April 8, 2025 Meeting - Seattle Community Technology Advisory Board

Topics covered included: Digital Equity State Legislative Update, DeiMarlon Scisney; Overview of the City of Seattle's Geographic Information System

This meeting was held: April 8, 2025; 6:00-7:30 p.m., via Webex and in City Hall Room 370

Attending:

Board Members: Phillip Meng, Isabel Rodriguez, DeiMarlon Scisney, Femi Adebayo, Coleman Entringer, Hailey Dickson

Public: Dorene Cornwell, Sanchit Gera, Call-in User_1, Call-in User_2, Robert Kruse, Arif Gursel, Desiree Walker, Jayson Todd Morris, Nick McCarty

Staff: Jon Morrison Winters, Vinh Tang, Zinta Smidchens, Chad Phelan, Harvey Arnone, Stephen Beimborn, Cass Magnuski

22 In Attendance

Phillip Meng: Let's get started with a round of introductions. In the room, I see some faces that I haven't seen before.

INTRODUCTIONS

Phillip Meng: Have I missed anyone? If not, let's get started. We have a very exciting agenda, centered around the City's Geographic Information Systems GIS team, as well as some updates from the Digital Equity Committee, which has been doing some fantastic work. First, I would like to ask a board member for a motion to approve last meeting's minutes from the March CTAB meeting. Do I have a motion?

DeiMarlon Scisney: Motion to approve.

Phillip Meng: Thanks, D, do I have a second?

Hailey Dickson: I second that.

Phillip Meng: All in favor? That's everyone. Can I get a motion to approve the agenda for this meeting?

Isabel Rodriguez: Motion to approve.

DeiMarlon Scisney: Second.

Phillip Meng: All in favor? That's everyone. The first item on this meeting's agenda is a follow-up from our previous meeting. Again, thanks, D, for kicking off our regular legislative updates. We want to take this opportunity to, during our meetings, also solicit feedback on what kinds of legislation and news that folks are following. For today, I think it would be helpful to just give a quick update on what has happened with HB 1503, which I know is a topic of interest to many here, particularly folks on the Digital Equity Committee.

DIGITAL EQUITY STATE LEGISLATIVE UPDATE

DeiMarlon Scisney: Thank you, Phillip. So, just to give some context, for those of us who have been monitoring the bill, but also may not have too much context around House Bill 1503, titled Furthering Digital Equity Opportunity in Washington State, that was introduced in the 2025 legislative session to address disparities in digital access and to promote digital inclusion across the State. The bill really aimed to establish programs and initiatives designed to enhance digital literacy, expand broadband access, and make sure that underserved communities the necessary tools and skills to participate fully in the digital economy. The bill was sponsored by 13 representatives, and as of April 8, 2025, Washington State House Bill 1503 has been stalled in the legislative process. So, after passing the House on March 10, 2025, the bill moved to the Senate, where it was referred to the Environment, Energy, and Technology Committee. And following a public hearing on March 25, and an executive action on April 1, the committee recommended passing the bill, and referred it to the Ways and Means Committee. However, during the scheduled executive sessions on April 7 and today, no action was taken. And so, given that April 8 marks the cut-off date for bills to advance, the lack of action indicates that HB 1503 will not progress further in this legislative session. I would love for David Keyes, as well, to shed any light that he can, if he is on the call. But as of April 8, 2025, it did not advance past the Senate Ways and Means Committee before the legislative cut-off date, effectively halting its progress for this session. And the specific reasons for the committee's inaction have not been publicly detailed yet, but it is common for bills to stall, due to factors such as competing legislative priorities or fiscal considerations, or political dynamics within the committee, as well. I would like to pause here for any specific questions. But, as of now, no action has been taken on the bill. So, it is halted in this session.

Phillip Meng: Thanks so much, D. So, indeed, the Senate Ways and Means Committee did not move forward with it? We're still looking to better understand what that means for the bill's progress. For everyone's awareness, too, and a huge thank you to the folks on the Digital Equity Committee, but the Digital Equity Committee has started drafting a brief white paper support statement of sorts for this bill. it is still in a discussion stage, of course, and not yet agreed upon. But it may be potentially relevant if the bill comes back. regardless, I think it is very good preparation as we get more involved in the policy process. Does anyone have any comments on that, or any specific request for us? Dorene?

Dorene Cornwell: I don't think David Keyes is here, so I am going to take a chance on getting this wrong. there are a couple of pieces. Today is the fiscal cut-off, which means that it probably won't go to the Senate floor. the Ways and Means Committee is the must-do money piece in the Senate. The State budget, overall, is in deficit and as someone else put it today, budget time is going to be a free-for-all. All kinds of things might happen. But one of the things that I kind of want to emphasize is one of the things the bill did was to move an aspect of digital equity out of the State Broadband Office in the Department of Commerce, and into a separate Office of Equity, that being super dug into the details of the budget. I think it is still going to matter a lot to keep reminding the Department of Commerce that equity has to be part of the picture of how they do things. I suspect that this exact bill will come back next year, along with a couple of other pieces that didn't get through the House. So, it is definitely worth watching both the exact bill and the issues behind the bill.

The other piece is because of all of the things going on or not going on with the federal government, I think it is going to be really important that Washington takes the initiative and keeps doing as much as we can, regardless of what happens with the federal government and money for broadband development. That would be my expansion of the issues. I don't know if there is anybody else who is following it, who wants to add something or tell me that I've got it completely wrong. So, thanks.

Phillip Meng: Thanks, Dorene. That matches my understanding. And it is also a great reminder that we really ought to invite David Keyes to these meetings.

DeiMarlon Scisney: Phillip Meng, if I may chime in, I just have a couple of questions. You mentioned that the Digital Equity Committee was working on a white paper around this. Per our last conversation, I remember conversations that we had with David Keyes, who originated a lot of the advocacy that came out of CTAB, that we would be moving advocacy under the arm of Outreach. So, I am curious about the progress that has been made on the digital equity side. And then, are we still overlapping that advocacy under Outreach and what does that look like. Because I dropped a document into the chat and it talks about CTAB's role, from a first touchpoint to a second touchpoint, requesting meetings, all while working with the City, as well, through the inter-governmental team. And so, there are multiple ways that we can touch on bills going forward that we haven't been doing. So having that structure -- is that structure going to live under the digital equity team, or is that just for the purpose of writing this white paper? Could you she a little bit more light on that? I would like to formalize structure around advocacy going forward, so that we can be sure that we are signing into these bills and everything going forward.

