

# Ottawa Light Rail Commission

Matthew Slade  
on Tuesday, May 24, 2022



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OTTAWA LIGHT RAIL COMMISSION  
OLRT CONSTRUCTORS - MATTHEW SLADE  
MAY 24, 2022  
(Continued from May 5, 2022)

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--- Held via Zoom Videoconferencing, with all  
participants attending remotely, on the 24th day  
of May, 2022, 9:01 a.m. to 11:54 a.m.

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1 COMMISSION COUNSEL:

2

3 Christine Mainville, Co-Lead Counsel Member

4 Emily Young, Litigation Counsel Member

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6

7 PARTICIPANTS:

8

9 Matthew Slade, OLRT Constructors

10

11 Mannu Chowdhury,

12 Paliare, Roland, Rosenberg, Rothstein LLP

13

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15

16

17 ALSO PRESENT:

18

19 Judith Caputo, Stenographer/Transcriptionist

20 Alicia Sims, Virtual Technician

21

22

23

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25

1 INDEX OF EXHIBITS  
2  
3 NUMBER/DESCRIPTION PAGE NO.

4 (None) .  
5  
6  
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8 \* \* The following is a list of documents undertaken  
9 to be produced or other items to be followed up \* \*

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11 INDEX OF UNDERTAKINGS

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13 The documents to be produced are noted by U/T and  
14 appear on the following pages:

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1 -- Upon commencing at 9:01 a.m.

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3 MATTHEW SLADE: PREVIOUSLY AFFIRMED.

4 CHRISTINE MAINVILLE: Good morning,

5 Mr. Slade.

6 MATTHEW SLADE: Good morning.

7 CHRISTINE MAINVILLE: As we've just

8 indicated, you'll be testifying under the same

9 affirmation as previously.

10 MATTHEW SLADE: Yes.

11 CHRISTINE MAINVILLE: And pursuant to

12 the same parameters, if you would like me to

13 revisit any of them, please let me know but the

14 same ones I read the last time.

15 MATTHEW SLADE: That's fine, thank you.

16 CHRISTINE MAINVILLE: Great.

17 So we wanted to discuss maintenance a

18 bit more today, but I just want to ask you first

19 about a couple of points I didn't touch on last

20 time. The first being winter testing.

21 Do you recall whether any dynamic

22 winter testing was done?

23 MATTHEW SLADE: So we were testing

24 during winter. I've never worked on a job where

25 there's been specific dynamic winter testing

1 undertaken. But on this project, on the Ottawa  
2 project here with the OLRT-C, we were undertaking  
3 testing for our winter of 2018 into 2019.

4 So, you know, whilst there wasn't a  
5 specific -- well, there were a couple of specific  
6 winter tests, dynamic ones, but they were very  
7 limited. There was only, I think, two or three.  
8 But otherwise, we were doing, we were testing  
9 throughout that period anyway. So all of the  
10 systems went through -- they went through all  
11 seasons, because we tested for at least 12 months.  
12 So I would say it was tested.

13 CHRISTINE MAINVILLE: Okay. And then  
14 there was the lab simulation testing; is that the  
15 NRC?

16 MATTHEW SLADE: Correct. That was done  
17 before I was there. But, obviously, I've seen the  
18 report. And that was for the onboard systems and  
19 the behaviour of the vehicle in both from minus 40  
20 to plus 40.

21 CHRISTINE MAINVILLE: And were those  
22 results satisfactory?

23 MATTHEW SLADE: I believe so, yes.

24 CHRISTINE MAINVILLE: Okay. And you  
25 said you hadn't seen specifically focused winter

1 dynamic testing done elsewhere.

2 Have you been involved in environments  
3 like the one in Ottawa, in terms of the type of  
4 climate, winter climate?

5 MATTHEW SLADE: I have another project  
6 in Edmonton, which is relatively similar to Ottawa;  
7 and that doesn't have any specific winter testing  
8 requirements, either.

9 So there are, like I said, there are  
10 some limited tests that need to be done, that are  
11 either done to simulate winter, such that -- for  
12 instance, we have, as I'm sure you've probably  
13 heard, there are switch heaters on the guideway.  
14 The obviously active tests that they will operate  
15 during winter, and obviously if your testing period  
16 is not during winter when they are due to be  
17 tested, you can simulate winter with those. You  
18 can buy ice in a can, for want of a better term,  
19 you can get them down to the temperature that  
20 simulates minus 40 on all the sensors and all the  
21 equipment to make sure that they turn on and turn  
22 off. But we actually went through a winter.

23 CHRISTINE MAINVILLE: Right. So in  
24 hindsight, is there any more winter testing you  
25 might do, or would you still deem that sufficient

1 to run the trains and perform other testing during  
2 the winter?

3 MATTHEW SLADE: I think what we did was  
4 sufficient. I think with Ottawa being the way that  
5 it is environmentally, the fact that there wasn't  
6 any specific winter testing required, you know, in  
7 the Project Agreement, may have been a shortfall.

