

Interview at the Economic Development Frankfurt GmbH (municipal) on pedestrian counters

White: can be easily skipped when reading the interview in the context of the workshop, but feel free to read it for more context or interesting new discoveries

Yellow: more interesting parts

Green: most interesting parts

RESEARCHER [00:00:02]: Okay, then the recording is running. Just to confirm for the recording: are you okay with us making an audio recording of this interview?

PARTICIPANT [00:00:10]: Yes, I'm okay with that.

RESEARCHER [00:00:14]: Ah, wonderful. (.) Um, I would like to start by talking about your job. Maybe you could describe what you do here at the Economic Development, how you work with pedestrian traffic. Yes, that. Feel free to answer in detail. It's all valuable for us. I'll keep an eye on the time so that we stay on track, but I'll let you know.

PARTICIPANT [00:00:34]: Yes, just interrupt me, yes. Um, so I am a project manager [...] here at the Economic Development Frankfurt. (.) [...] (.) Um, in my current role, I focus on the city development strategy Smart City. (.) And that includes, in our department, pedestrian traffic. (.) Um, because we think, how can we leverage electronic, um, features, I would say, to support our work here through data, through content. (.) And to make ourselves useful, um, with digital tools for decision-making in the areas of urban development, planning, and economic development. And that includes pedestrian traffic numbers. (.) [00:01:36] **How do we use all this? We actually analyze it week by week. So, it's something that runs in the background. Um, every week, we retrieve the data from the previous week on an hourly basis. And we analyze this data based on retail-relevant pedestrian traffic. So, we look at the traffic between 10 am and 7 pm. To be honest, the rest doesn't interest us. We look at the whole thing from the perspective of retail. (.) And for us, it's a kind of early warning system. (.) So, we look at how things are developing.** Um, are there developments that we need to take a closer look at, where we need to examine the background? And where we, as

a city, as an economic development entity, need to be active because we notice developments that could harm retail. [00:02:36] Um, at the same time, we also look at what events, what developments in the city that we undertake, have an effect on pedestrian traffic. (.) And, um, if we have events, um, whether these events have the desired effect, whether we would continue them in the future. Or whether it was ultimately perhaps a one-time pilot event that did not prove successful. So, for us, these are really data that we constantly examine. First in the background, and from which we then derive active action needs.

RESEARCHER [00:03:20]: So, in this context, urban development is not about infrastructure but more about events, culture?

PARTICIPANT [00:03:27]: No, we, um, we, as a competence center for urban development and planning, are ultimately an internal service provider for economic development. So, we have many competence centers here, I would say almost all of them, except for the administrative area, have direct contact with companies in Frankfurt through us, advising the companies. We have business consulting for small and medium-sized enterprises, then an industrial department, a creative industry department. We, in urban development and planning, form the basis or provide a basis for all these competence centers. (.) By supplying data. Meaning, when the business consulting holds an event, for example, we provide data afterward and say, here, this and that was the effect. Or if we see in the retail sector that there is a need for action in a certain area, then we point it out to the business consulting and have discussions with them here, whether we can, want to, or need to do something.

RESEARCHER [00:04:32]: What kind of actions, so what do you do, what is it about, and what kind of events? I can't quite imagine it concretely right now. (..)