From chat: DeiMarlon "D" Scisney- CTAB Board 4/8/2025 6:18 PM • https://docs.google.com/document/d/16hcgAZDedXBSXnMHHtfS32tJJXxXqFrWRf2MhBb8oiI/edit?usp=sharing

Phillip Meng: One hundred percent. So, the way that I understand it, and would invite members of the board committees community to chime in here, is that when and if the full board adopts a position, certainly the responsibilities would largely come to the Outreach Committee. And likewise, I know that, given the momentum here, the Outreach Committee will be driving a lot of our work on legislative outreach. And at the same time, committees that have a strong interest in a topic, I want to strongly encourage those committees to put together first drafts and suggest legislation of interest, and so forth. Eventually, the Outreach Committee gets involved, and eventually the full board gets involved. I think this kind of bottom up approach works well as it allows us to keep more eyes on what is happening.

DeiMarlon Scisney: If possible, if I could be a part of Digital Equity. I don't know if there are too many people on that committee right now, and there is a certain amount of people allowed on a committee. So, if this exceeds that, then how do we combat that going forward on the advocacy side?

Phillip Meng: No matter what, we will make sure to keep everyone in the loop, especially when any of these things progress, obviously the Outreach Committee and the whole board, let check on the quorum piece. Thanks for flagging that, D, because we really would love to have you in some of our meetings, if we can.

Coleman Entringer: Just to tag onto that, I think for quorum issues it is three people. Right now, I am the only CTAB member on DEI, so I think we should be totally fine. I will make sure to add you into the email chain.

DeiMarlon Scisney: Awesome. I appreciate it.

Phillip Meng: Fantastic. Thank you for a great legislative update. And again, thanks to everyone for the interest. Now, moving onto the overview of Seattle's GIS program and team, I am handing it over to Harvey, Stephen, Zinta, and Chad.

AN OVERVIEW OF THE CITY OF SEATTLE'S GEOGRAPHIC INFORMATION SYSTEM (GIS)

Harvey Arnone: First of all, I want to thank you for inviting us here. It was nice to hear that you guys want to hear what we are going to talk about, because we are excited to bring this overview of the City's Geographic Information System to you. We hope that you find it interesting, and useful, and we would love to hear your feedback at the end. Like I said, I'm Harvey Arnone. I'm the interim director of the Data Enablement Division in Seattle IT, and that is the division where GIS resides. Let's look at the agenda that we've got for today. I'm going to give a little background on the Geographic Information System, or GIS, as we will call it from this point forward and what that is exactly. Then we will talk about what GIS is to the City of Seattle. Then I will hand it over to Stephen Beimborn. He will do something that we call a gallery walk. He is going to walk through a number of different practical, real world uses of GIS to give you an idea of how the departments use it and benefit from this technology. And then we will hand it over to

Zinta Smidchens, and she will talk about some of the services that we provide to many City departments that utilize GIS. And then finally, Chad Phelan. He will talk a little bit about our technology roadmap. Like all technologies, this technology continues to grow and advance and take a look at what is on our roadmap ahead of us. We will have ample time at the end for questions. If you do have questions while we are talking, it would be great if you could put those in the chat, and we can answer some of them on the fly as they come in. And others we will answer at the end.

What is a GIS? It is a computer database system that we use to create, manage, and map data. This is a spatial system. The data has a spatial dimension to it that we can render onto the map. Our GIS is made up of hundreds of layers, as is shown on the image on the left of the screen here. the City of Seattle has really an endless number of layers, and we are always building new ones. And these are arranged into staff layers, things like road placement and aerial imagery, zoning, parcels, infrastructure, park properties, water bodies, and so on. It goes on and on. And then on the right side of my slide, there is an example of a map. Of course, there ae many different types of cartographic products that we produce, but this is a particularly good one, because it shows both the type of analysis that we can do with GIS, and it shows some of the cartography. So, this is a heat map showing hot spots with the intensity showing where greater events are occurring. And we do a lot of different types of map like this for different departments around the City. So that is a great example. But, if we think about GIS and why it is so broadly used at local government agencies like Seattle, King County, and other agencies, we only have to think about what local government agencies are responsible for. It is everything out there in the real world. Everything has a location. We can give a coordinate, an address, or whatever it might be. We can place it on a map somewhere. So this is really important for our agencies to be able to map where assets are, how the land is divided up, where certain events are occurring. That really makes up the bulk of the data that we are responsible for creating and curating.

But besides just mapping and spatial analysis, which is a big part of our bread and butter, GIS brings several other benefits to the workplace. We can map data out over time. GIS is really good at the temporal dimensions. So it is space and time, if you will. Going back to the map on screen here, if you could imagine whatever the events that are being portrayed here on the heat map, they change over time. We have an animation that shows the intensity of going up or down, depending on what is happening in the location. So it's really good for that. The other thing I think it is really good for is integrating with other technologies, other business systems, for example. Zinta Smidchens will talk about this a little bit later, but we've got a lot of systems where the data is strictly tabular. There is no spatial component. So we come in with GIS and spatially enable that data, which essentially unlocks it, and allows us to map it and to perform spatial analysis on that data, to have a different view and usage on that data. It allows us to get more value out of the City's data.

One last thing I will mention here is that GIS is also about efficiency. If we think about life in the workplace without GIS, we would really be talking about things taking much longer. People who are doing planning, or decision-making, whatever it might be, gathering the information they need to do that work would take much more time. GIS is very nimble. People can bring up their GIS application, and in a matter of 20 or30 seconds, navigate to a location, bring in the layers they want, and have the analytics tools that they need at their fingertips. So it really is a big productivity tool for City staff. And that is why it is used in so many different scenarios at the City, and it brings great value to the City. And that is part of why we are here. We want to communicate the value of this technology across the City.

