

TRANSCRIPT

LEGISLATIVE COUNCIL LEGAL AND SOCIAL ISSUES COMMITTEE

Inquiry into the Victorian Government's COVID-19 contact tracing system and testing regime

Melbourne—Wednesday, 18 November 2020

(via videoconference)

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WITNESSES

Mr Charles Agee, General Manager, Global Technology Services Australia and New Zealand, and

Mr Ralph Klaassen, Safer Planet Solution Architect, IBM Services.

The CHAIR: Good afternoon, everyone. Welcome back. I am very pleased that we have IBM joining us. We have Mr Charles Agee and Mr Ralph Klaassen. Thank you so much for making the time this afternoon to join us in what I am sure will be an interesting session. My name is Fiona Patten. I am the Chair of the committee. My Deputy Chair is Dr Tien Kieu. We have Ms Kaushaliya Vaghela, Dr Catherine Cumming, Ms Melina Bath, Ms Georgie Crozier, Mr Lee Tarlamis, Mr Enver Erdogan and Ms Wendy Lovell all joining us today.

I would just like you to know that all evidence taken at this hearing is protected by parliamentary privilege, and that is provided under our *Constitution Act* as well as the standing orders of the Legislative Council. This means that any information you provide is protected by law. However, if you were to repeat those comments outside, you may not have the same protection. Any deliberately false evidence or misleading of the committee could be considered a contempt of Parliament. Obviously we are broadcasting but we are also recording, and we have a Hansard team listening to every word you say. They will provide you with a proof transcript of this, and I would encourage you to check that transcript to make sure we have not misrepresented you in any way and have spelt your names correctly, but I am sure our team will do that. If you would like to make some opening remarks, we will open it up for a broad committee discussion after that.

Mr AGEE: Thank you, Madam Chair. I would like to start off today by thanking the committee for the invitation to participate at today's hearings alongside my colleague Ralph Klaassen. My name is Charles Agee, and I lead the Australian and New Zealand operations of one of IBM's largest business units, Global Technology Services. Mr Klaassen is a Solution Architect for one of IBM's products, the i2 intelligence analyst platform, and was involved in IBM's dealings with the Victorian government on matters related to COVID tracing. IBM appreciates the opportunity to contribute further to your inquiry. In the hope it assists the inquiry, I thought I would set out briefly an outline of IBM's key dealings with DHHS on its COVID tracing work. IBM was approached by the Department of Health and Human Services—I will refer to that as DHHS—on 18 July 2020 to determine whether IBM's i2 analyst platform could assist DHHS. We were informed by DHHS that it had been made aware of the potential for the i2 platform following briefings from the commonwealth, who had seen demonstrations of the i2 platform's capabilities.

The i2 platform is an IBM product that automates ingestion of both structured and unstructured data and then presents or visualises this data and the data's relationship, allowing geospatial, visual, temporal and social analysis capabilities to assist an analyst. The technology has been globally used by police for criminal investigations and by national security services for intelligence analysis to assist visualising and analysing the key elements of who, where and when are common across all of these use cases. Importantly, however, the i2 platform is designed as an analyst tool, intended to assist a user in performing their analysis. It does not have the capabilities to automate the analysis or to make predictions; therefore in that capacity it is not an AI tool.

Following DHHS's approach and given the unprecedented COVID public health emergency at that time in Victoria, IBM immediately arranged for subject matter experts to provide a series of demonstrations and briefings to DHHS staff members concerning the i2 platform and its capabilities. DHHS then initiated contract negotiations for the implementation of use of the i2 platform in DHHS's environment, on 20 July. The contract was structured with an initial two-month build stage with licences for that purpose. Upon successful completion of stage 1 DHHS would, if it wished to do so, purchase the required licences of IBM i2 and a third-party software supplier. The contract allowed DHHS the capacity to withdraw from the arrangement after the first two-month period—we might call that stage 1—by giving notice of its intention to do so and without incurring any further cost.

