

## Interview 23

Interviewee	25-User-C
Interviewer	Ashraf Shaharudin (TU Delft)
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### Interviewer

So let me start with my first question. Could you please describe your role at <redacted>?

### Interviewee

It was kind of funny because at the interview questions as well as like, ohh typo, but you said the company name right.

### Interviewer

I know. I'm so sorry.

### Interviewee

So I am what is called an Esri technology specialist at <redacted>, which basically means that I am a GIS consultant. I'm sent to clients that have relationship with <redacted> and basically help that client improve their whole GIS thing, for lack of a better word, specifically on the Esri side because that is the software package that I'm most familiar with.

### Interviewer

OK. Could you perhaps describe <redacted> as a company? What do you do and who are the clients in general?

### Interviewee

So <redacted> is a geospatial consultancy company. Basically, <redacted> is like a place where they gathered a whole bunch of smart people who are really good at GIS and they really want to concentrate that technical knowledge, that [specialisation] thing, and with that concentration, they send these people to work as geospatial consultants for different companies to help those companies improve their techniques and capabilities with GIS software. In terms of companies, <redacted> does a lot with – <redacted> is also international, it's related with <redacted>, which is not really consultancy related but more I think just a lot of technical drawings and just a lot of like production and 3D models, building plans, et cetera, et cetera. So that's only different.

It also has some people, I believe in <redacted> and <redacted>, but I don't know who they're related with, and <redacted>. So I'm just gonna stick to the [country C] part and <redacted> does work for <redacted>. That's not really a company because it's governmental, but also a bunch of provinces, several municipalities -- <redacted> works there – <redacted>, also <redacted> -- they're also active there -- and also utility companies both on the water side of things as well as the electric side of things.

Is that enough of a descriptor? OK.

### Interviewer

Yes, definitely. Thank you.

And do you use open data in your work?

**Interviewee**

Definitely yes.

**Interviewer**

And for what purpose?

**Interviewee**

Before I answer that question, it might be nice to say, before I started at <redacted>, I worked at one of the provinces as well. I also worked a whole bunch with open data there. I could talk about that as well as well as what I do at <redacted>. Is that interesting?

**Interviewer**

Yeah, yeah, yeah, definitely.

**Interviewee**

OK, then I will try to shoot it that way.

So to get into specifics, right now, for <redacted> I work at <redacted>stations, so the [country C] railway company basically, but I don't do anything with trains, but a lot of GIS information related to the upkeep of stations. So, like is everything cleaned on time; where are the gates that people check in [and] check out; the elevators [and] escalators, are they working. This is the type of data that I work with. What I noticed, <redacted> has its own data that is used for like the station purposes, but there's also a definite dependency on what we get from <redacted>, because there are also a governmental organization, so they also of course have the task of open data. So yeah, we got a bunch of stuff from <redacted> about like the stations and basically stuff that we'd need otherwise.

So yeah, we got a lot of stuff from <redacted> and also just open stuff from other sources, like cadastral info is interesting for <redacted>. Also because they do stuff with like buildings and stations, so they sometimes need information from the <redacted>, from <redacted>, obviously, to check the geometry of stations and also to see for -- one thing that's starting up now is we wanna get a better grip at greenery around stations. And so also inventory using from open data like, what do we know from open sources where these things are, so these things can be maintained.

Also, this is gonna be a shoddy translation, but the monumental status because there are laws now that all of those offices need to be at least energy label <redacted>, unless those offices are national monument. So there's a big project like checking, so, which buildings do we have that are national monument, which aren't, because then the ones that aren't, needed to be insulated better and stuff. So that's also something that we grab from there.

**Interviewer**

And do you have any challenges or unmet needs with using open data from all these sources?

**Interviewee**

There's a couple. We are very much dependent on what <redacted> -- there is definitely dependency on what <redacted> sends us in terms of information. So it's interesting cuz like <redacted> have the info of like how all the stations are drawn, but sometimes it's not always super accurate, because then we use this information in our processes to like add <redacted> specific stuff that we need to know but sometimes the geometry is just plain wrong and outdated and that's super annoying. Then you're just saying the wrong stuff, and people draw the wrong conclusions.

Sometimes speed is an issue.

