

Episode 12 Airport Logistics

Length of recording: 28 minutes

Transcription notes

I:	Interviewer
R:	Respondent
S:	Speaker
wo-	an unfinished word
(word)	an uncertain passage in speech or an unrecognised speaker
(-)	an unrecognisable word
(--)	unrecognisable words
[pause 10 s]	a pause in speech of at least 10 seconds
, . ? :	a grammatically correct punctuation mark or a pause in speech of less than 10 seconds

S: The Operations Leadership podcast with Gautam Basu provides insights for today's business leaders on creating value through operations improvement, process excellence, digital innovation, and organisational leadership.

I: Our guest for this episode of the Operations Leadership podcast is Markku Kuula. Markku is the head of the information services management department and a professor of logistics at the Aalto University's School of Business. This interview is all about airport logistics, some of the factors that are influencing and impacting the industry as well as some of the trends of digitalisation that are influencing the air cargo operations. If you like what you're hearing with this podcast series, we kindly ask you to hit the subscribe button. And without further ado, here is the interview with Markku Kuula. Enjoy.

I: Hello Markku and welcome to the Operations Leadership podcast.

R: Thank you, Gautam. It is good to be here.

I: Great. Could you tell us a little bit about your background and experience and role at Aalto University?

R: I have been around Aalto University more than forty years. First as a master's student. After that, a doctoral student. Then, I think that it was -93 I doctorate. And before that I already have been here lecturer in management science and then I get the position of CIO for business school. After that I have been professor in logistics. Very soon after that I think that 2002 or -03 I was also the head of the department of information and service management.

[02:07-02:09 side discussion]

R: And currently I am also holding the position as the head of the Professor Council for whole the Aalto University.

I: Okay. Very, very experienced and sounds like you are a lifer at Aalto University. Very good. I also know Markku that you are an expert in airport logistics. So, could you enlighten us a little bit on the topic of really the key elements that make airport operations efficient and effective, in terms of maybe cost or service level or turnaround, either cargo or passenger traffic? What are the key elements that make this airport operations effective?

R: If you look at the airport operations in whole, first of all it is crucially important to Finland, and also matter other countries, but especially Finland. We are like an island in somewhere north. And if you look at the effectiveness of the airport services, it means that the airport should be planned so that they are able to take care of the big passenger flows, and how it is built up it's also helping air companies to operate there. But as we know, the passenger traffic is only one part of the business of the air companies. They have also to be able to handle the cargo, and cargo is always under the passenger seats. So, the same plane, when going to somewhere, is taking full load of passengers, but also it is very crucial to them to get good load of cargo. And how the airports are then planned how to fulfil that, there should be possibilities to have easy way to handle the cargo same time when you are loading also the passengers and their packages and luggage and so on. So, how it is handled, it is somehow optimal also, for example, in Helsinki-Vantaa.

I: Right. And I guess there's multiple folks or companies within the ecosystem. There's a terminal operator, there's the airlines, there's also the cargo and the passenger, let's say, crews to help turn around the aircrafts. So, it's like an ecosystem, isn't it?

R: Yeah. This is correct. And if you look at, for example, Helsinki-Vantaa, there are the ground operators; there are several of them, not only one. And then, of course, there are several air companies working there, so there has to be also spaces for each of them and how they then able to use their own equipment there, and so on. Now they are not pulling the equipment. Every operator do have their own.

I: Okay. That's interesting because it would make sense to pull some of the equipment to gain some of the efficiencies if you look airport-wise. Wouldn't you agree?

R: Yeah, I agree totally. It's important to understand the needed space, for example, close to entranceways or where the parking areas are for the airplanes. If there are too many operators and too many fleets of different devices, of course it is more difficult. And currently one of the big problem or issue is how to make the operations more sustainable and maybe also to electrify, for example, the devices there.

I: Right. And that leads me to my next question is, what is your view on the current state of airports here in Finland and even globally due to multiple factors? Of course, we are now recovered from the Covid, but there is the post-Covid elements. There's also, right next door, the Russian situation with the Ukraine that has affected some of the routes here in Finland. And now you just mentioned sustainability. So, how do you see airports and the whole ecosystem? How has that been impacting based on all of these different factors?

R: I think that post-Covid situation is challenging because now all the airports in Europe are coming back to the normal. What is the normal? It is always the question, but, still, the volumes are already now very big and then we have still problems with some Covid situations, for example, how to take care of the travel from China to Europe. There are coming new Covid variants from China and, also, from USA. Should we have special treatment for them or not? It is under debate currently. But, still, I mean that the passenger flows and cargo flows are all the time increasing. And we are almost already in the situation that we had before Covid, not maybe in Finland but European (-) [08:18]. We are looking the airports there. The Finnish speciality is the Russian situation.