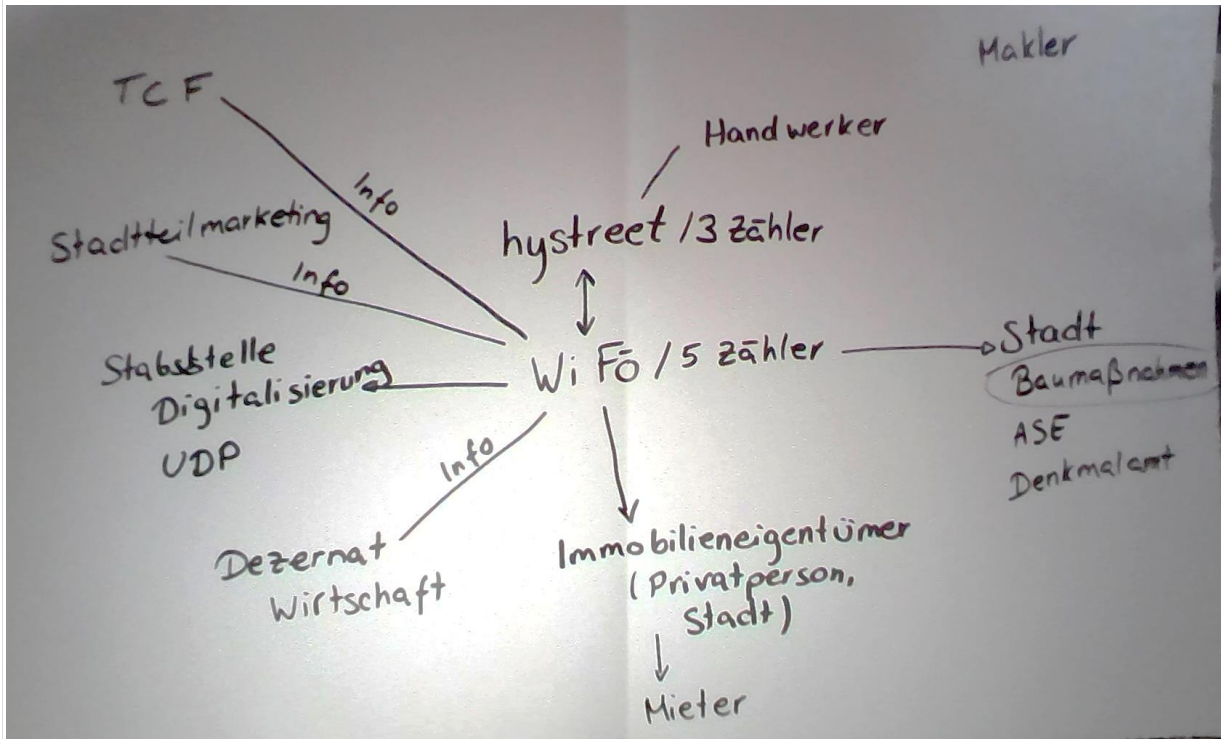
PARTICIPANT [00:04:44]: Maybe "event" is the wrong word. So, we now look at, for example, what is the effect of the Christmas market. So, it's not that we in economic development organize the event ourselves, but what is the current effect of the Christmas market. Is it bigger than last year or smaller? When we have an event or other events at the Römer, when we have events on the Zeil, so when I say "we," I might always be talking about the entire city. The Tourism and Congress GmbH does

a lot, and we are also in contact with them so that we simply know what effect it has. (..) Maybe an economic development event that we have had in the past few years, but it's also unclear whether it will continue, is "Frankfurt am Start." That's a trade fair that takes place in the neighborhoods, and you could, for example, also see if it has an effect on local retail, if we conduct it on a street like Schweizer Straße. (..) [00:05:45] So, you can also refer to something like that. (...) Another example, perhaps unrelated to events, would be a political discussion during Corona, and we are then also a bit in the traffic sector, which is surely interesting for you. (.) There was, when the stores reopened during Corona, I don't remember which lockdown it was, but the stores reopened, there was a political discussion about public transport prices. (..) And whether we should reduce these prices to bring more people into downtown Frankfurt, to provide incentives for a few weeks. (..) We, as economic development, and it may sound strange at first, spoke out against it. Namely, because we could prove through the pedestrian traffic numbers that there were already as many people in the city center, or even more, than before Corona. (.) [00:06:54] This is demonstrable in that the pedestrian traffic counter on the Zeil, we have eight in Frankfurt by now, and the one on the Zeil was already there in 2019. So, we had a reference to before Corona and could say that the problem of sales, the retail sector had said, the sales are not at a pre-Corona level. We need to readjust, and the level of sales, the issue was not the traffic on the Zeil. (..) Why people, customers either don't go into the stores or leave without buying, or the cash registers are lower than before, we as economic development cannot assess. What we can assess is that the number of people on the Zeil is back to a pre-Corona level. So, we spoke out against reducing public transport prices and ultimately led the opinion correspondingly in the discussion, and there was no reduction in prices.

RESEARCHER [00:08:12]: Interesting. The Economic Development is a GmbH, but does it belong partly to the city or to the city? I haven't quite figured that out.

PARTICIPANT [00:08:19]: We are a wholly-owned subsidiary. So, we are a GmbH, but 100% municipally funded. (..) We used to be, but that was some time before my time here, municipal, not a GmbH. However, for legal reasons, it was then decided that we should be outsourced because, in some areas, we would probably have better leeway or it would be easier. (..)

RESEARCHER [00:08:51]: Okay, yes, that helps me. I would now ask you to sketch a network around pedestrian traffic. So, who installs the counters, who decides where they go, who pays whom for it, where do the data flow? So, everything that comes to your mind, write it down. It doesn't have to be complete, and feel free to think out loud and say what you're drawing and why. (.)