On 1 September the project formally commenced and IBM had its first access to the actual pool of data that DHHS had available to it. During the month of September IBM and DHHS engaged in a range of activities, which broadly involved design meetings and workshops with DHHS, identifying the data most relevant from that pool for tracing analysis, evaluation and confirmation of data schemas, demonstrating visualisation of the data, implementing the software in a test and then production environment, confirming the correct data was

being sourced and how the data could be presented to the analysts. Following training of the DHHS data analysis team on the i2 platform and a two-day period of use in early October, DHHS directed IBM to consider prediction and alerting automation using the i2 platform and provide indicative time lines for completing that process. This was complicated and presented challenges, because as I mentioned earlier, the i2 platform is designed to be an analysis tool, but its capabilities do not extend to automate analysis or predict an alert. IBM worked to put forward some potential solutions to try and address the requested automation, including how limited data availability would impede the requested automation process and suggested approaches to address these data gaps. This led to IBM being asked to present to the DHHS CIO and data analysis team on Friday 9 October on potential options to provide prediction and alerting automation. During the week beginning Monday 12 October it became clear to IBM that the DHHS data analysis team required a system capable of alerting them to significant events or conditions that should be followed up by an analyst, in contrast to an analyst using the system to discover these conditions or events.

On 14 October the DHHS project manager requested IBM stop work on the i2 platform deployment. DHHS subsequently indicated their intention not to proceed to the next stage using the i2 platform's capabilities as its requirements had evolved. At this juncture DHHS approached IBM and at least one other company to discuss a further project to explore a solution capable of automated prediction and alerting. IBM's response was to offer a six-week engagement at no cost to DHHS to look at solutions to augment the i2 platform with IBM's AI platform to provide the prediction and alerting automation. Ultimately, however, following a communication on 11 November, DHHS indicated it would not progress to the next stage of the project, to provide prediction and alerting automation. I would be happy to respond to any questions the committee may have to further assist the inquiry.

The CHAIR: Thank you very much, Charles, for that. I understood most of the words, and I am sure most people did as well. It sounds like what the government is looking for is something that can provide alerts or predictions that things are going askew, that the virus is going on a path that will harm our community. Do you think there is a product out there that would meet the needs of what they are suggesting they are looking for?

Mr AGEE: I am certainly not an expert in that particular area of all the products on the market that might provide sort of automation predictability in that regard. I know our platform is an analyst platform. It analyses all the data. But I am not aware. I am not certainly an expert in that stage. I can certainly ask my colleague, Ralph, who perhaps is more au fait in that area—Ralph, if you are aware of any other product that would do this?

Mr KLAASSEN: I think there is a range of solutions out there that companies are offering, some of the biggest names on the planet in fact, around the use of artificial intelligence and how that can be applied to analyse large pools of data—defined, if you will, trends—and then basically alert to those trends that are emerging. So I do not think there is a single solution; I think there are lots of options that could be applied. The fundamental aspect to it really is that the requisite data is actually in place to enable that prediction to happen.

The CHAIR: I guess I am trying to understand why they did not go forward with the AI platform or whether it just was not what they needed or was not going to meet those needs.

Mr AGEE: I am not sure, Madam Chair. Perhaps it is a question better posed to the department.

The CHAIR: Yes.

Mr AGEE: We know that the i2 platform was certainly described, evaluated and ultimately deployed in a production environment and performed to the specifications of what our product and our platform does. Perhaps I guess that question is probably best asked to the department.

The CHAIR: Yes, yes. Well, we are seeing them on Monday, so good. Thank you. Deputy Chair Tien Kieu.

Dr KIEU: Thank you, Chair. Thank you, Charles and Ralph. So sorry, I have been interrupted by some very urgent things at home here, but my understanding is you have a platform which is to have the analysts to make decisions, and then you were asked to provide a platform to guide the analysts in terms of using AI for automation and indication and alerting. So my first question is: the first platform, is it still on with the DHHS? The second question may now be hypothetical because that was not continued with the DHHS on the AI. As I understand it, with the AI system, but particularly newer networks and so on which I had been playing around

with sometime in the past, it is very data hungry and also very data intensive in order to train the system. But COVID is still panning out worldwide. I do not know how much data we have in order to train the system. So, relating back to the first question, your i2 platform, is it still on with the DHHS or not, and has it been deployed elsewhere for the same purpose in the world?

