data is available, you wouldn't be even in the position to ask for access, to this data.

So I think we need to have this as a first step. And, um, of course then the access to data needs to be as seamless as possible. We need, of course, to always consider the regulations like a PII data that needs to be on a confidential basis. Also, we have other company confidential data that must only be disclosed to certain employees. But other data actually, could be shared more openly. So what we are now doing is: we are starting a data classification to identify what data could be made accessible to employees without any further approval workflow. Because at the moment, nearly all systems have an approval workflow to get access to the data.

But actually, it could be a relief if you just by being an employee of Lufthansa Group had access to the data. If there is no other regulation prohibiting this access. So, um, this is something we are doing in order to support easier access. And then also save time in not having to run through an approval process.

[00:14:02] **Jonathan Sullivan:** Yeah. That reminds me of maybe my elementary school, where I didn't realize that the library had a card catalog and I could go in there and get whatever book I wanted, as long as I had permission to spend some time in the library. And it'd be nice if, in a lot of companies, instead of needing to individually, get to know each data set and then ask for permission, there was some sort of broad

card catalog of sorts that would allow us to ask a question. Perhaps...maybe the data already exists, and I can access it. Just try and solve my problem without having a hundred percent of the knowledge of the people that generate it.

[00:14:39] **Kiomi Spriestersbach:** Yeah. Exactly. We are also looking at how we could implement a data catalog in a sensible way.

I mean, a data catalog itself doesn't solve the problem. As you mentioned, if it's there and nobody knows that it's there, it doesn't help you really. So we need also then to set up the catalog in a sensible manner, and train the employees, on how to use it. And also have the data up to date. I mean, if you don't have the accurate data available, then also if a data catalog it's not re currently scanned and automatically updated, yeah... then it's senseless. And it doesn't really help. And if people try to find something in the data catalog, and they're not successful one or two times, they will simply not use it. So the introduction of such a data catalog must be well planned and, uh, people must be trained to use it according to their role. I mean, a data analyst will have other requirements, then a data steward. But all the target groups must be addressed then individually in order to make the implementation of a data catalog of success.

Jonathan Sullivan:

Yeah. So I wanna switch track a little bit and talk about data and automation and the employee experience.

So at home, at least in my home, Siri is almost a member of the household. You know, she answers lots of questions. Does lots of work for us, and I'd love to have Siri join me at work, but she doesn't really do anything within the Accenture world. And how is it that we can start to drive both data and automation to improve the employee experience, and specifically within Lufthansa Group, what are you thinking of doing there?



Kiomi Priestersbach:

So, yeah, for instance, we have recently implemented a fast compensation platform where customers can select a way they want their compensation. Be paid in case of irregularities. And do no longer have to involve a sales agent. So at that point, we have a win-win situation because, on the one hand side, the customer has a more seamless experience and can get the money back faster. And yeah, the sales agent does not need to listen to a customer, tell him in the banking code, and maybe run into errors, and then you really get in into a mess.

So this is one thing where we really want to have our employees doing sensible things, but not useless tasks that can be automated. Another thing is that we have a joint development of an operational decision support suite with Google to increase operational efficiency, customer satisfaction, and sustainability.

And in this platform, we collect data from various units and processes within the companies as passenger itineraries, aircraft assignments, crew rostering, aircraft maintenance. And then, we have a system logic inside, which I can't disclose. But um, then scenarios are calculated and offered to the employee.

And so he can decide which scenario to choose depending if we want to optimize or on costs or on benefit or on operation stability and keep the operation as stable and as efficient as possible. So here also, in former times, the employee had to set up scenarios by himself and try to figure out, okay, what could be an optimum? Now he's offered scenarios with key decision support and can really concentrate on finding the optimal solution for the company.

[00:18:38] **Jonathan Sullivan:** Interesting, interesting. And for jobs, like "what happens in the operations control center"? I'm sure having a lot of that precalculated or ready, calculated gives a big head start in decision making, and you've seen big quality improvements in those kinds of decision.

[00:18:55] **Kiomi Priestersbach:** Definitely. I mean, at the first time, people are somewhat: "okay, well, I know how things work and I have my gut feeling." But after having experienced

that these solutions offered by the system are really good ones; they also trust in the solutions offered. And they're really happy that they have such a good decision support system.

And, I mean, this example shows that, AI and automation can be used to enhance the employees' experience, improve the efficiency and reduce costs. But what is important also is that it won't replace human workforce. Some colleagues were also frightened about losing their jobs because there's now a machine doing their work. But no, it is not. It is just supporting them in improving their workforce. And that's what is also important, I think, when talking about AI and automation, it can't replace the human workforce. It can just support it.

[00:19:50] **Jonathan Sullivan:** Yeah. And these are some heavy-duty problems that you're using data to try and solve. Sergei, can you give the audience a little bit of a point of view on what some of the major challenges are to scale data, to solve those big enterprise-wide optimizations or enterprise-wide analytics problems?