And what I'm also really starting to notice on the on the monumental front is -- so all of the national monuments, that's the data set by the <redacted>, also, Esri publishes that. So that's nice. On the provincial monuments, there are only two provinces that do that: <redacted>, <redacted>. Both of these use ArcGIS, so with a little bit of know how you can get the ArcGIS services with the provincial monuments. And you also have municipal monuments. They're just their own, it's not national. There just isn't the place to get all of the monuments at once. And considering there's like hundreds of municipalities in [country C], you can't do that.

**Interviewer**

And the two provinces that have data, their data is on ArcGIS platform?

**Interviewee**

True, true. But yeah, it really depends. Some municipalities, some provinces don't have the money for ArcGIS, so they use QGIS. But also, what you would really want is just one spot with all of the municipal monuments, because going after every single municipality, which there are hundreds, to see like, do they use ArcGIS, do they have a service with this kind of thing, that's a lot of work.

**Interviewer**

And apart from data availability, do you also have other issues with using open data?

**Interviewee**

Could you maybe give examples?

**Interviewer**

Maybe in terms of the standard, the format, or in terms of the timeliness, is it old data, outdated data? So do you have a those kind of issues as well?

**Interviewee**

Yeah, the outdated is definitely something that we struggle with, that's what my example with <redacted> was all about. In terms of standard, one thing that's always annoying is there's a lot of stuff that we can fish from the Living Atlas from Esri. [Esri distributor in country C] publishes a lot of [country C] data sets on there, and that's nice. But there's still also a lot of datasets out there that are published with, like Open Geospatial Consortium style like WFS, WMS, [but] those don't always gel with Esri platform. And yeah, it's a known issue.

**Interviewer**

So you have to transform the format into shape file? Something like that?

**Interviewee**

Yeah, something like that. Usually this is where we boot up FME because that thing can read pretty much everything. Then we transform it from there.

**Interviewer**

OK, so now I'm gonna talk about Esri. How do you use Esri products in your work and for what purposes?

**Interviewee**

It's interesting. Because, Esri, of course made its name with just, you know, like when you're at the

university, you learn how to use, in my case, ArcMap. But then what I've noticed with both my job at the province and here is, most of the time that I do, get spent on the online component and or the enterprise component. So most of my -- I only really use ArcGIS, desktop ArcGIS to publish services and maybe do like attribute rules and stuff. And from there on it's all about like making these work and look good in the enterprise or online component, putting those into like a web app or an experience or a dashboard. That's pretty much 90% of what I do with the Esri platform.

**Interviewer**

And so you don't do it, you don't use it so much for analysis?

**Interviewee**

No, no. It's a lot of getting information and displaying that information in a user friendly manner to the people who use our GIS platform. And in the case of <redacted>, that is the people who work at <redacted> stations. And when I worked at <redacted>, that's both the civil servants who worked at the province and for the open data sets [for] anyone who's interested.

**Interviewer**

So what software or system do you use to process and analyze data?

**Interviewee**

At <redacted>, when things go into the data processing or analysis, then usually FME is used for this purpose. That's what I see.

**Interviewer**

And is there any particular reason why you don't use Esri product for processing and analyzing data?

**Interviewee**

It's not one that I have a definite answer for. My best guess is a lot of the analysis that we do are not something that it's just a one off thing, but these are entire workflows that need to be done multiple times. These are workflows that need to be repeatable. And one can use the model builder for that but generally, FME, in terms of that type of repeatable workflow offers a lot more inputs, a lot more like buttons to turn on and off. And also it looks a little, yeah, the whole thing also just looks clearer.

And also, now, this is not something that I do, but also you have FME server as well and sometimes you need -- I guess there are people who work at <redacted>, who need FME server to run their workflows in the cloud or something, because yeah, they just need to be run all the time, or like daily or something?

**Interviewer**

And so when you use Esri product to publish this data, so are these data publish as open data or only shared with your clients?

**Interviewee**

With <redacted> stations, it's definitely only the clients and like the people on a need-to-know basis that <redacted> stations works with, which is usually <redacted>.

**Interviewer**

OK. Is there any instances where this data is published as open data?

**Interviewee**

There actually is, but interestingly it's not done in the usual GIS method because it is architects determined. <redacted> has been very active in proliferating their API portal. I know, from <redacted>, the one thing we do actually serve as open data, there is -- I'm gonna go look up what is it in English? Whatever station floor plans.

**Interviewer**

OK. Yeah.