Mr AGEE: Thank you. The answer to the question is that we deployed the production environment for the i2 product and were then requested to cease work. I will certainly refer to Ralph to provide more colour and to perhaps answer your second question about data intensity, but I believe that platform is not in use by DHHS today. However, the work done to implement that production environment would mean that that platform could still be available to DHHS at some point in the future, should their needs require that type of tool. Ralph, could you provide some commentary around the data intensity of the platform?

Mr KLAASSEN: Sure. I will actually talk to the first as well. At this point in time the servers are not being decommissioned, right, so the system could be updated with new data and work could continue from a manual aspect from analysts in fact looking at the data. The key things that are brought into the system are really around people, where they live, the places they have been—and it is referred to by the department as ‘case movements’—in order to understand who has been a close contact of an infected person and who has potentially been a casual contact in a public place.

So the data as collected currently by the contact tracers is captured in their essentially interview capture system which—I stayed for and listened to the earlier hearing—you have had described to you. So when we look at the information, we have got the core, right? It is who, where and when they were at particular places. The overarching thing from a data perspective comes down to, from what the department has told me, they like to understand where a contact took place. Okay, that sounds obvious—it is the place they visited, but more importantly, it is not just the place they visited, but other establishments might be close to that particular place, right, so sensitive settings. So that information in the case of easily identifiable things like hospitals and doctors’ surgeries and childcare centres is known, but other situations like hotels, restaurants et cetera are not public in the sense that they are not recorded and held within the data, so basically sourcing that data and bringing that data together is a major part of the challenge.

The CHAIR: Thank you. Georgie.

Ms CROZIER: Thank you very much, Chair, and thank you both very much for presenting to us this afternoon. My line of questioning is really similar to the Chair’s in relation to trying to understand the approach made by the department in I think in mid-July when the cases were rising, and it is absolutely no reflection on you. I am just trying to understand: how many platforms are within DHHS? Who approached you? I think you said it was a procurement person. Did you speak with the chief health officer or anyone involved in the contact-tracing team, and who was that? And in terms of then your cessation—you were asked to cease your involvement with DHHS—it seems to me that Salesforce was then signed on so is there any duplication with what they are doing and what you were doing? So there are a number of questions in there. I am just wondering if you could help me figure those out.

Mr AGEE: I will try to tackle them as I respond to them. I was contacted by Dr Steve Hodgkinson, the CIO of DHHS on the 18th. The nature of the contact was very much around discovery—‘We understand you have capability. We have seen that capability demonstrated in other government forums. Could you demonstrate that capability to us and help our discovery of: is this capability that is going to help our contact tracers to become more effective?’. So that was the nature of the contact. We responded immediately. In fact within a number of hours we had a full team together with the department going through the platform. I am sure Ralph would remember that clearly. And then really in that intervening process—

Ms CROZIER: I see a wry smile there. Is there any reason for that?

Mr KLAASSEN: It was not really a smile. It was a wry smile; it wasn’t you know—

Ms CROZIER: A wry smile, that is what I said.

Mr KLAASSEN: It was an intense time. You know, we started off that process and we were involved in many discussions which started from the perspective of, ‘Well, what does the platform do? What can it do? What capabilities does it have?’.

Ms CROZIER: Was there a sense of panic in the department, do you think, at that point?

Mr KLAASSEN: No, I think it was very measured and inquisitive to understand what there would be. We were also provided with a set of requirements, which were fairly general in nature, which aligned to what our platform is capable of doing, so in particular the temporal analysis and the geospatial analysis and the linkage between common addresses, for example. So those things came to the fore under the requirements and we addressed each of those as we went through. The wry smile, I guess, was I was asked to sit in on some of the legal discussions between our parties and that took a little while.

Mr AGEE: So I think it is important to note that from the 18th when we first had contact, I believe it could have even been on a Sunday, we responded within hours. We formed a team. You know, during that process we found the department to be very professional in fact. I am not aware of any opinion within IBM that the department acted in anything but a professional and competent manner. There was certainly a focus. We immediately went from that initial demonstration of capability through to a multipronged workshop approach where both commercials as well as technical workshops were undertaken in the hope that we could quickly stand up a platform that could assist the department in their efforts.