I: Right.

R: Helsinki-Vantaa used to be the closest airport from European community to Chinese or Japanese or Korean cities. Currently, it is not anymore the case. We have to round Russia. And this affects, of course, to the cargo flows in Helsinki-Vantaa, for example.

I: Right. So, that was really the northern route that was used and that went through Russia. So, how are the planes being routed now, previous to the geopolitical situation? How are they routed now, and what is the impact, for example, on the lead time?

R: Yeah, this is depending on the route. Some of the planes are going to the northern side, so North Pole and then to Japan or Korea. And the other routes are going under the Russia. And it means that they have to fly southern route. Now it is also the situation that more and more the Chinese airports are opening, and then there are possibilities to fly also there.

I: Yeah, so I guess, as you mentioned, that, in Europe, Finland was the hub because of the close routes taking the northern route to Asia. And now because of the situation, they're having to reroute these aircraft, and it's creating lots of longer lead times so the competitive advantage maybe threatened.

R: Yeah, this is true. It's thought that before Covid, Finnair was the only air company in Finland that had the possibility to fly far east and come back in one day time.

Currently, it is not anymore possible. It takes some fourteen hours to fly there, and before Covid it was less, much less.

I: Okay. Yes, that's a bit of a shame because that was a competitive advantage for Helsinki-Vantaa. Maybe switching a little bit to different topic, could you explain a little bit of what the role of digital and advanced analytics would be in airport operations?

R: This is important question, and how the air companies could use the digitalisation more. Actually, they are using already quite much, but the problem is that their IT-systems are not, still now, connected to, for example, their customers or freight forwarders, et cetera. And because of that, there are a lot of manual work in between. However, it is to remember that the passenger side has been already tens of years almost totally digitalised, and now the problem is in the cargo side.

I: Right. Yes, I can imagine that the passenger side was much more mature on the digitalisation. Now the cargo side is starting to catch up. What are the interesting technologies or analytic solutions that you see being employed in the airport sector?

R: I think that the most important would be first of all to get, for example, all the air-cargo-related documents digitalised, so that the flow of the documents would go smoothly from one point to another point. And this is difficult because there are so many actors. If we look at, for example, only the authorities. If we are looking the air cargo, it is first, in Finland, we have customs, we have police, we have –

I: Tax.

R: Yeah, many other places. But it is also (in the other hand) [12:58].

I: Right.

R: So that there should be easy way to transfer the papers or documents in electronic format.

I: Right. And this would be things like airway bills and whatnot that has all of the information there on the cargo that's being shipped.

R: Yes.

I: Yes. And do you see, for example, technology such as a block-chain based technology being utilised for this exchange on a distributed ledger, perhaps, for this purpose?

R: It could be one possibility to make it more secure. I mean that you are not able to change anything if it is that kind of block-chained based system. However, block

chain is at the beginning, not necessarily the first thing to develop. Might be that it would be much better to concentrate on the API's and uniform a little bit the airway bills and maybe the other modes of transportation.

I: Right.

R: Because the cargo is many times coming from trucks to Helsinki-Vantaa, for example. Or vice versa: it is transported from the airport to middle Europe using first truck, then ship, and then maybe truck or maybe railway. And all of them have own documentation.

I: Right. And what is the status of, for example, this IATA, this International Air Transport Association, with the standardisation of an airway bill? I understood there is like fifty-three or fifty-four elements there that need to be there from the shipper and consignee to the wait and this and that. But is that now on its way to be standardised?

R: Sort of, yes. It is not yet done, but I mean that, for example, Finland is not the only country that have the same problem. This is global problem, and then there are many initiatives. For example, European community has had their own initiative to really digitalise that kind of documents. And then there are some businesses that are also doing it or trying to do it and so on. But it is work that is ongoing all the time.

I: Right. Because you mention a little bit about the passenger versus cargo operations and, let's say, the maturity of digitalisation, when do you think the cargo operations will catch up to the, let's say, passenger traffic? Do you see that evolving quickly, or there's many years behind, or how do you see that?

R: I would like to see it happening soon.

I: Okay.

R: However, there are so many players and so many different areas where the airlines are working. For example, China-Europe, Europe-USA, USA-China, et cetera. And all of them have their own initiatives. I think that to unify them, all that kind of things should go via IATA or some other organisation. IATA is active, but then there is also – how to say? – conflicting interests between different actors or countries and so on.

I: Right. It sounds like a bit of a standards issue. So havi-

R: Yeah. And, actually, whose standards we are willing to follow. And everybody agrees, or mostly it is agreed, that there exist problem.