[00:20:13] **Sergiy Nevstruyev:** Talking about scalability, kind of wakes up the technologist in me. So thank you for this question.

And in fact, if we look back 10 years or even five years, when we talked about scaling data and analytics, we mostly talked about scaling technology. So the challenge that was in front of a lot of organizations was: can we get enough storage? Can we get enough compute to actually perform the activities that we would like to perform in our data? And can we actually afford it? What I personally see, in the last two to three years, we are not. Discussing these questions anymore, or at least not so much because the reality is: you can get the storage, you can get the compute and you can actually afford it. And you can scale it up and down with cloud technologies and the way you want.

However, what we are facing right now is a different set of problems that you can still to the question of scalability. And this is closely related



to what Kiyomi was saying previously. Even if I had a great data and analytics function within one part of the organization, how can I actually scale it across the entire business, especially a complex business?

Like Lufthansa Group with different business units, different countries, different cultures, and different technology solutions in place, at least in some of the areas. The second question is then, even if I succeeded in scaling it out into my organization, how do I actually make sure that I can scale the talent that I need to perform these activities? Because even if your Siri is more or less doing everything on its own. In reality, there are people behind it who need to train Siri, who need to perform, let's say the testing with machine learning, and so on and so forth. So if we talk about the scalability of data and analytics today, we are focusing on these let's call them soft aspects in terms of the organization, in terms of the people, and in terms of the talent that is actually needed to make this successful within an organization. And I believe also within the Lufthansa Group, there is a number of activities, to address these questions. Right, Kiomi?

[00:22:33] **Kiomi Priestersbach:** Absolutely. So data quality and governance is just one aspect of, our data efforts. We have another one and this is what you mentioned, the data community. So every employee that is working with data in whatever position it is, or even people that are interested in working with data, but simply lack literacy.

So we need to teach them how to work with data. And also... yeah for the future: I mean, we have the baby boomers slowly leaving the companies. So we need to attract and enforce data talents in order to keep pace. And also in the data work. What we have been doing now is to set up a group-wide data community for the extensional house.

So, we are really regularly now meeting, well in person, if the pandemic situation allows, to foster also the networking. Because, sometimes, data people feel like: "oh my God, am I the only one having this and that problem?" But if they get in touch with others, they see: "oh, well, others have often the same, issues and we can collaborate and solve better the problems.

And it's also good to have exchanges across business units, like one colleague from Technik working together with one from the cargo business area. They have different business models. However, on the data level, they might have the same issues. And it's always good to have them connected. And in my position, developing the data quality and governance standards, it's also a collaborative task. Because I'm always working with the representatives from the different business units and we are jointly defining: how do we want to work with data? How do we want to share data? How do we want to regulate access? How do we want to set up the responsibility?

So it's overall, as Sergiy, as you mentioned, there is no discussion on technical issues. It's just on organizational issues and how we govern our data.

[00:24:38] **Sergiy Nevstruyev:** Maybe, to add to what Kiomi just said: we had a number of projects, Jonathan, with some of our clients that were purely focused on the question: how can a travel company attract, retain and grow talent in the data and analytics domain? The reality is, these people are rare in the market and if they're looking for an opportunity to progress their career, a travel company, or an airline is not necessarily the first place they would look for. They would rather look at Google. They would rather look at Amazon. And what we did was really working with the HR department on defining a career path and the set of potentially different benefits for people with this skill set, to be able to attract them. And even more importantly, retain them in the organization and show them what kind of progression a person who is dealing with data and analytics can have within a travel company.

[00:25:37] **Jonathan Sullivan:** Well, I mean, let me just go on the record and say that travel companies are great places for people who love data to play. There's so much different kinds of data used in, optimizations and planning decisions every day, all day, that, that job will forever be there.



[00:25:56] **Sergiy Nevstruyev:** Couldn't agree more.

[00:25:56] **Kiomi Priestersbach:** Absolutely. I mean, as I mentioned, my two passions, aviation and data.

[00:26:00] **Jonathan Sullivan:** Exactly. Speaking of travel companies and data, I get asked to provide my data a lot. Kiomi a lot to different airlines and sometimes to Lufthansa, but I don't really get anything in return that I sense and feel. What's going on with my data? What can I get back?

[00:26:20] **Kiomi Priestersbach:** Well, we're working on really making you sense that you're getting something back.

Actually, well Lufthansa Group as you know, there are different airlines, like Lufthansa, Swiss and Austrian Airlines to name the three big ones. And all of them ask for your data on an individual basis. So, you were asked by Lufthansa you were asked by Swiss, you were asked by Austrian Airlines. You were contacted from three different corners or more.

And there was no central customer profile management actually. Up until now. You can register with a Lufthansa Group travel ID. And then, your data is centrally stored and you won't get bits and pieces of information or offers.