Another thing I want to go over with you all is the layout of the environment of GIS at the City of Seattle. Focusing, really, on the data layers. I will describe the image that is on-screen right now in just a minute, but we know that mapping is nothing new for the City of Seattle maps, plans, and drawings. They have always been around since the City was founded. But as technology arose moving into the 1980s, GIS began being implemented in lots of local government agencies. So in 1987, three City departments -- I believe it was the old engineering department, which doesn't exist anymore, Seattle City Light, and the former Water Department -- they all brought their own GIS projects to Council for funding. And the Council had the foresight to see that this is one type of technology. This should really be one project. So they sent them away with marching orders to consolidate into a single project. And that is exactly what they did. In 1988, they came back and they pitched their project to Council, and it was funded. And that project implemented what we see in the center of the screen, the CGDB, the Central Geographic Database. And that continues to live on today, as is the model that I am going to describe. So the project implemented the base layer that turned out to be the foundational layers for the City of Seattle's GIS. These are things like the engineering survey model location layer that gave us the highly accurate base map with spatial accuracy. We had the plats, the lots, and the blocks that we call the legal layer, street network, and many more. Now the beauty of this approach was that all of the other departments could then start building their departments' specific layers. The utilities built their pipe infrastructure layers; the park built their properties layers; the permitting department built their zoning layers; and so on. Even if these departments weren't really collaborating, their data was all in the same language because it was built from the same platform. Now, this was really progressive back then. Just to give you an indication of what things were like back then, this was 1988. This was before email was in common use at the City of Seattle. This was a time very few people actually had PCs as their desktops. The accountability for us and for our business, a timeless technology that has carried through all of those years to advance and benefit the business. The last thing I will say, I guess, is that the City of Seattle does continue to maintain the central geographic database in the departments still continue to maintain their layers. One thing I was going to mention earlier was that in the 1990s, a lot of other counties and municipalities and actually other countries, were implementing GIS, and we should be very proud to know that the City of Seattle was a model to learn how we implemented GIS. And places like New York, Cincinnati, Malaysia, and Lebanon followed some of what they learned from us.

Now we will move on an talk about the uses and the ways GIS is used at the City of Seattle. I've got a lot of bullets on here. Obviously, I'm not going to read all of them, but some of the important ways that GIS is used at the City of Seattle's field operations, asset management, emergency management, public safety, work management, transportation -- these are all very important functions. But in truth, I can probably fill up six or seven different slides full of bullets like this. After so many years of this technology being used at the City of Seattle, I would say to you that it would be hard for us to find any department or office where they have some aspect of their business that doesn't benefit from GIS one way or another. So it is really pervasive and ubiquitous throughout the City.

With that, I'm going to hand it off to Stephen Beimborn. He is going to walk us through some real world examples of how GIS is used throughout the departments. I will just say that we are showing quite a bit, but this is just the tip of the iceberg.

Stephen Beimborn: Hello, everyone. My name is Stephen Beimborn. I manage a team of GIS analysts throughout who use GIS to support their work. I would like to show you a few examples of some of the applications used by the City. I will start with some internal-facing ones. As Harvey Arnone said, they bring a lot of efficiency to the City, and then show some that are available to inform the public. we will also provide you with a link to a gallery showing dozens of examples, and you can explore those at your leisure.

GIS enables us to manage assets in the field. A great example of this is SPU's field operations mapping system, called FOMS. FOMS is used every day by hundreds of SPU staff who work with the drainage system or the sewer system, or the drinking water system, their major lines of business. And the solid waste system, as well. Whether a person sitting at a desk using a PC, or they are out in the field on a tablet or on a phone, everyone at SPU shares a common view of what is going on. Everyone sees the current location of all of the vehicles. They see the work orders, and the work orders are symbolized by their order of priority. They can also see the utility infrastructure itself and find out most of what is known about the infrastructure is accessible through FOMS. All these layers are available for query. For instance, you can look at the work order history of a particular drainage pipe and see when it was last cleaned or inspected, or when it was last repaired, how it was repaired, that kind of thing. But this is just the entry point for accessing this information. A lot of times, information stored in a different business system, like at SPU, the Maximum Work and Asset Management System or the Engineering Record (unintelligible). The GIS map is a useful way to identify what you want to know about it, and then the application retrieves the information from a different system and brings it to you. There is a version of FOMS that was built for the Cedar River Watershed, most recently added. GIS also enables us to improve processes. I'm going to use another example that ties into FOMS. Diving down into one of the types of work orders you will see on the FOMS map are water shutdowns. This is the water shutdown tool that is used to create efficiencies in that process of conducting the shutdown. The application is used for a common activity that needs to be well-choreographed between a lot of different groups. This application automates some of

the important tasks, such as tools for identifying which valves to be closed so that you can isolate the pipe and stop the water from running until you can work on it. It also creates a list of all of the customers who will be affected when the water is shut off, and identifies who among those customers might be particularly sensitive to water outages, like a school or a restaurant, or a kidney patient, or that kind of thing. This information is shared with the public on the water system outage map, which I will show you in a few minutes. The groups that are involved in this are the crews who have to shut off the water and perform the repair; there is the staff in the control room, who have the system-wide view of everything that is going on; and sometimes, there might be a planned shutdown, and then an emergency one near each other, and so they have to assess the effect of that to figure out what is Plan B. Do we stop the emergency. We have to do a divergency so we have to stop the other one, or reroute somehow. There is also a team that notifies customers ahead of time for planned work, and there is staff in the operations response center that communicate with the field staff. The record the beginning and the end time of the shut off. The relay that information to the fire department to the them that there are some hydrants that will be out of service; and they take calls from the public. They also make sure that the information on the water on the outage map is available to the public. This application makes it clear to everyone involved where things stand and what needs to happen next.

Another way GIS helps: These are examples of the use of GIS to coordinate work activities. Sometimes the work affects the public and in those instances, GIS is used to communicate with the public. I'm going to show a series of things you may be familiar with some of these applications. Here we have the water system outage map. The data on this map was produced by the water shutdown tool, which I just showed you. When a person looks at this map, they can see all of the current outages, all of the causes of the outages, the areas that were affected by the outages, and what time the water service is expected to be restored. And I want to note that there is a text-based version of this, so if you use the text-based version and type in your address, it will tell you whether you are affected by an outage, or if there is one nearby.

Here is the City Light outage map. The City Light outage map was actually the inspiration for SPU's water outage map. Originally, they just asked us for an outage map, but in order to have an outage map, we needed data. So, backing up, we had to create the water shutdown tool, in order to get the data. The City Light map includes a lot of the same information as the water map. I have to say that we can't take credit for this one. City Light's outage data comes from an outage management system that is supported by a vendor, but it's another example of GIS being used, and it is not us supporting it. But, this map is very well used by City Light customers, especially when there is a major windstorm.