**Interviewee**

That we do serve that as an API to people who are interested. The only thing that makes it kind of less open is if you want to use <redacted> APIs, you need to have an account. The architects determined like all the stuff that we wanna share both within the organization and outside of the organization, we do that via API. That's basically what was there.

**Interviewer**

OK, but then this API is not through Esri platform?

**Interviewee**

That's correct. The data has been modified and can be remodified to easily throw it into the Esri environment. I think if you wanna get it, you get it as like GeoJSON . So yeah, you can run on Esri. But then yeah, you need to do a little something first.

**Interviewer**

Yeah, but I mean, when you share this API, do you use Esri technology at all to share this API?

**Interviewee**

Not really, I think we just use a lot of like scripting like Python and such to do this. And I think, once again more FME.

It's also like organizational priorities and concerns cause and <redacted> is of course a semi-private company and not a governmental organization, so they don't have like the open data task. That is a significant difference.

**Interviewer**

Do you use Esri open data related services at all, like Living Atlas or ArcGIS Hub?

**Interviewee**

Yeah, for sure.

**Interviewer**

In what instance for example?

**Interviewee**

Well, the living Atlas is of course a good way to -- it's how we use some of the data that's on the Living Atlas, namely, like the energy labels, the national monuments, <redacted>, <redacted>, cadastral borders. These are all stuff that we grab from the Living Atlas, for instance.

And ArcGIS hub would be interesting if we used our ArcGIS online, but we're on enterprise. So we're stuck with portal and sites, but close enough.

**Interviewer**

OK. So you get data from Living Atlas, but then you take it out to process, right? You don't process it in the Esri environment, right?

**Interviewee**

Like 9 times out of 10 if we get something from the Living Atlas, it's because we want to display that information from the Living Atlas in a map to people at <redacted>. So that just gets thrown into a web map in the portal environment.

**Interviewer**

Makes sense.

So the data that you get from Living Atlas is actually useful for the publication component?

**Interviewee**

Yeah, for sure.

**Interviewer**

And do you have any grievances in using these services? Anything you don't like about using Living Atlas?

**Interviewee**

A long time ago it used to be that they didn't update the <redacted> as much, and back then I found that frustrating. But since then they fixed that.

One thing I do notice is that a couple years ago, it felt a lot easier to just go to all of the content shared by Esri.NL. But I think they changed that. And now that's not as easy anymore. And yeah, that's a little bit sad. But maybe that's just because they changed it and I haven't figured out how to perfectly do it now. That's also a very possible.

**Interviewer**

Do you have any experience of using QGIS?

**Interviewee**

A little bit. Yeah.

**Interviewer**

How is that experience different than ArcGIS and which one do you prefer?

**Interviewee**

It's kind of cyclical and it's like I prefer ArcGIS because I'm more used to it. That's basically what most of the answer boils down to. Like every single time I need to use QGIS for something, which is usually like opening something from Open Geospatial Consortium, or like the server is down for I don't know why, or on the off chance I wanna do something with GIS for myself, for private purposes, then QGIS is great. But then it's always like right, how did you do that again in QGIS? Just it's like the muscle memory.

But one thing that has Esri does well, is they took -- they really followed the current of sharing, making it easier to share data. And that is something that, especially in [country C], governments are very excited about because that's part of what they need to do. All the different things you can do

with Web app Builder, experience Builder, story maps, these are all, very good ways to bring GIS data in an understandable form for citizens and specialists.

And of course, it's like a self-reinforcing thing, like the more stuff you add -- the more ArcGIS services that are shared with everyone, the more stuff is there and then it just gets even more useful. So yeah, that's a positive feedback loop as well.

**Interviewer**

And you mentioned about if you get the data from OGC format then you would use QGIS because then you have to transform it. So because I'm not a geospecialist, so if the data format is in OGC compliant data format, so can the data be immediately used in ArcGIS? Is that true?

**Interviewee**

The answer is it depends. What I know is if you try to add an ArcGIS service in either ArcGIS Pro or ArcGIS Online or portal, that pretty much always works. If you want to try and add an OGC service, like I've had experience here with the feature service, map service, and the tile service, so it's limited to that. But it always boils down to like is it gonna work or is it not going to work. Like WMS and WMTS, usually most of the time that goes quite OK. But I have had issues with WFS, and also more specifically grievances that when you do use WFS, you cannot do as much with it in terms of filtering, styling, then you would with an ArcGIS feature service.