Relating to I think perhaps your final question, as is often the case in technology projects, the process of discovery and the process of getting, I guess, your hands around something and understanding its capabilities—in that process of applying those capabilities to your business problem it is actually very normal and quite common that your requirements as a client will change. I think that is certainly the case with the department. As we went through the process of standing up the platform the requirements evolved and they kind of evolved from an analyst tool, a tool that analysts could sit in front of and begin to connect dots with, to needing something that was perhaps a little bit more predictive, that would immediately just tell the analyst what to do, as opposed to require the analyst to connect things together. And that is not uncommon in technology projects, quite frankly. I cannot quite comment on the conversations or the engagement that the department may have had with Salesforce. I simply was not privy to those, unfortunately, so I cannot provide any insight. But I know that in our engagement the department acted focused, professional, competently.

The CHAIR: Thank you.

Mr KLAASSEN: May I add something there?

The CHAIR: Yes.

Mr KLAASSEN: To the question around Salesforce, my first knowledge of their, well, participation, if you will, came in mid-September, when our project manager from the DHHS side advised us that the department had made the decision to implement Salesforce. Our understanding is that it was primarily to be focused on the actual mechanics of contact tracing, in the sense of capturing detail and then that detail would then flow ultimately into our system, replacing the older system, PHESS, which was in place.

Ms CROZIER: There was just one question I wanted to know. You dealt with the CIO, obviously, but did you deal with any of their clinical team?

Mr KLAASSEN: During the contract negotiation period, no, though we were provided the set of requirements, which were clearly related to their interest, by the project manager we were engaged with from the department.

The CHAIR: Thank you. If I could move to Kaushaliya Vaghela.

Ms VAGHELA: Thanks, Chair. Thanks, Charles and Ralph, for your time today. Now, from what I understood from the initial remarks that you have made, Charles—correct me if I understood not correctly the technical terms—you are an international company that is working with many countries as they respond to COVID-19. What I am understanding is that your IT system is an analysis product and it does not do the automated analysis which gives the predictive capabilities. Is it unusual to look for a product that does the automated analysis? Because when your system was used, it was implemented, tested, and then it went into production. But is there any product available in the market currently which gives both those capabilities, analytical as well as automated analytical, and if it is there, then will it integrate well with the existing system which DHHS has or probably with the i2 system?

Mr AGEE: Thank you for the question. I would suggest that there is really no normal when it comes to technology deployment—there is no usual or normal. It really does get back to the client, and in that case, DHHS, or perhaps if there was another country globally that might be using the same platform, what their capability is and what their systems might look like, the quality of the data that they have available to them. So there really is no usual or normal in this instance. I think that it was pretty clear initially and in fact throughout that the department was looking for capability that could enhance and in many respects really accelerate their ability in contact tracing. I can speak from the conversations that I have had that that search for that capability was very genuine, that there was a very genuine search for what capability can we use now, with the i2 platform being used in many different government type of approaches, whether it be in police work or in intelligence work or even in the medical field, perhaps, in some countries. I do not think it is unusual at all that they would reach out. Our platform is pretty well known as a very capable platform when it comes to really visualising and bringing these disparate data points together, and it really makes an analyst's life a lot easier. But perhaps, Ralph, do you know of any product out there that would be off the shelf, provide both the type of analysis that i2 would combined with the automation and more predictive capability and could easily fit inside a set of legacy systems?

Mr KLAASSEN: I am not aware of any one specific solution which is capable of addressing that broad range. I will make the statement that I believe that, given the data, the AI technologies which are in the market can be applied and act on the data. I think there is potential there, but really, as referred to by Dr Kieu earlier, data is required to train the model and to work through that process, so I do not think there is anything off the shelf in that respect.

The CHAIR: Of course. Thank you. Wendy Lovell.

Ms LOVELL: Thanks very much, and thanks for your presentation this afternoon. I am just a bit concerned about how many different platforms there are containing data in the state at the moment. I am just wondering if you could just give us a bit of a snapshot—like, what happened to the data previous to your i2 platform? Was that loaded into i2 or is it only the stuff that was between 29 August and mid October? Is it still sitting there in i2 or has it been downloaded into another platform? How do we actually get a detailed response to data in Victoria if we have got all these different platforms with the data spread all over the place?