This is another one from City Light. City Light wants to communicate and share information about the work they do out in the community. So, you can look at the map and find projects you are interested in. Maybe you drove past one, or it's near your

house, and you're curious. What is that going on over there? You can find it on the map, click through and view the project details. Here is one of the detail pages. This is a map of the East Pine Substation upgrade with some project details in the margins. Here is the SDOT winter weather map. Someone said earlier that they are interested in transportation. This is the winter weather map. It shows which roads have been plowed or treated within the last one hour or two hours or three hours. And this is super popular when it snows. This is the urban forest restoring map. In this map, you can find out a lot about the publicly maintained trees in Seattle. Many different departments maintain trees in Seattle, and they all contributed to this map. This map brings all of the trees from all of the different departments together on the same map. So if you are curious about those trees in front of your house, you can learn about them. Mine are crabapples.

The communication units using GIS is not entirely one directional. It's not just the City speaking to the public. More and more, GIS tools are being used to gather feedback from the public. In this example, the Office of Planning and Community Development used GIS to inform the public about proposed zoning updates. This tool allows the map reader to look at the zoning, and anywhere they are interested, it's at their local business district, and they can submit comments about the changes that are being proposed. But they can also read the comments that other people have submitted. I went and read this the other night. It's very interesting reading what people have to say.

Next, I will show you how GIS can be used to track key performance. This is an example from the Department of Parks and Recreation. At Parks, they strive to serve all areas of the City equitably. So, it is important for them to track where they are expending their resources. This application draws labor and cost data from the asset management system that Parks uses, and it helps Parks employees to assess whether they are investing more or less than they would expect, given what is in a park. They can see how many bathrooms are there, how much grass needs to be mowed, how many ball fields there are, and they know how much time it should take to maintain those assets, and they can make sure they are being fair to all neighborhoods. The application also includes demographic layers to help them understand the characteristics of the communities that surround the parks.

Those are just a few examples. We can go on and on. But you can go on an on on your own. You can visit the Seattle City Maps. We have a map gallery there, and we will make the link available. We hope you will explore it when you have some time. And I would like to hand off to my colleague, Zinta Smidchens.

From chat: Phelan, Chad 4/8/2025 6:45 PM • City GIS map gallery: https://maps.seattle.gov/seattle-city-maps

Zinta Smidchens: All right. Thank you. I'm Zinta Smidchens:, and as I mentioned earlier, I manage the GIS Programs and Initiatives team In Seattle IT. Stephen Beimborn just walked us through a variety of maps and dashboards, and embedded maps and the variety of tools for various occupations. Transitioning here, I wanted to

show you this person in the field. What does that look like? This photo is of a person at the Cedar River Watershed in the Cascade Mountains. That is the source of our excellent drinking water in Seattle. And he has a tablet in his hands. Our mobile devices enable staff to trace areas of interest. For example, they can do it directly into a digital map skipping the process of marking up paper maps with notes, and instead, they can be creating digital polygons directly into the City data depository. And creating maps, and developing mapping occupations for use by City departments has always been a public (unintelligible). These are the most visible of the data service provided by the IT GIS team.

A key component of Geographic Information Systems is the people fact. And I will talk a little bit about what is happening behind the scenes. Our GIS learning center is focused on supporting end users at all levels, from beginners to GIS departmental administrators. We are placing particular emphasis now on the self-serve GIS model, because with today's GIS tools, a person no longer needs to be a GIS specialist to be able to create spatial data, and spatial analytics in the workplace. So, that is the people part of what is happening behind the scenes. But under the hood, there is a whole other set of services that the GIS team provides. These benefit City departments and the public. In this chart, in the slide, starting at the bottom of the stack is infrastructure. The GIS team partners with other IT teams to work to have a secure, reliable format, and scalable environment. An anecdote on that is did you know that in the early 20 teams, when the first winter weather response app, the app that shows recently plowed streets that Stephen Beimborn showed earlier, when it went live and it was mentioned in the morning news, it went viral, not just locally, but it apparently went viral nationally because it was newfangled and amazing. There was so much traffic on it that it broke the City's GIS service to its knees. So, we learned from that, and now any public-facing mapping apps that may go viral are hosted in the Cloud. But that comes at a cost. And right beside the IT infrastructure solutions, to be containing the costs at the same for all departments. This is a service that we take very seriously.

Next up in that stack is data. Over the last 18 months or so, the GIS team has made an effort to reduce the dissipation of data layers. As Harvey Arnone mentioned, there are literally hundreds of data layers, and there was a lot of duplication making nuanced differences, and we really needed to streamline and get the subject matter experts to identify what is authoritative data layers and make and how to make those broadly available, broadly discoverable, and available for everyone to use, so that everyone is singing off the same sheet. Building on top of the data: This is where end users start to see an impact. There are many different types of web services. Among the web services are locator services. These can take addresses that are entered by users and then compare the addresses to map layers behind the scenes. And it can answer questions such as is this address eligible for programs in the Department of Education and Early Learning; or in which Council District does this address fall. Many of these applications at the City may not have an actual map in them, but they can still make use of web services that are running spatial processes under the hood or behind the scenes. And then, at the top of this stack shown here are system integrations. This is where, as Harvey Arnone mentioned, systems that support business processes are

integrated with GIS to take the data to a whole different level. More and more, City departments are configuring light weight apps for their own use, making use of the authoritative single source (unintelligible), data layers, and building on top of the City's infrastructure platforms.

This diagram here is a representation of many different business system integrations at the City that make use of GIS under the hood. Going across the top are elements of departments that most heavily make use of GIS. And going down each step are examples of types of systems that are GIS-enabled, whether they are permitting systems, customer relationship management systems, asset management systems, work management systems. Those are just some examples of the systems that then are able to spatial analysis and visualize the business system data in different ways than they would just using graphs and spreadsheets.

I think I would like to hand it off now to Chad Phelan who will talk a little bit more about our GIS, and what is on the horizon for us.

Chad Phelan: Thanks, Zinta. So, you've heard about how GIS is being used at the City. You have heard where it came from, and about some of the services we provide. So, I will talk a little bit about what we're doing, looking to the future to expand what we provide and continue to be able to provide the services that we do.