Yeah, it's probably because it's a little bit monopolistic because Esri is this big old environment of like doing everything their way. I think I can understand why they are not very interested in following the open standard, especially because they're influential enough. Somehow I think people still mostly use shapefiles even though they're old as heck. I try to use the Geopackages instead, whenever I can, because you can do a little bit more with it and it's a little bit more modern and it works well in QGIS and ArcGIS. I really like that as well.

**Interviewer**

And with WFS for example, can you do more on in QGIS? Can you for example do more filtering in QGIS with WFS?

**Interviewee**

Basically, yeah. But like, I don't know enough on the coding / back end side to tell you why. I can only guess that like filtering in ArcGIS services works differently compared to filtering in OGC services. It probably has to do with that, because ArcGIS and QGIS are written differently. That's probably why. But this is where my knowledge ends.

**Interviewer**

OK, that's fair enough. So in a way, they are not very interoperable?

**Interviewee**

Yeah, not really. I think usually like loading ArcGIS services in QGIS, I haven't done very often, but I think that's okay. A couple years back, QGIS finally also allowed you to pen up and look at file geodatabases in Esri stuff. I do remember then, which was like 2019 or something that, you couldn't do as much with shapefiles or the more open standard stuff, but that might have changed since then. Again, I use very, very little QGIS, I use it very sporadically.

**Interviewer**

Yeah, yeah, that's not a problem.

Do you think Esri plays a role in enhancing access, supply and flow of open data?

**Interviewee**

Mostly yes, because it's a very easy and convenient way to put a lot of all your open stuff, and if you're an organization that has a fair amount of funding, then you can afford the Esri stuff. And then everyone around you tends to have Esri stuff. And yeah, that just kind of snowballs. So, that's also very convenient. It does, of course, still remain like its own little ecosystem.

Because I work in GIS, I know how to grab the aerial photograph from, like 2021 there was like 8 centimeter resolution which is pretty detailed. Technically that's available for anyone with a computer but you do need GIS knowledge to get there. So like, that's the other side of it like it's very easy to make things accessible, readable when presented via storymaps and stuff. But in terms of like findability, searchability, like the analytic side, the search engine side, sometimes I think things could still be done there, I think.

**Interviewer**

You mean Esri can do better in that regard?

**Interviewee**

Perhaps.

**Interviewer**

And do you think Esri also plays a role in connecting other actors in the open data ecosystem? For example, data providers with data users or data users with another data user.

**Interviewee**

My feelings are on the matter are, not actively. Because a lot of people use the Esri stuff, because of that sort of monopolistic position, if everyone uses same thing, then it's easy to share with everyone. But if you're not part of that ecosystem, then you need to jump through a couple more hurdles. That's how I feel about it.

But this is not something that's very -- I don't have a strong argument for this.

**Interviewer**

OK, no problem.

**Interviewer**

Do you see any negative or less than ideal impacts of Esri on other actors in the open data ecosystem?

**Interviewee**

It's hard. I would think I'm fairly experienced with like a lot of Esri stuff, so I know how to find my way. So like I'm inside the monkey house, as it were. So my few of the outsiders very warped. Yeah, the only thing I could say about this is again, like that whole monopolistic-ishness. Like if you're in, then yeah, it's easy. Esri definitely very much tries to do it their way. Open geospatial consortium, be darned.

**Interviewer**

So even though for example Esri facilitates the access to open data, but actually ecosystem is not so open? So even then, there is a barrier to access the open data through Esri, yeah?

**Interviewee**

Yeah, depends on what you wanna do with that thing. Like, as a governmental organization, it's very easy to use ArcGIS Online like to publish your maps and make them available for people who are allowed to see them. So like, yeah, that's nice. But then you do need to know -- you do need to be told where all this stuff is. And that is one thing that I encountered at my previous job because also a lot of time was spent there, following the open data -- you have a very nice hub with a lot of information. You're governmental organization and you publish all that and that's great. But if you ask someone on the street, will they know about this? Probably not. And so every single time you're like., oh yeah, I worked here and I did all this stuff. And most of them are like, oh wow, I never heard of this, I need to check it out and then they're like, oh, wow, this is great. But they're never gonna -- unless someone tells them they're never gonna find it.

**Interviewer**

So my last question to you, do you have any suggestions or wishes of how Esri's business model or way of doing things can be -- you mentioned that perhaps they are now a monopoly, they have this monopolistic power. Do you think that over time it is sustainable to have such power? And if not, do you have any suggestions on how perhaps they can change the way that they do things? If you have?