Mr AGEE: Thank you for the question. Relative to data sitting in so many different places, which I think is getting at the core of your remarks, your question, again this really is not unusual in almost any enterprise. Being able to understand where your data is, how that data is protected, how you get access to that data, how that data gets integrated and then, once it is there, does it stay there or does it go somewhere else—I think that is at the crux of your question. I think what we have seen inside the department is really not unlike most enterprises. Ralph, you would have actually had some hands-on experience with the data coming in in terms of the format of the data. Where was it coming from?

Mr KLAASSEN: From the outset there was a very strong focus by the department on data handling, even from the perspective of who IBM might bring to bear from a professional perspective—whether they are Australian and so on. So certainly data sovereignty and privacy was to the forefront of mind. The data that was provided to us came from the PHES system, which had been pushed into use for assistance in COVID tracing, so it was data capture. They feed that into a data warehouse of their own, and from there it was provided to a database server which our i2 system was sitting on top of. Now, that database server was in exactly the same security zone environment as the PHESS data warehouse. So, as I said earlier, at all times the focus was very much on: where is the data and how can we control it?

Ms LOVELL: Sorry, my question was not really so much about security but about whether all these different platforms are talking to each other so that a complete picture is gained from all the data.

Mr KLAASSEN: I could only refer to the data that we have been provided with, which was that core contact data. If there are other data holdings that the department has and may have in different places, I am not aware of what that is because I have not been advised of that.

The CHAIR: Terrific. Thank you. Enver Erdogan.

Mr ERDOGAN: I wish to give my rights to the Deputy Chair, Dr Kieu.

Dr KIEU: Thank you, Chair. This is something that I am very much interested in. But now coming back actually to the policy and the requirement, I could see that at that stage, when we were at the height of the pandemic—the second wave in our state—there was very much a need for some system that could react quickly in helping the human tracing team in the field. Your system—i2 in particular because the AI was not adopted, it has been dropped—is actually still not decommissioned, so there is still a chance that may be used or employed with the [inaudible] later on. Has the i2 system been deployed elsewhere in the state of Victoria in particular or elsewhere in the world so that there is some familiarity with the usage and familiarity with the capability of the system?

Mr KLAASSEN: Yes, without mentioning specific agencies other than in a broad context, defence and various police organisations in the different jurisdictions around Australia. All of them have people who are using this technology as part of their day-to-day investigative work.

Dr KIEU: Just a follow-on a little bit, may I, Chair?

The CHAIR: Just a little bit; we have got quite a few people.

Dr KIEU: Okay, in that case, you mentioned about unstructured data as well as structured data. So the i2 could handle unstructured data in terms of voice, video recordings and even some of the various texts—optical reading texts—

Mr KLAASSEN: Yes, i2 itself directly does not. We actually leveraged the services of a third-party software provider, an Australian-based company called Sintelix, who perform unstructured text analysis. They also have the ability to pipeline audio transcripts to become then transcribed to written text for analysis. Video—not a capability.

Dr KIEU: Okay. Thank you.

The CHAIR: Thank you. We will go to Dr Catherine Cumming then Melina and Lee.

Dr CUMMING: Thank you for your presentation. It is very technical. I guess my question is around: are you also in communication with the commonwealth government and other states? Obviously, the community was really excited with the COVIDSafe app at the very start, hoping that that would be the solution to being able to have freedom of movement, so they would actually know they had been in contact with somebody who was diagnosed with COVID-19. Looking forward, when you are working with DHHS what are their hopes with your company for the future for the community?

Mr AGEE: Well, I will tackle the last question first and I might have Ralph handle the first question. Relative to the hopes of DHHS, relative, I guess, to the relationship with IBM, which I think, Dr Cumming, is your question, I can honestly say that we enjoyed a very productive albeit short engagement with the department. We found them professional. We had a really good engagement going through the establishment of the platform of i2. However, since then there are not necessarily any additional plans at the moment with DHHS. I believe Dr Hodgkinson knows how to reach me, and we are certainly more than willing to contribute and to lean in and help. We would consider the work that we have done to be valuable, and of course as Dr Kieu stated before, that platform is still there and ready to be used. So there are not necessarily any sort of long-term plans, if you like, between IBM and the department. We will lean in and help whenever asked.