Originally, GIS was much more of a specialized thing. There were professional GIS people who had high-end work stations that did GIS work, and they worked with fancy databases. Oftentimes, the products were paper maps. As you have seen in the gallery that Stephen Beimborn showed, and some of the services he talked about, that has changed a lot over time. These days, we produce interactive web mapping applications that can be used on mobile devices as well as web browsers and work stations. We also make those available to users of all types. Some people just want to view data. Others just have an editing process, or maybe they use it in the field, and all the way up to the full-blown GIS professional. That has been our focus over the last five to ten years where this has expanded a lot, and our efforts are very much in expanding the use of GIS to these types of users and devices.

Another way we are expanding access to GIS is by making it more accessible. In April 2024, the Title II of the Americans with Disabilities Act now includes digital accessibilities for all public-facing content. The City of Seattle has until April 2026 to make all public-facing digital content accessible. We take this very seriously in GIS, and are going over all of our applications to make them more accessible. GIS can be a little bit challenging on the accessibility front, because they are very interactives, and often very visual focused. So, while we are using a range of techniques to make them more accessible, making them more compatible with screen readers, using cartographic techniques like enhanced contrast, and colors, we know that a map is not always the right solution for every user. As Stephen Beimborn said, with the water outage map, we

also provide a list version of that same application, which is being shown in the image here. On the right is a list showing outages close to the user or affecting the user. We are taking that approach on a lot of our applications.

Another way we are expanding access to our GIS is by working with others at the City, and following other City initiatives, one of which is the One Seattle data strategy, which is an initiative to make Seattle a data-driven city, and make data easy to find, easy to analyze, and easy to use. That is very much on our minds in GIS data, and an example that Zinta Smidchens talked a little about is by making our data not having a lot of duplicates of our data, having standard data that can be used by everyone. This initiative which we call the 'common data layers initiative,' and taking the reference data that is used across the City, putting it online in the Cloud so that it is highly scalable and reliable, and then making it available to City employees on multiple platforms. We also make it available via Open Data in most cases. So, we're taking an open by default approach to this data. And what that means is if there is not a reason to hide the data for privacy or security reasons, then we share it out with the public. And that has a couple of benefits. One is that we are providing a common set of data for the public and City staff to see. It also makes it easier on us, because there are not as many versions of the data that needs to be maintained.

This is great. GIS is used in the City more than ever before. We are getting more users. But that leads to more work on us to make sure that it stays secure and responsive, because if GIS services aren't reliable and transparent, then people aren't going to use them. Three graphs here that show some of the trends that have been happening. On the left, there, the data processing that, as we make data available in more locations, and to more people, we have to move data around more. So, some of the services we have provided for a long time continue to increase the number of things we do. We are also adding additional capacities capabilities. So, the middle graph shows that we stood up a new web mapping platform internally in 2020, and it has quickly grown to more than 2,000 users. And then, the third shows how we are trying to respond to this. These are the servers that we manage in GIS, and starting in the couple of years leading up to 2020, there was a huge spike in the number of servers as we stood up these new capacities. as we got used to these, and have been trying to figure out ways to continue to provide the same services with less infrastructure, so that it remains sustainable.

How are we doing that? we are taking an approach of modernizing, standardizing, and then protecting our services so they remain responsive, trusted, and secure. We want all of our systems to be as modern as they can be so we are not hit by legacy software problems or unpatched bugs. Modern systems are easier to maintain. That is something we are really focused on. We also want to standardize. We don't want to have a whole bunch of versions of different software, or duplicate data systems of this data. Once we have a more limited set of trusted systems and data, we can really focus on protecting that data. so that data and maps can be made available to users, to the Cloud, in a very secure way, and then we can make them available where appropriate to the public.

This is great. We are working on keeping our services up and running, and it is going fairly well. But we know we also need to focus on what is around the corner. Some of the things that we are focusing on that are upcoming, one of those is Artificial Intelligence that I am sure you are aware of, and has been very much in the news as of late. We're looking into how we can use this in GIS. We are being very cautious about the Generative AI large language model and things like that. One area that has a lot of promise for us is the ability to identify objects in aerial imagery. We have very highly detail aerial of the City that we purchased. And the ability to get more out of that data and identify objects in it is very promising. So, one area of focus is on the Seattle Department of Transportation pedestrian infrastructure and identifying aspects of that that are not currently inventoried. Another thing we are looking at is new uses of GIS in new and exciting events, like the FIFA Club Cup that is happening this summer, and the FIFA World Cup that is happening next year. GIS is being used to plan for those events. It will be used to coordinate and to protect those events. We are also exploring Digital Twin technologies. This is a group of technologies that seeks to model the earth in more detail than before, often with 3D technologies and new imagery approaches. One exciting thing here is that we are working with our CAD team (Computer Aided Drafting) to essentially bring more new construction projects into our GIS system. Those are a couple of the project we are working on to improve our GIS system. And I will turn it back over to Harvey Arnone.

Harvey Arnone: Thank you, Chad, and thanks to Zinta and Stephen. I just want to mention that they are three of the many people on the City's GIS team. This is a really high-performing team that I am very proud of. The team has a lot of passion for this and the services they can provide to the City departments, and to the City overall. It's just a really great group of people, and I hope you got a feeling for that as we were going through the work that we do.

I haven't been able to check the chat to see if there are any questions that have come through. We can open up for questions now. And there are also some links here that you might share afterwards. Can we share the PowerPoint?

Vinh Tang: Yes, I will share the PowerPoint after the meeting.

https://data-seatlecitygis.opendata.argis.com

https://data.seattle.gov

gismaps@seattle.gov

From chat: Phillip Meng 4/8/2025 7:02 PM • maps.seattle.gov/seattle-city-maps

data-seattlecitygis.opendata.arcgis.com

data.seattle.gov

Phillip Meng: I did put the maps in the chat.

Harvey Arnone: Thank you. Did someone have a question?

Phillip Meng: Thanks so much, folks. Does anyone have their hand raised? The floor is open for questions.

DeiMarlon Scisney: Awesome. Thank you so much. I actually have a couple of questions. My first question is in regards to the relationship. I'm familiar with SPU's work in GIS. I've worked with the and subcontracted with them and other organizations. But I'm curious, because SPU themselves have their own GIS analysts and engineers that work specifically within SPU, but then you all at the City also work in collaboration with those organizations that I saw through SPU to the seven other organizations that were listed on the PowerPoint. My question is what does that relationship look like? How are you all interacting together? Do you all have your own engineers and analysts? And then I have a follow-up question just in regard to the community side of things, but first this question.