**Interviewee**

The easy answer would be make it easier to also interface with the more open data standards. But I would assume there needs to be an actual incentive there. But it's interesting. What I see Esri do is like you have something like Survey123 or like ArcGIS Online assistant which are nice either third party tools or like its own software thing. And then Esri was like, great, we gonna absorb that. Which is nice. And then I know you also can -- I also have a tiny bit of experience with VertiGIS products and I know that Esri and VertiGIS are in this symbiotic relationship as it were. Like Vergis is very active in the more workflow heavy side of GIS work. If you need to do something that has a whole bunch of steps and also has a geospatial component, then VertiGIS is very interesting. Esri and VertiGIS, I'm pretty sure they've made like, how do you say it, like they have talked to each other about we'll steer clear from each other. We'll let you do A so we can do B. So we don't really compete with each other, but we can add on to each other basically. So that create a nice work.

**Interviewer**

So those are my questions. Do you have anything else that you would like to share with me that you think will be useful?

**Interviewee**

For the research thing?

**Interviewer**

Yeah.

**Interviewee**

Yes, it's mostly I think, more of a follow up to your previous question.

Speaking as someone who transferred from a very much open governmental thing of like, share all this stuff with people to the more asset management-ish side of GIS, I do see Esri has nice geoprocessing things. They do a little bit of like Python as well. There's a lot of cartographic things. Yeah, it feels like right now Esri spends a lot of time and effort in making things look pretty, which is definitely important, you know, you wanted to get people enthusiastic about it.

But a little bit more meat on the bones would be nice. A little bit more possibility like some of the technical stuff that you can do in ArcGIS desktop side of things, you can also offer that functionality to users on the online component. So, basically more effort letting your users do more complex stuff themselves without you, as the GIS specialist needing to do that for them, basically.

**Interviewer**

So you think that a lot of the functionality is there on the desktop software, but you think they should also be available online and then users can do, can use them online?

**Interviewee**

Yeah. Or at least in a more user friendly way. A very specific example that we're working on now about platform safety at <redacted> and making sure that the train platforms aren't totally stuffed with people and seeing like, where that might become a problem. So we share that with the team right now and they're like, yeah, one functionality we would like is so we do load like train journeys, we'd like the ability to select and delete a whole bunch of these with different queries. You can easily do that in ArcGIS Pro, but these people don't have ArcGIS Pro and it's not cost efficient to give it to them. And you can do it in ArcGIS Online but you need to do like twice the work to do it there than the Pro. That's not very nice. Something like that.

**Interviewer**

And what do you think is stopping Esri from improving the ArcGIS Online?

**Interviewee**

That's not really entirely fair question, because they do do a lot to improve ArcGIS online. A lot of people use the Web app builder, that was very popular way to like display stuff. And now they finally dropped the bomb, yeah, we're stopping development on that, we're gonna go over to experience builder. I use experience builder a couple of years ago, and when I'm using it now, you can use so much more with it. I can see just how much time and effort they put into that. So that's great. That's really great.

But when I look basically at the updates of like the new release of ArcGIS Online or the new release of enterprise, a lot of this is like cartographic things that has no use case for our clients. Whereas, a bit more technical functionality and more ways to let clients do what they wanna do without us needing to do it for them, yeah, that will be convenient. They do a lot but just not maybe always enough of where I think they need to go.

**Interviewer**

OK, that's a understandable. Of course this is a speculation, but do you know any reason why they focus on certain aspects but not like as you said the meat or like the technical functionalities? Do you think that they don't see the value or technology is not there yet? What do you think is the challenge?

**Interviewee**

So obviously I don't know. My best guess is that Esri very much made its name in the cartographical side of things, like you make maps on your computer and that you print it out to people who use it from there. I think that's where Esri became big. And I think because that's where they became big that they still put a lot of effort in there because they wanna push that field forward even though perhaps GIS as a field has moved away from the cartographical aspect a little bit.

Yeah, I mean that for sure like back in the day, if you wanted to make maps, you'd become a cartographer. And I have done 0 cartography. The only cartography I've done is because is of my own accord and own interest. I got into GIS via a very different path and here I am making maps.

**Interviewer**

OK. Thank you so much. I'm gonna stop the recording now.