We can better serve you with providing you the right offers at the right time. For instance, upgrade options when you're at the gate; baggage claim information when you're on route. And all the things can help to have a more memorable travel experience.

Another thing that I would like to mention is if you're a Miles & More customer, I don't know if you are, but we have now launched a prototype for a redemption recommendation. I mean, it's sometimes hard to find a redemption flight because you're looking for maybe a route that is really demanded. But on the other side, we have open capacities.

So what we are now doing is, we are trying to indicate you nice destinations that you might consider. And there you would then be able to

redeem your miles, and you wouldn't have to Take the task of looking for flights, but you will be presented the flights like sort of on a silver tablet.

[00:28:20] **Jonathan Sullivan:** Wow. That sounds a lot better than me querying the system over and over and over again, to find the flights that work and that it fit within my budget.

[00:28:29] **Sergiy Nevstruyev:** Yeah. Maybe, to complement a little bit what Kiomi just said. I mean, working in this industry and being a frequent traveler myself, I do feel the pain, a little bit of people asking what's going on.

And I think it links a little bit to this use case driven mentality that we were mentioning previously. Because in my experience, a lot of organizations are very hesitant to start using customer data as long as they do not have the magic 360 degree of the customer. But the reality is there are some very simple use cases that do not require a lot of data, but deliver great benefits.

And I was extremely happy, when couple of years ago, you know, Lufthansa group introduced, just give me your mobile phone at the check-in and that will notify you about everything around your trip. It doesn't matter where you booked it. It doesn't matter if you have my app, just give me this small piece of information.

Yes, you are revealing your personal information to me, but I'm giving you something in return. And I think in our experience combining this use case driven approach with, what we call the design thinking or the customer experience definition gives you these opportunities to really make sure that the customers get a great return on the data that they provide to the company.

[00:29:54] **Jonathan Sullivan:** Sounds interesting. Sounds very interesting. Well, how do we bring it all together? And Sergiy, you were sort of hinting at this before, but, cloud makes it a lot easier to scale to meet some of these



challenges at a reasonable cost. How do we start to bring it together across the different clouds that exist- both between us and our partners and airlines and make it real?

[00:30:22] **Sergiy Nevstruyev:** I believe, in today's connected world, there is no other option, but to collaborate in a sense of a data ecosystem, so that the times where your data alone was sufficient, are over from my perspective. At least if you would really like to offer your customers something in return for giving you the data.

And I believe, a lot of organizations, including Lufthansa Group have recognized, this opportunity to work with partners. Be it as Kiomi mentioned with Google in the operations space, be with other partners in the commercial space. And the more partners you have, the more difficult it is to bring all of these different bits and pieces of data of your own, but also of your partners into, let's say a coherent single model that actually allows you to implement these use cases across different domains that are bringing the most value. And this is where I believe cloud is, not even beneficial, but almost a prerequisite to making that happen.

Because it's very, very difficult to connect all of your different partners with the data that you have on-site and then start deriving results from that. And if I'm not mistaken, Kiomi, I believe Lufthansa Group is also heading into, let's say the same direction, working with different partners on different domains, but then bringing the data together, on a cloud to realize the benefits from analytics.

[00:31:51] **Kiomi Spriestersbach:** Yeah, absolutely correct. Sergiy, I think it's also important to say, well, there is not only one cloud. We will always see different clouds depending on what collaboration you are facing, and on what you want to achieve.

So, yeah, cloud definitely helps, to scale up things to collect and assemble data that has been stored in different environments. Be it legacy data warehouses, be it an Excel spreadsheet, or whatever data that you want to combine. Also, clouds can support in combining structured and unstructured data.

And it's also one advantage we do have now with this modern technology: that we not only rely on structured data, but we can also work with unstructured data, which can give us even more insights. And it's important also to say that it's always a collaborative approach between the IT and the business.

So, we are no longer having this silo with IT on one side and the business on the other side, having battles one against the others, but, it's an equal partnership. And it needs to be always collaborative on both sides. And it's always also good to have IT- minded people on the business side as, as well, having a business-minded people on the IT side then, to make this a success. As mentioned before technology is not the only thing. We also have to think about the human factor in all of this. Technology alone doesn't solve our problems.

[00:33:27] **Jonathan Sullivan:** Super. Well, I'm, I'm excited about what the future's going to bring. And, and Kiomi, I'm a little jealous of the work that you get to do every day, just to tell you the truth. It sounds like fun. You get to play in a playground of amazing data in an airline.

I'd like to thank you both very much for, for participating in the podcast today. It's been insightful for me. I've learned a lot, and I hope our listeners are as well. Thank you.

[00:33:53] **Sergiy Nevstruyev:** Thank you, Jonathan.

[00:33:53] **Kiomi Spriestersbach:** Thank you, Johnathan Thank you, Sergiy