PARTICIPANT [00:09:15]: Okay, so the pedestrian traffic counters are provided by the manufacturer Hystreet. That's who we commissioned. [...] It's a company from Cologne that had already hung three counters in Frankfurt before we even used pedestrian traffic counters. That's once on the Zeil, so that one already existed before Corona. Then it's the Fressgass, so it should be the Große Bockenheimer, and the third is on Goethestraße. (.) The three were already hung before, and we approached them and asked if we could hang more in cooperation. So, completely responsible for the three counters is the company Hystreet from Cologne. Then we, as Economic Development, are the ones who approached Hystreet and said, here, we've started a discussion, we would like to hang more counters. How does it work? What do we have to provide for that? How is it with installation? How is it with the costs? (.) [00:10:35] While they, I'll just write a 3 behind it, are responsible for the three counters, we are responsible for an additional five counters in cooperation with Hystreet. (.) Saying who is responsible for these five counters is a bit difficult. We have the cooperation with Hystreet, meaning

they provide the pedestrian traffic counter, the laser scanner. Everything around installation is organized and commissioned by them. So, they have, I would say, the craftsman on hand who then hangs the whole thing. (..) And then we also have the property owners, who must give their approval for the pedestrian traffic counters to be hung on the property because all eight counters are attached to buildings. [00:11:48] Either on the roof, on the wall, depending on how it was individually solvable. (.)

RESEARCHER [00:11:56]: Are these contracts that also have a term? (.....)

PARTICIPANT [00:12:04]: I don't know if they have an expiration date. They are certainly terminable. But that is half-knowledge now. I wouldn't rely on that; I would have to look into it. With the property owners for the five counters, the communication went through us. (..) And it's interesting again because property owners sometimes mean private individuals and sometimes the city. (..) So depending on whom we had to contact, we did so accordingly. Behind the property owners, there is partly or in one place still a tenant. (..) The tenant is connected again because we need a power connection. And this power connection is in one place in an apartment. So, the tenant had to be contacted accordingly. **And if the counter ever fails and needs to be restarted, Hystreet informs us. [00:13:10] The counter is not working right now. We inform the property owner, and the property owner informs the tenant to please unplug it. That's the extreme case. (...) If it could be solved differently, of course, no tenants were involved, but it had to be done accordingly. (...)** Then we definitely also have the city on the side with its various offices when it comes to hanging this counter. (..) Because usually, to attach them to the house, you need a lifting truck. And to set that up, you need permission. (..) Meaning, we, in turn, submitted a permit to the city for construction measures. (.....) [00:14:12] At that point, it should be the Office of Road Construction and Development. (..) Depending on the property, the Monument Protection Office. (...) **A counter failed because not because the Monument Protection Office objected, but because the monument requirements would have led us to pay a five-figure amount for a cable because it would have needed a certain color length, etc., to create the power connection. This also has to be considered, depending on the property where it's done. (...)** Then, on the other hand, we also have, and that's the reason why we come together today, the Digitalization Department. (.....) **There is a cooperation agreement between us and the Digitalization Department. [00:15:14] Also only recently. (...)** For the use of the data on the urban data platform. Use in the sense

that they can show it there within a certain framework, with a certain retrospective view on this urban data platform. (...) While we internally examine it economically, they look at it or make it available to the entire population, publicly. (.)

RESEARCHER [00:15:48]: How is Hystreet involved in this agreement? Because on the urban data platform, I can also see the Zeil counter, for example, which is completely from Hystreet.

PARTICIPANT [00:15:57]: We have an agreement between Hystreet and Economic Development and an agreement between Economic Development and the Digitalization Department. (..)

RESEARCHER [00:16:04]: So, Hystreet allows you to use the data to a certain extent, not in full resolution and retrospectively.

PARTICIPANT [00:16:12]: Exactly, Hystreet has allowed, through us, the Digitalization Department, to publicly provide these data to a certain extent. It's worth noting that anyone can create an account on Hystreet and view this data.

RESEARCHER [00:16:29]: I've done that too.

PARTICIPANT [00:16:33]: Exactly, so ultimately, what is shown here on Hystreet is also presented by the Digitalization Department with the Frankfurt context. (..)

RESEARCHER [00:16:43]: The difference I saw is that on the urban data platform, you can display the data by the minute, which was not possible on Hystreet itself. Ah, okay. (..)