Harvey Arnone: Okay. That's a really good question to start with, so thank you for that. I'll take a stab at it and you guys can weigh in. Part of our Seattle IT GIS team came from SPU, because the City's central GIS office was located in SPU, due to its tie to engineering, which is run out of SPU and still is. During our City reorganization, many of the GIS professionals in SPU that were providing citywide services were moved into a consolidated IT department. But we work very, very closely with the GIS team and with SPU, as well as other SPU staff who are using GIS. So, we are very connected with them. But the same is true with every City department. Stephen, maybe you can describe the jagged edge.

Stephen Beimborn: My connection came when a lot of the GIS analysts were transferred to IT, during that IT consolidation. Some departments kept their GIS analysts. Some sent them to IT. I kind of roped them all in and put them all together and created a team. And we call it the jagged edge. We try to meet the departments we kind of complement. Some departments have no GIS staff, and we do all of their GIS. Some of them have very capable GIS staff, and they just need some of the higher level. They might need servers set up, like Seattle City Light has a very talented staff and a lot of capabilities. We work very collaboratively with them. Zinta, for instance helps to negotiate the contracts with the vendor, and everybody in the City is using the same contract. So we have both pricing or both negotiation on that kind of thing. So, in so many different ways we work collaboratively with the other City departments.

From chat: Jayson “BAMA” Morris 4/8/2025 7:04 PM • How does the city ensure that GIS data is kept up-to-date and accurate across different departments?

From chat: Jayson “BAMA” Morris 4/8/2025 7:04 PM • How is GIS being integrated into climate resilience and environmental monitoring efforts in Seattle?

From chat: Jayson “BAMA” Morris Jayson “BAMA” Morris 4/8/2025 7:06 PM • Are there any plans to integrate AI or machine learning with GIS for predictive analytics in city planning? Can you talk more on this area? Thanks. :)

From chat: Dorene Cornwell 4/8/2025 7:07 PM • Does the city have any kind of map of what broadband technologies are available where? Examples, home WIFI? , unused or partially used "dark fiber?"

Z**inta Smidchens:** You were talking about the people side. On the technology side, we have one central database that many departments are maintaining their data in. But it's one central database that is centrally curated, managed, backed up, upgraded to new versions, that sort of thing. So, we have one set of standards by which the spatial data is being maintained and stored. But the subject matter experts are in the departments, so it is true that it's maintaining its own data, but it is on a central platform. The Department of Transportation is maintaining their spatial data, but it resides in a central platform. Having it standardized and centralized in that way then makes it that much more accessible to other departments that may want to consume it. That's not just maintaining the roads, but every other department that is interested in seeing where those roads are. The other departments are not maintaining the data, but they are seeing it. They have immediate access to it. That is part of that partnership. There are some data sets that we maintain centrally, in the IT GIS team, and those are the street network data set, the common place names, the addressing because pretty much every other department is dependent upon that data. So that is maintained centrally. Does that help, D?

DeiMarlon Scisney: Yes, that was very helpful. Thank you so much. My other question and the question that was in the chat, too -- my other question was just around community. I do a lot of AI enablement, data enablement in community and so I am curious about what I can take back to community, because when you mention GIS just to everyday people in community, specifically BIPOC individuals, a lot of people don't understand the power of GIS. So, I m curious, from being able to understand the neighborhood, locate community resources, track City services, all of these things, is there and education or training that the City is providing or looking to provide to make GIS more accessible to the non-technical individuals.

Harvey Arnone: I can say that we do not have any programs or specific training for the public. Zinta, do we have any learning documents that are focused on outsiders, or is it all internal?

Z**inta Smidchens:** No. The learning documents that we have created are for staff on how to operate within the City's environment. We could look into what does our vendor offer to the public at-large. There is a fair amount of learning that can be done on these web sites. There is some training that is only accessible to organizations that are paying

a maintenance fee. So there is training that is available to staff that is not available to the public at-large. But there is some learning that is available to the vendor, and they host a massively open online classes, books, that are available to the public at-large. Those are some resources.

Harvey Arnone: I was going to mention that we have an open data site and you can actually go there and start making maps, turning different layers on right from the open data site. And there are hundreds of layers there to download, but you don't have to ....

DeiMarlon Scisney: Going back to that, I'm so sorry. But we have a data analyst or data engineer and having that background, I completely understand that. But common community people won't understand the possibilities behind that. Our people learn by doing, and so I don't know if there is any types of trainings or education. But I will take it back -- I'm familiar with the certifications, all of those, so I can take that back to community.

Harvey Arnone: I will say, D, that we used to go to the library and have office hours there. There was a special work station there and people could use it. But now it's on your phone. You don't need to go to the library.

Stephen Beimborn: Two last things on this topic. One is that King County does host some training courses that people can sign up for. I think that those would be a little more advanced and probably not geared towards the general public. They are more towards the professional. I'm totally open if you want to contact me. We can have a session on this. Frankly, you've peaked my interest in this a little bit, so I would be open to talking to you and getting a little deeper into this.

DeiMarlon Scisney: Awesome. Thank you.

From chat: Tang, Vinh 4/8/2025 7:10 PM •

Hi Dorene,

I am aware of the following websites:

Free Public Wi-Fi - Tech | seattle.gov

Screen reader accessible version: https://maps.seattle.gov/publicwifi

Digital Equity State Legislative Update

Stephen Beimborn: 2nd Jayson question...

From chat: Robert Kruse 4/8/2025 7:13 PM • Have any legal policies been converted into their own data layers that can be queried by API?

Harvey Arnone: There are a couple of questions in the chat thread. I don't know how much more time you want to give us.

Phillip Meng: All of the time we need to answer these questions. We should have a short rest of the meeting, but thank you for your patience.