The CHAIR: Thank you. Melina.

Ms BATH: Thank you very much, gentlemen, for being here late this afternoon. Gentlemen, I put my hand up and firmly admit that I am no technology specialist. There are certain things I can do and there are a lot that I cannot. But when I think of IBM I absolutely think of technology specialists, without blowing your trumpet at all. It was a 12-month contract and you were suspended after two months—no disrespect whatsoever. So my interest is: are you in other states in Australia? If so, could you identify them? And in what other jurisdictions are you operating platforms, such as i2 or others, for contact tracing or as a COVID response measure to support those other jurisdictions?

Mr AGEE: Thank you for the question, Ms Bath. In the engagement with the department in terms of exploring the capability of the i2 platform, you know, really evaluation and then standing up a full production

environment, I believe that the department decided not to go to that next phase simply because their requirements had evolved. I do not think it says anything about the platform or about IBM, simply that in the process of standing up this platform—recognising what it does, seeing the way in which analysts were using the platform—their requirements evolved. Now, as it relates to other jurisdictions specifically that we are working with, unfortunately from a privacy perspective I simply cannot divulge details in that regard. You know, as Ralph has said, certainly the i2 platform is currently in play in a number of police jurisdictions, certainly there has been some work with the commonwealth. But in terms of specifics around other contact tracing and other jurisdictions within Australia, state governments where it might be, from a privacy perspective I cannot—

Ms BATH: Internationally, Charles, is that something you have worked on in other countries?

Mr AGEE: I personally have not. Ralph, you might be aware where i2 is being used, broadly speaking, in other places?

Mr KLAASSEN: Certainly i2 as a technology has been used in the US and Europe for many years. In terms of COVID-related efforts, IBM globally has a number of different aspects to that, involving being safe to return to work, health declaration prior to admission to the workplace and other tracking elements like that for deployment by a commercial enterprise to fulfil their own obligations to keep the community safe. There is a range of initiatives.

Ms BATH: Thank you. Finally, I guess there is one last really quick question. You mentioned the DHHS requirements evolved. I am not sure if you can speak to that, but I think it is a very interesting comment, and I still do not understand what that means.

Mr AGEE: I think when you look at it, the very first contact point was around ‘Can you explain the capabilities of the i2 platform?’; then seeing that capability and wanting to evaluate that, and then moving to a phase of actually implementing it in production so we could get real-life data into that platform so that contact-tracing analysts could use the platform, in that process, as often happens in technology engagements, clients learn, clients get experience. They will say, ‘Well, what about this?’ and ‘What about that?’, and it opens up a thought process around ‘Well, where do we want to go in this?’.

Now, you will have to perhaps ask the department a little bit more about their thought processes. I am not exactly privy to that. But I do know that we structured our engagement in such a way that there was a point where that next phase could be opted into, so there was a natural break in our commercial agreement. We certainly wanted to make sure that the capability of a platform was exactly what the department’s needs were at the time. I think by evolving, it simply means that they were learning. They were taking into account a lot of different inputs, and often those inputs I find in technology projects surface in different ways. It is not necessarily something that is just written down. In the beginning they are dynamic. I think along the way the dynamic nature of those needs pointed squarely to having a tool that was far more automated relative to its predictive analysis as opposed to its platform for human analysis.

The CHAIR: Thank you. Now, unless there are any other burning questions, I would just like to thank you both very much. I think maybe we understand—no, we do. Thank you. We really appreciate it. This is such an evolving pandemic. The thoughts and the way we work have been changing very quickly over 2020. Thank you for explaining that to us. Thank you for your time, and thank you for all the work that you have been doing in Victoria. You will receive a draft transcript from us.

Mr AGEE: Our pleasure. Thank you, Madam Chair. We certainly appreciated the opportunity to contribute.

The CHAIR: Thank you very much. Thank you, Ralph; thank you, Charles. Thank you, committee. I think I can call this hearing to a close. Good night.

Committee adjourned.