PARTICIPANT [00:16:55]: Yes, and that results in spikes, is that correct? (.) The Digitalization Department is currently still fine-tuning because these data, in this form, don't make sense. (.) Because you can't, or it just doesn't make sense to, represent pedestrians by the minute. It should be done on an hourly basis to get an appropriate curve of how it develops throughout the day. (.) But yes, I don't know if you could make sense of that. We talked to the Digitalization Department and advocated for reconsideration with the service provider who designs the urban data platform, and we were generally agreed upon.

RESEARCHER [00:17:39]: You can also draw the service provider if you like. Is it Cockpit or e-kom or both? (....)

PARTICIPANT [00:17:50]: I know that e-kom is involved, but I would have to ask you to inquire with the Digitalization Department. I can't confirm that. (.) So, we have the connection, and what happens next is beyond us in the urban data platform; we have nothing more to do there. (...) Otherwise, maybe we could leave it here under construction measures, Monument Protection Office, and ASE. But we still have many other city departments. (.) I'll write it on the side, maybe on the left, who benefits from the data. (.) We have the TCF, the Tourism and Congress GmbH, who inquire with us repeatedly for their decision-making, how the data is developing. We have the District Marketing [...], who essentially does the same as the TCF for decision-making and to simply observe developments in the city; they also occasionally request data from us, and we are in active communication. (...) [00:18:59] I would say those are the main actors. (..)

RESEARCHER [00:19:03]: Who pays for it? (....)

PARTICIPANT [00:19:08]: For the three counters from Hystreet, Hystreet itself, they also have not only counters in Frankfurt, as you may have seen, they cover all or many major cities in Germany and partly in Europe. (.) The installation of the five counters, no, the installation of four counters, we paid for as Economic Development. To my knowledge, one counter was covered by the Tourism and Congress GmbH because it has a downtown reference. (.) There's a counter in the context of Römer, and that was a request from the Tourism and Congress GmbH. As Economic Development, we said we don't see a huge added value from an economic perspective. (.) We, as Economic Development, covered the B-centers; the A-centers were already well covered by Hystreet, according to the Retail Centers Concept. We covered the B-centers, such as Leipziger Straße, Berger Straße, Königsteiner Straße, and Schweizer Straße. (..) [00:20:22] We covered the costs of installation as Economic Development, plus ongoing costs related to electricity. (..) This is also borne by us and, in the case of one counter, by the TCF.

RESEARCHER [00:20:37]: Does Hystreet receive ongoing payments for the data and analysis? Do you know that? (...)

PARTICIPANT [00:20:46]: No. (..) No, to my knowledge, there are no payments flowing. (..) Hystreet's business model lies elsewhere, or to my knowledge, it is in development and data utilization.

RESEARCHER [00:21:01]: Interesting. (.....)

PARTICIPANT [00:21:06]: I think maybe I'll remember something else in a moment. (...)

RESEARCHER [00:21:14]: How much does it cost to install such a counter, can you say?

PARTICIPANT [00:21:19]: I can't say at all because, as I mentioned, with the Monument Protection Office, for one counter, it failed due to the Monument Protection Office and a cable. It depends on how the power connection still needs to be created, how complicated it is, whether cables need to be laid, whether walls need to be built through. (.) It was quite different, and I don't know what a counter costs. But you can certainly contact Hystreet and inquire; they are very open to communication. (..)

RESEARCHER [00:21:59]: Great, thank you very much, that helps me a lot and fits well with our practice-focused approach. (.....)

PARTICIPANT [00:22:15]: Maybe one more advantage that Frankfurt has in general with the counters: we are the only city where even the district centers are covered. So, that was very, very important to us, and now with the pedestrian traffic counters, we have a uniqueness nationwide and just an advantage because, for a few years now, or the last ones were hung last year, we have counters, we also have numbers in the different district centers, (.) so B-centers according to the Retail Centers Concept, and we can compare their development. (..)

RESEARCHER [00:22:54]: Interesting, yes. What legal hurdles are there besides monument protection when installing such a laser scanner? Are there any data protection considerations? (.....)

PARTICIPANT [00:23:10]: I would answer that with no because they don't recognize individuals. The only thing these counters, so you can imagine it from a technical point of view, at least that's how Hystreet explained it to me, is like a light curtain through which people walk. (.) These are not cameras; they are laser scanners. So, they don't recognize individuals; they only recognize that something, a person, is moving through this light curtain. So, no data is collected that would need to be protected under data protection laws, to my knowledge. And the only distinction is made between children and adults in the sense that, I believe, anyone under 1.20 meters is considered a child. (..) So, there is only a distinction made; otherwise, no personal data is collected.

RESEARCHER [00:24:04]: Okay, so you just need to clarify with the property owners that you can use the facade, and then you are already legally secure? (..)