Harvey Arnone: So, Jayson “BAMA” Morris' question: How does the city ensure that GIS data is kept up-to-date and accurate across different departments? Zinta addressed part of that in that we have citywide standards. They work within our environment. We provide them with tools and so on, but but every different major layer, key layers, like for example, our legal layer, which contains the lots and blocks and a survey layer, addressing, which is really important to 911, and then, some of the department layers like the (unintelligible) structure. That's what needs to be held at a really high standard. So, they have accuracy standards that they adhere to. And then there are quality assurance processes that are integrated into the editing practices. So, someone will update the GIS from an engineering drawing or whatever their source might be, and then someone else on the team will review that and validate that it is correct as it is. So, those are some of the basic practices. Does that answer your question, Jayson? Then I will move on to your next question: How is GIS being integrated into climate resilience and environmental monitoring efforts in Seattle? Of course, there are several different departments that are doing work on this front. We've got the Office of Sustainability and the Environment. But we've got other departments like SPU and City Light, who are invested in these particular topics. I am actually come unequipped to bring any particular analysis that we're doing, other than sea level rise, but....

Stephen Beimborn: SPU's draining system is kind of messed up when the water table rises, so our engineers are really trying to figure out how to....

Harvey Arnone: I just want to finish my thought. The map gallery that is public-facing may have a couple of examples that fall under this category.

Z**inta Smidchens:** The Office of Sustainability and the Environment has done a lot of work with tree canopy and the City. They've got a number of projects underway and some relatively new hires who are also diving into making use of GIS for many of their projects. We don't have a lot of examples here to bring to the table, but we know that there is a lot of effort within the OSE.

Harvey Arnone: Thank you, Zinta. These are really good questions. I'm enjoying this. So, Jayson, your next one: Are there any plans to integrate AI or machine learning with GIS for predictive analytics in city planning? Can you talk more on this area? Well, before we get to predictive analysis, we can mention a couple of ways that (unintelligible) AI play in a role. Chad Phelan, do you want to just mention some of the testing that you have done?

Chad Phelan: I will say that we are a little bit early days on this. We are still exploring what techniques are useful to us. Because, prior to this, we have used AI services we purchase in products we purchase from vendors, like the impervious cover. We have a data set that was generated through AI from a vendor. But we are looking to do that in-house, so we are focused on things that are relatively easy, and not so much the predictive. More of just what is there now. I think as we get more confidence in the tools and know that it is available I think we would explore with other departments what they would be interested in. So, we are trying to build the confidence and an assessment of how we would use these tools. That is kind of the space we are in right now.

Harvey Arnone: I would say for some of that stuff, two, three, five years ago, it just didn't seem realistic to use these kinds of tools to develop some of this data. Today, it is still not ready for prime time. But it is moving so fast that I am pretty optimistic about some of these AI tools becoming really functional for some of the data collection and capturing features off of aerial imagery and LIDAR imagery.

Zinta Smidchens: You might want to mention that the AI policy work that is underway right now will help frame how we would flow with it.

Harvey Arnone: Yes, this is referring to -- the City of Seattle currently has two AI policies, the Generative AI policy, and the new one, which should be posted on seattle.gov shortly, the General AI policy. And primarily, these are for City staff so that we can develop a responsible practice. We have found that some of these AI tools to be a little bit dangerous from a security perspective. Some of the things that they are doing re unknown, and so we need to take a very methodical approach to evaluating and not put the City at risk from a security perspective. There is a lot of interest in AI. So, from an IT perspective, we are kind of in the middle. New AI technology is coming fast and furious. Business wants to use it. We need to make sure that we don't expose ourselves unnecessarily to a cyber event. A couple of other ways that AI comes into play for GIS, the GIS tools that we use, particularly the desktop software tools that we use, can be difficult and fairly challenging. I'll just make an analogy: If you have never taken a class in Photoshop or Illustrator, that's a pretty hard tool to use. So, vendors have produced the GIS software that we use by looking to use AI. It's kind of similar to Co-Pilot. How can they make the tools easier to use? Now, the last thing I will say on this AI front, getting into your predictive analytics question, is we are starting to get into, when we are talking about predictive analytics, we are starting to think about data science. And that is one of the high priority initiatives for this new division that we have created in Seattle IT, gaining enablement. So, standing up the data science of foundation practice and training, and then helping the City departments to understand their business and what sort of predictive analytics can we do and support in the departments. There's not a lot of that going on right now. We have done some capacity modeling with infrastructure under this scenario. Where will we have a bottleneck? Where will the problems occur? Some examples like that. Transportation is a huge venue for this type of analytics, and we're really starting to have talks with their data architects and data analytics folks over

there, as well. We're just getting started on that. Dorene Cornwell has a question. Does the City have any kind of map of what broadband technologies are available where? Examples, home WIFI; unused or partially used "dark fiber?" We have the WIFI map.

Stephen Beimborn: Vinh Tang and I both posted to that. That is a perfect example of one we did make. You type in the address, it will tell you the nearest location. I don't know that that has been done for that map yet.

Harvey Arnone: There is a screen reader version of the public WIFI, which will be a little bit different than -- I missed the part of the question about the broadband vendors.

Dorene Cornwell: This is actually helpful. I will probably go and mess around with where the WIFI is just because that is one of those digital inclusion pieces where people have really limited data plans, and they can find public WIFI and know hoe to use it. That can be a real extender. I did specifically have in mind dark fiber. Because I know from previous conversations that at different points, Seattle or other entities have put in fiber. And so, one question is how old is it? Is it still usable? If I am building a building, and wanting to think about how to easily enable internet access, what dark fiber is around is a question that would occur to me to ask, but since I don't build very many buildings, I don't know if that is something that would come up for other people.

From chat: Tang, Vinh 4/8/2025 7:10 PM •

Hi Dorene,

I am aware of the following websites:

Free Public Wi-Fi - Tech | seattle.gov

Screen reader accessible version: https://maps.seattle.gov/publicwifi

From chat: Stephen Beimborn Beimborn, Stephen 4/8/2025 7:16 PM • https://www.seattle.gov/tech/reports-and-data/internet-for-all/internet-for-all-seattle-dashboards

From chat: Beimborn, Stephen 4/8/2025 7:17 PM • https://www.arcgis.com/apps/dashboards/c6f477cfb51742c8b0ab62d983ef2e73

From chat: Robert Kruse 4/8/2025 7:13 PM • Have any legal policies been converted into their own data layers that can be queried by API?

Jon Morrison Winters: It is definitely an issue that we are looking at, as far as the Internet for All initiative. One thing I will point to is that the FCC has produced a map that show internet access at a location level, an address level. And so, you can dial

down all the way to Seattle. The other thing to think about, in terms of your question about dark fiber, is yes, there is a lot of fiber owned by the City. Oftentimes, it is maintained by different City departments. We have done some investigation within the digital equity team to try to determine if that would be useful for digital equity purposes, and that is very much still a work in progress. We're trying to figure that out, but it is really complex. Part of the challenge is what is needed for using City fiber for digital equ8ity purposes would be an understanding not just of where the fiber is and who owns it, but an understanding of traffic management and a bunch of things.