I: Okay. There is a problem, but how we go to solve it, I guess, people have different opinions about that. Well hopefully that will get sorted. Maybe moving on to a different question. I understood that there was a project from Aalto University and some of the master's students. It was around the managing or planning the material flows within the Helsinki-Vantaa. Could you tell us a little bit more about that project, and how the students actually engaged with the airport?

R: The project was done last year, and we had a very good, three-people student group who get the assignment from Finavia. Finavia is operating the Helsinki-Vantaa Airport. And the problem was that, first of all, there are now big renovation inside the airport, and then our students were looking how the material flows of different actors inside the building is working and then also looking that, what should be done to make it much more smooth? And they saw that the shops and cafeterias inside the airport building, they have a little bit different objectives what to do and what kind of material flows they do have. For example, book shop or the kiosks there, their material flows are much less than, for example, the big restaurants there. And then there are material flows that are coming in, but there are also the reserve way. They are sending back the empty bottles and trash and so on.

I: Right.

R: And then looking the distances also, the whole airport building I think that it is something like a little bit less than one kilometre long. And how to travel there and how to then select the correct doors or ways to go out, and then same actor may have different places their own cafeterias or so. Should they serve them same time or make different material flows or so? And then to make it a little bit more easy, the students had also to investigate that, where to store? The companies do have also somewhere else than in their own shops inventory places or warehousing possibilities. And then to make it also a little bit more simple, some of the goods should be stored in spaces where it's cooling possible, and some of them don't have it. And always there is tardiness of that kind of spaces, and how to then Finavia is offering the spaces to different actors. I think that the students were excellent. They made very good work there, first describing the ways and then finding the bottlenecks where the flows are not working the best possible way and then also to find solution: What should the companies do to get the material flows working? Of course, there is also the problem that it is secured area, whole the airport building. All the cargo that coming there should be controlled. You are not allowed to bring whatever there, and that's why the security company is also watching the material flows.

I: Right. How long was this project?

R: It take some, if I recall correctly, two months or two-and-half months.

I: Interesting. I think this is a nice way for, let's say, some of the master's students to get some practical, real-life knowledge of these operations. So, that's great. And I also saw there was a bit of press and good feedback on this project. So, good stuff. How do you see the role of airports evolving in the next five years?

R: I think that their importance is all the time growing, and then, for example, now Helsinki-Vantaa is still in a good position. Why? It is because the European big airports, like Heathrow, Amsterdam, Copenhagen, Frankfurt, et cetera. Their problem is that their capacity is full. They are not able to take many new airlines or cargo things. In Helsinki Airport, it is thought that you can handle the cargo much faster than in the other airports. And if the digitalisation is advancing, it would be also possible to shorten the time that is required inside the airport. I mean that the customers could already make all the declaration or the companies (with the) [23:37] customs make the declarations when the plane is flying, and only in that kind of control purposes they might make some sampling and look at all the cargo that is in the documents are really there, and there is nothing extra. Nowadays, they have to wait a little bit before they can go further from the gate, but in Helsinki already now the cargo is passing by the control much faster than in many other airports in Europe. And this is, of course, an advantage for the airport, and Helsinki is big enough to handle whatever kind of airplanes there are coming and going.

I: All right. And I guess that would give a competitive advantage if the turnaround times are quicker in Helsinki, especially that there's still capacity available. Good. And maybe a final question is that, as you're the head of the department at information service management and, also, very active in the logistics-and-supply-chain field, is there anything that you want to say to, let's say, potential operations leaders or, let's say, potential folks that want to apply to Aalto?

R: Yeah, I mean that we have different type of offerings. For example, at the master's level and bachelor's level system is working very nicely. We are actually expanding our offering all the time, and, also, in-tech is growing. So that now our department is one of the most popular departments in whole business school, and it is because of the digitalisation, artificial intelligence, and information systems, and logistics or supply chain related work possibilities also. But then we have also new offerings in life-wide learning side. And it could be very good to also look at our offerings and look at how to be able to get more information and maybe to take only one or two courses from our offerings.

I: Great stuff. So, there's not only for the masters-level students but also for executives as well that want to continue their life (-) [26:31] -

R: Yes, and then, of course, we have the doctoral-level system, but it is only for some people. It is not mass-production.

I: Got it. All right. Excellent. Thank you very much, Markku, for your time. Take care.

R: Thank you, Gautam.

I: That's it for this episode of the Operations Leadership podcast. I'm your host Gautam Basu. If you like what you're listening to with this podcast series, then please hit subscribe. And until next time.