PARTICIPANT [00:24:14]: Exactly, facade use, and comply with all the city's requirements, obtain building permits, all of those are the legal backgrounds.

RESEARCHER [00:24:26]: Okay, you just briefly mentioned the functionality of the scanner. Can you explain how you envision the technical process of evaluating the scanned data? Where does this take place? Do you have that information? (.)

PARTICIPANT [00:24:41]: I can tell you how we evaluate it. We, um, download it weekly on an hourly basis from the Hystreet portal, (.) and we get it output in the form of an Excel spreadsheet, so it's a bit old-school in that regard, um, and we have our own Excel spreadsheet, which has become quite extensive over time, with formulas embedded in it, and, um, we input the data there and analyze it. This way, since 2019, we can really see how these, um, frequencies have developed. Um, we also overlay the data for different streets to see if there are any changes between, as I mentioned, the local district centers or if it all follows the same structure. Um, through this Excel spreadsheet, we also examine, for example, how, um, (.) things look during Advent weekends, um, whenever there are special events, [00:25:45] we conduct special analyses on a weekly basis, um, where we examine it in more detail. But in general, we look at the retail-relevant pedestrian frequency on an hourly basis and also the daily frequency, but only for the retail-relevant time. Okay. Um, for us, it's an Excel analysis that has gradually evolved. Um, with, for example, the Digitalization department, it is

then processed accordingly on the platform, um, they are not quite as old-school as we are.

RESEARCHER [00:26:24]: And taking a step back, when this scanner, so it creates a kind of light curtain, someone walks through it, it registers it, and then what happens? Does it calculate internally, or does it already send this data somewhere? Does the mobile network, I mean, if you don't know, I can ask Hystreet, but...

PARTICIPANT [00:24:41]: Then I would refer you to Hystreet; I don't know for sure.

RESEARCHER [00:24:49]: Yes, no problem. (...) There's already... (...) What challenges are there in determining pedestrian frequencies? As you mentioned, a counter has sometimes failed. Maybe...

PARTICIPANT [00:27:03]: Exactly, so, um, a counter fails here and there. (.) Also on days when you don't want it to, like on Black Friday, we had the problem that we had unusually strange numbers, low numbers. Unfortunately, something failed there. (...) Then there are limitations in the street width, I would say, (.) that Hystreet is currently working on or experimenting with, how to solve it. You can cover a certain street width with a counter. That works. (.) I think it's still two counters facing each other, but feel free to ask Hystreet again. (..) It works on the Zeil, for example. It's quite a wide street. (.) The Zeil center is quite good there. When you go to Hauptwache, where it widens, it becomes difficult. [00:28:07] It becomes unreliable counting there, at least not currently. As I said, they are working on it. (...) Otherwise, there are no technical problems in that sense, but when hanging the counters, we had to consider, are there trees? Will these trees potentially grow so large in five years that they obstruct the view? (...) Yes. Are there umbrellas in the summer because of outdoor gastronomy? Is there an awning? Of course, we also thought about not hanging a pedestrian traffic counter directly at a subway station because we don't want to measure the influx in the subway station but rather the retail-relevant influx on the street. These were considerations in the planning.

RESEARCHER [00:39:30]: So, yeah. (.....) We've discussed a lot already, but I don't have much left. (...) Maybe I'll still ask a question about data usage. How is the data transfer structured between the various actors? (...)

PARTICIPANT [00:29:21]: The Digitalization Department gets the data directly from Hystreet. (.) We're not involved in that. When it comes to the TCF and neighborhood marketing, they ultimately receive a PDF from us, based on the Excel sheet of our Excel analysis. (...) Or if individual data is requested, we also provide it via phone or email. But there's no automated transfer happening. (.) We send an analysis internally once a week to keep everyone informed. This includes our department, and we forgot to mention it here, the Department for Economy. I'll write it down here because Mrs. Wüst is ultimately our highest boss. (.) [00:30:27] We are now located in the Department of Economy under Mrs. Wüst. Hystreet, of course, gets the whole information from us, and the information exchange goes regularly in both directions. (.) Also with the TCF and neighborhood marketing.

RESEARCHER [00:30:44]: And on whose initiative? (....)

PARTICIPANT [00:30:49]: The initiative for the analysis and regular review of these pedestrian frequencies was ours. (..) Ultimately, everyone was so interested in the data that they asked if we could make it available. (..) Naturally, there are some municipal structures behind it. Neighborhood marketing also falls under Mrs. Wüst. The Tourism and Congress GmbH does not. But yes, Frankfurt politics, in the end, we all work towards the same goal. (..) And we also have the pedestrian frequency goal together with the TCF. (.) I had some other goal in mind just now, which I forgot. (...) Maybe it'll come back to me in a moment. (....)