Vinh Tang: Dorene, the one thing I will add is if anyone wants to apply for a permit, dig up a street, we want that developer to know what is available down there. So, there is a checkbox just for fiber and broadband where there is coordination. We don't want the street dug up three times over a three-month period. It should be dug up once, and if there is an opportunity to coordinate with developers or whoever, there is that coordination.

Dorene Cornwell: Great. Thank you.

Harvey Arnone: Robert Kruse, you won the hardball award of the evening. The question is: Have any legal policies been converted into their own data layers that can be queried by an API? (overtalk)

Stephen Beimborn: I know that we've met those for the police department. When talking about the police department, City Light, and the police, (unintelligible) infrastructure for privacy reasons. and I know within their boundaries, they've got this open zones. I think if they're not common data layers, they will be soon.

Chad Phelan: I don't know if this is what you're going for, but legal rights-of-way are in the GIS database -- the layers that we provide on open data, there is arrest API that you can look up on arch GIS arrest API on how to interact with those. So, I think that would apply. And one other kind of legal -- this is not necessarily in an API fashion, but we have a mapping application for opening a marijuana business. So, there is a map that shows where all of the schools are and bus stops, the things you have to be a certain distance away from, so it's kind of an interactive application to locate where it is possible to put a marijuana dispensary.

Robert Kruse: I will be putting on a program called WA AI Over 5G I will be working with a major law firm and a major 5G carrier. I will also be working with some of the leading legal AI experts in the world, especially coming out of Europe, where there are advancements in AI there that we don't have here yet. But we could expect our consent and privacy laws to be potentially turning into ISO standards, for example, which would allow for (unintelligible), like is this legal. I'm glad to discuss if you are interested. Give me your email. I will be happy to follow up.

Phillip Meng: Fantastic. What a great discussion. Thanks so much for the great presentation. We weren't kidding when we said we are excited about GIS. Please do stop by CTAB often. It is a topic of great interest.

Harvey Arnone: Okay. When we feel we have something new and exciting to present, we will contact Vinh Tang and get on the agenda.

Phillip Meng: Fantastic. We're a little bit over time, but the rest of today's agenda should be fairly fast. The Digital Equity Telecom Forum compilation -- the team is still finishing up a couple of items, so we will move that to next month. On broader board updates and work plan items, this week via committee selection, I want to put out a special ask to folks to consider joining the Outreach Committee. As you can all see, we are doing very important work there on legislative outreach and we would love for more folks to be involved. Finally, moving on to committee updates, do we have anything from the Digital Equity Committee?

COMMITTEE UPDATES

DEI

Coleman Entringer: I don't believe so. Like you mentioned, we are still working on our telecom forum document, and I think we already had the update on 1503.

Phillip Meng: Thank you. Anything else from the Outreach Committee?

DeiMarlon Scisney: Nothing to report to begin with. We are looking forward to having more people sign up for the Outreach Committee as we extend our arm into advocacy.

Phillip Meng: Yes. Please, folks, join what is and will continue to be a very, very important committee. Next month, we are also excited for our first round of reports out from the committees, as we get going.

DeiMarlon Scisney: Real quick, I wanted to ask what is the best way to deliver the database? I can contact you and Vinh Tang, and email and you all can check out the database. One of the missions of Outreach was to create a central database that we can use to use out to people around the legislative process, etc. Can we just share that with you and Vinh Tang? Or how do you want us to proceed with that.

Phillip Meng: Yes. If that works, you can share it with Vinh and me and then we can share it out to the whole board for their contributions.

DeiMarlon Scisney: Awesome.

Phillip Meng: Great. With that, we go to our last agenda item, public comment. Does anyone have anything to say?

PUBLIC COMMENT

From chat: Jayson “BAMA” Morris 4/8/2025 7:32 PM • GIS is an incredibly powerful tool for making data-driven decisions across Seattle. As we discuss its role in city operations, I’d like to highlight a few key considerations:

• Equity & Accessibility: How is GIS being used to ensure that all communities, especially underserved neighborhoods, receive equal attention in infrastructure planning and public services?

• Public Engagement: Many cities are leveraging GIS for interactive public dashboards. Are there plans to expand open GIS data access so residents can explore and contribute to decision-making?

• AI & Predictive Analytics: With advancements in AI, is the city exploring ways to use GIS for predictive modeling—such as identifying areas at risk for flooding, traffic congestion, or emergency response delays?

• Privacy & Ethical Use: As GIS collects vast amounts of location-based data, what safeguards are in place to protect residents’ privacy while maintaining transparency?

Seattle has an opportunity to be a national leader in leveraging GIS for smarter, more inclusive urban planning. Looking forward to hearing more!

Dorene Cornwell: My basic question is -- I guess I kind of have a reflex whenever people talk about sharing data. What level of privacy have you promised the people who you are sharing data to, because I have conversations all of the time, where somebody says 'we will not give you our list,' but we will pass stuff along. I don't know if CTAB needs to think about that because I think that Outreach is really important. But have you thought about it, or have you promised anybody privacy or explicitly said we are going to share your data all over the place. I would be interested in knowing what your thinking is about that.

DeiMarlon Scisney: Yes. You know that I am all about data privacy and data governance. And so, for me, it should first be sent to Phillip Meng to go over. And these lists are commonly populated with digital equity initiatives, so DELN -- I've worked with Sabrina Roach, who has a position with the Office of Equity, as well, and others, to collect these and to aggregate these lists. So, with that, I would be more than happy to work with Vinh Tang and Phillip Meng, once they have looked over the lists and have solidified that this is good, to maybe send out an initial email for this specific listserv, and then from there, we can move forward. Thank you so much for bringing that up.

Phillip Meng: Thanks, Dorene. Totally good point. With a board that has a Privacy and Cybersecurity Committee, I think it is very fair that we ought to be modeling best practices across the board. And Jayson, thanks for that statement in chat. Indeed, as this whole conversation states, this GIS is very powerful. Great! If nothing else, and I'm

seeing no other hands. thank you very much for participating in such a great discussion. Have a great evening, and we will see you in May.

ADJOURNMENT