RESEARCHER [00:31:43]: We've talked a bit about it already, but I still want to ask about who uses the data for what purpose. (..) Specifically, what actions and measures does the city take based on the data? (.....)

PARTICIPANT [00:32:01]: I would sum it up as an early warning system. We don't have constant decisions in the city based on pedestrian frequency numbers. (.) But they are always there, ultimately. (..) They are always considered in decision-making when relevant to the topic. (....) Early warning system fits quite well. (..)

RESEARCHER [00:32:38]: And what measures are taken when the early warning system triggers? Can you explain that briefly? (.....)

PARTICIPANT [00:32:54]: Since the end of Corona, I would say we haven't had a situation where we need to fear for the retail sector. Because the pedestrian frequency numbers are there. Of course, we have more on one day or week and less on another. We also have outliers downwards. But overall, we are at a pre-Corona level. (..) So, we can actually say the early warning system has reassured us. It didn't have to warn us. It just taught us that the problem must be elsewhere. And now we have to figure out how to address the issue. (...) During Corona, it was different. (.) But you also have to question to what extent this warning based on pedestrian frequency numbers was necessary. Because if all the shops are closed, or if there are contact restrictions, it's clear that the pedestrian frequency goes down. [00:33:56] You could see that if you were on Zeil, for example. (.) We could quantify how much. That's an advantage. But various measures were taken, which I wouldn't necessarily attribute to pedestrian frequency numbers. But simply to the Corona pandemic, supporting retailers, making them more visible online. We did that as part of the campaign "Shopping in Frankfurt," which also falls under the project "Frankfurt at Start." (..) Or advising on possibilities. The cross-consultation advised on what possibilities they have to reach customers despite the circumstances. But as I said, I wouldn't attribute that to the early warning system. Instead, this system taught us that we don't necessarily need to be warned currently. [00:34:58] Which is also a nice realization.

RESEARCHER [00:35:02]: Yes, definitely. And do you know if business people or companies specifically look at and use pedestrian frequencies? And if so, how and for what?

PARTICIPANT [00:35:11]: Yes, that's exactly the point I just remembered, which I forgot. It's certainly interesting for real estate agencies. (...) I'll just write them up here. (..) Where they, in turn, retrieve this data, I wouldn't say for sure now. They can create an account with Hystreet like everyone else. But we also have real estate agents who call us, who know us, and ask if there are any developments, can we say something about it? (..) It's initially about the property evaluation and then about the property marketing. (...)

RESEARCHER [00:35:58]: For commercial properties, ultimately? (..)

PARTICIPANT [00:36:01]: Yes, ultimately, pedestrian frequency is interesting for retail properties. So, it usually revolves around retail properties. (.) Whether also finally, I can't specify that, but usually retail.

RESEARCHER [00:36:17]: Okay. And do you think that even private individuals, for example, look at the data on the urban data platform? (...)

PARTICIPANT [00:36:26]: I would like to ask them about the click numbers. Because we had a very intensive discussion with the Digitalization Department, which is not a secret now. (..) In our evaluation from the Economic Development, we have a traffic light system, which naturally shows when we need to be warned and when not. And we need to be warned, and for us, red is applied for fewer people in the count, for example. (.) Green is many. So, if we are at 100 percent compared to 2019, we think that's great as Economic Development. (.) The Digitalization Department sees it a bit differently because they look at it from a citizen's perspective and initially suggest, (..) a citizen would like to see the Zeil as empty as possible. (.) For whatever reason. One may prefer it more empty, the other less, but that was their basis. (.) [00:37:30] And they then introduced a traffic light system that was exactly the opposite of ours. The fewer people, the greener, and the more people, the redder. And we had a very long discussion with the request to remove that. Because if that's what is publicly accessible later, and the retailer looks at it, (.) they could blame the city later, in the worst case, that we're telling citizens, "Attention, red, please don't go to the Zeil now," then they go to MTZ or Bad Homburg and shop elsewhere. (.) If we assume the worst-case scenario. The result was, I think it turned blue at the Digitalization Department. They have now depicted it in various shades of blue, just to show the development without evaluating it. (..) Of course, we can afford to evaluate it because we don't make it publicly accessible. It's an internal city evaluation with a very, very direct economic reference, [00:38:30] because it's the retail-relevant pedestrian frequency. (....) Whether citizens access it? I have to ask about that. (..) Personally, as a citizen, I probably wouldn't do it, to be honest. (..) Everyone has a feeling for when the Zeil is full and when it's not and when I want to go and when I don't. (..)

RESEARCHER [00:38:56]: I find that fascinating with the effect that the data could ultimately have on the pedestrian frequency in turn.

PARTICIPANT [00:39:02]: Exactly, could have, so a feared effect. (...)

RESEARCHER [00:39:08]: Exciting questions that arise there. (...) In the Masterplan Mobility, pedestrian counts are also mentioned as part of the data landscape in connection with mobility in Frankfurt. (.) From your perspective, do these data play a role in traffic planning?

PARTICIPANT [00:39:31]: Yes, definitely. (...) In traffic planning (.) Yes, they play a role, but they have their limitations. (...) When I think about traffic planning in the retail sector, I wonder, how do customers come to Frankfurt? (.) To know how they come to Frankfurt, I must, on the one hand, know where they live. (.) So, the one who lives in Frankfurt has a different route than the one who lives outside. (...) I would perhaps explain it with an example, and that is the traffic calming on Oederweg, which is also hotly debated. (...) There are many, many, many theses around this traffic calming. (.) Whether it has a positive or negative effect on retail. It was also investigated by the University of Applied Sciences and now published in, I think it's a preliminary paper, or I don't know if it's already the final study, [00:40:40] but there is definitely a publication now on the surveys on Oederweg, where individual retailers or business owners were also interviewed. We wanted to look at the whole thing based on data. Apart from the fact that there is no Hystreet pedestrian frequency counter on Oederweg, (.) the question would also be, how much added value would this pedestrian frequency counter have, because ultimately, it only reflects whether people are there or not. (.) However, no effect can be demonstrated on whether the mobility behavior of these people has changed, (.) because we don't know whether these people now, because it's blocked there, simply drive elsewhere and then park and walk there, whether they come by public transport, whether they now also come by bike. This can be limited or actually not demonstrated through such a pedestrian frequency, or actually not through a Hystreet pedestrian frequency counter. [00:41:48] Therefore, while we consider pedestrian frequency data very, very important in traffic matters, (.) the question is whether the pure laser scanner is the final solution or can be. In this regard, we have therefore looked at two different providers. Namely, one provider who looks at it based on GPS data and one who looks at it based on mobile phone cells. Ultimately, we are dealing with mobile phones in both cases, but the accuracy of the data is different. (.) The interesting thing about this data is that conclusions can be drawn about the

demographic backgrounds of the individuals and also, at least with one provider, interactions between different streets, department stores, [00:42:52] such as how people move, how many percent, for example, who are on Oderweg were previously on Zeil or how many go to Zeil afterwards. That's possible, we're still experimenting with it. (..) And when you evaluate such data, I believe it could have a very, very large added value for traffic planning. But there is still a lot of other things, whether it's in the retail sector the evaluation of receipts via credit card providers, etc. There is a lot, and I believe that all these data must be brought together. The Hystreet pedestrian frequency counters are one part of the data, but I doubt that these pedestrian frequency counters alone can provide an effect or a basis for traffic planning in Frankfurt. (.)

RESEARCHER [00:43:51]: But what you've told is very interesting. We've encountered mobile phone data and such repeatedly, but it was usually said that, to buy it similarly to TomTom data for cars, continuously and extensively for pedestrian traffic, that would be far too expensive. Did you still get it to that extent, or did you request individual evaluations? (..)

PARTICIPANT [00:44:17]: Yes, it is very expensive. We looked at the data for one street, for a period of a few years, that was two or three years, (.) and also in the evaluation, it is a huge effort. We looked at it for a street calming measure and then the various data, so on that day a restriction was introduced, and then the cycle path was marked. We had from the city when which measure was taken, and then we could look in the week before and after, was there a direct effect, or also in the month before and after, was there a direct effect that is recognizable. We mainly focused on the age composition of the pedestrians and also the origin of the pedestrians. (.)

RESEARCHER [00:45:20]: So, place of residence in Frankfurt? (..)

PARTICIPANT [00:45:24]: Exactly, the place of residence. Residence in the immediate vicinity of the street was all of Frankfurt, and also outside of Frankfurt. So, for example, a bike lane has an effect on whether, for example, fewer people from the Taunus come, which is a very common claim in the Frankfurt retail scene, I would say, that many retailers say, but if you now take the parking spaces out of the street, then the people, the affluent Taunus population, will not come to us anymore because they can't park near the store. These are claims that we just want to take a look at because, unfortunately, we have to say, we can't currently evaluate whether they are right or not.

(...) And that's what we would like to explore, but we haven't come to a final result yet.
(.)

RESEARCHER [00:46:25]: Does that mean it's still ongoing, the evaluations for this?
(..)

PARTICIPANT [00:46:31]: I would say we have completed the first experiment and must admit we have not seen major changes in the data. (..) I have to be very clear about that; it was an experiment with a provider for whom we would not vouch here. It was just an experiment, and we are always looking around, are there other data providers where we can take a look and want to, but are actually at the point you mentioned, it's pretty expensive. (...) We are a municipal company; we handle taxpayers' money, and we just have to see: can we and do we want to afford it? (...)

RESEARCHER [00:47:19]: But if something else happens, and someone continues to work on it, then you can definitely let me know again, if possible, I would love to take a look over the shoulder or find another appointment for a conversation.

PARTICIPANT [00:47:33]: Yes, I don't know/ we'll have to see what happens in the coming year.

RESEARCHER [00:47:38]: That would definitely be very exciting. Now, I'll make sure we conclude, so we don't take up too much of your time. (.....) Perhaps one more question: how would the data collection practices need to change for the data to be even more useful for traffic planning? (.....)

PARTICIPANT [00:48:09]: I could provocatively say, no data protection, but we won't go there. (...) I don't think the data itself needs to change, but we just need to bring together the various data. It's not possible for us to always look at everything in a kind of silo, but we need to connect it. Exactly what we tried with this mobile phone data.

We put them next to the data from Hystreet to validate them, to see if the same trends are visible. So even if we look at Oderweg, for example, and Zeil in one case, the trends were the same. (.) And if you could then, as I've already said, add payment data or traffic data in the form of cyclists, car traffic, use of parking spaces. If all of that could be laid side by side, then you could work much better with the data than if everyone looks at their own data and keeps it to themselves. (..)

RESEARCHER [00:49:21]: Do you know if, in connection with the evaluation of the Mankai closure, pedestrian frequency data was used? (.....)

PARTICIPANT [00:49:33]: There is no pedestrian frequency counter on Mainkai. Therefore, to my knowledge, no. We also have no pedestrian frequency counter on the Römer side, so from Römer to Mainkai. (.)

RESEARCHER [00:49:53]: Does it hang on the other side? (.)

PARTICIPANT [00:49:58]: Exactly. On the side facing the Main, we had a problem with the monument office. So, it was planned, but ultimately, it would have been too late. (.) To my knowledge, they didn't play a role in the Mainkai closure. But also from our perspective, the question would be, to what extent would that make sense from our point of view because we don't have retail on Mainkai. (..) So from our point of view, the location is not relevant. (.)

RESEARCHER [00:50:26]: Are there efforts from other departments saying they want to do more pedestrian traffic counts with lasers? Or do you not know anything about it yet? (...)

PARTICIPANT [00:50:38]: I know that there are many... So, there are some municipal companies that are considering how they can use pedestrian counts. That's something I've heard at the round table of the Digitization Office, where you were also present. I was in the group that looked at the pedestrian frequency counters. For example, someone from the zoo was there, someone from a museum, from a sports event or sports/ I don't know, sports background. And there were also people from the citizens' office. (.) And yes, everyone is considering how they can use pedestrian frequency counters and what added value it would have for them. It is being reflected upon, but then the question is always what form of pedestrian frequency counter. So, for example, whether Hystreet makes sense at the zoo is a question. [00:51:39] Because it is interesting to know how many people are in front of the penguins for how long. (.) In that case, you need different counters that can, for example, show how a space is used, how many people go in. Hystreet can be used to see how many go out, yes. But where are people staying, how many stand in front of the penguins? So, these are internal considerations for the zoo, for example, and something similar could be done in a museum to somehow depict visitor flows. (..)

RESEARCHER [00:52:09]: Fascinating. Well, I would now somewhat conclude the whole thing. Is there any question or questions that are important in the context of our research that I haven't asked? (.....)

PARTICIPANT [00:52:24]: At the current time, nothing comes to mind, no.

RESEARCHER [00:52:28]: And is there anything else you would like to share with us in general? (..)

PARTICIPANT [00:52:33]: I would be interested in how things will progress with you because perhaps you will eventually have insights or ideas that can help us. Therefore, I would be pleased if we stay in touch, and if, I don't know the time frame of the project, but if there are results or interim results, we would, of course, be happy to know. [...]