8 I don't know what's in the other  
9 project agreements for the other projects that they  
10 have ongoing at the moment, but I would have  
11 probably, as a result of what they saw on  
12 Confederation Line, maybe added something into  
13 those agreements.

14 CHRISTINE MAINVILLE: Right, okay.

15 MATTHEW SLADE: Ottawa is pretty  
16 unique, environmentally.

17 CHRISTINE MAINVILLE: Yes.

18 And going back to the pretrial running  
19 period, you spoke about that last time, how there  
20 were few days of pretrial running.

21 Do you recall if only single trains  
22 were being run during that time as opposed to  
23 coupled?

24 MATTHEW SLADE: We were running some  
25 coupled trains, but it was pretty limited.



1 CHRISTINE MAINVILLE: Okay. And then  
2 for trial running, do you recall an appendix to the  
3 trial running procedure setting out exemptions?

4 Appendix C was --

5 MATTHEW SLADE: I think that was  
6 done -- I might get this wrong. I think that was  
7 done when it was amended. I think we drafted  
8 something with exclusions, but I can't remember  
9 that it was actually finally agreed with the  
10 exclusions in.

11 I think we drafted some exclusions, but  
12 I think through discussions with the City, I think  
13 we agreed that they weren't required. But I can't  
14 recall --

15 CHRISTINE MAINVILLE: Right.

16 MATTHEW SLADE: -- whether they were  
17 all removed, or whether some of them were removed,  
18 I cannot remember.

19 CHRISTINE MAINVILLE: They do appear in  
20 the first revision and not -- as far as we can  
21 tell -- in Revision 2, which is the final one dated  
22 July 31st, 2019.

23 So they were contemplated, I suppose,  
24 but maybe not part of the final document. But what  
25 were they? What's your recollection of what that

1 was?

2 MATTHEW SLADE: I cannot recall any of  
3 them off the top of my head, I would have to read  
4 the document.

5 CHRISTINE MAINVILLE: Okay. But is it --  
6 were they things that were going to be left out of  
7 trial running, or you don't recall?

8 MATTHEW SLADE: I don't recall. I'm  
9 sorry, I have absolutely no recollection of what  
10 was in that appendix, I'd have to read it.

11 CHRISTINE MAINVILLE: No problem.

12 MATTHEW SLADE: If I knew what they  
13 were, I might be able to comment. But off the top  
14 of my head...

15 CHRISTINE MAINVILLE: Okay. The trains  
16 ran for a couple of weeks after trial running and  
17 before going into service, correct?

18 MATTHEW SLADE: Yeah.

19 CHRISTINE MAINVILLE: Would you have  
20 had any knowledge of how the trains were running at  
21 that point in time?

22 MATTHEW SLADE: Yes.

23 CHRISTINE MAINVILLE: And how was that going?

24 MATTHEW SLADE: We had good days and  
25 bad days, I think is the polite way of putting it.

1 I don't know how to describe it, really. You know,  
2 inconsistent I guess is maybe the other way.

3 CHRISTINE MAINVILLE: Okay, right.

4 MATTHEW SLADE: There were challenges  
5 on some days. Some days were great, some days were  
6 not so great.

7 CHRISTINE MAINVILLE: Okay. And work  
8 was ongoing then, I suppose to fix that?

9 MATTHEW SLADE: Yes. You know, the  
10 vehicles were -- when you say "fix that"; you mean,  
11 to fix the performance or to fix the vehicles?

12 CHRISTINE MAINVILLE: Well, both if  
13 they were connected.

14 MATTHEW SLADE: Sure, I think as we  
15 touched on last time, the vehicles had retrofits  
16 that were required to be completed, they had minor  
17 deficiencies that had to be completed. But then,  
18 obviously, as they were being used, issues were  
19 arising, and those have to be dealt with as well.

20 So there was a constant, I guess, turn  
21 of vehicles that needed attention. And whilst they  
22 may have wanted to be doing retrofit work, if they  
23 had a failure on the line, they would then have to  
24 do corrective maintenance before they could do any  
25 of their preventative, or retrofit, or deficiency

1 work.

2 CHRISTINE MAINVILLE: And did any of  
3 this work, or retrofitting, require any retesting  
4 to be done?

5 MATTHEW SLADE: Some of it might have  
6 done. Well, maybe not the retrofitting, but some  
7 of the maintenance or deficiency work might have  
8 done.

9 CHRISTINE MAINVILLE: Okay.

10 MATTHEW SLADE: As soon as you  
11 disconnect something from the vehicle, you  
12 generally have to go through a level of testing to  
13 prove that when it's put back together, that it's  
14 still working the same way it was.

15 So there is, you know, whether that is  
16 back through -- I know you know we've talked about  
17 SPICO's and DPICO's, etcetera, etcetera.

18 So if key parts of the, either the  
19 train control system or something else that's been  
20 removed then, yes, it has to go back to a test  
21 procedure to validate everything is still working  
22 the same way as it should be.

23 CHRISTINE MAINVILLE: And so whenever  
24 retesting was required, it was performed before  
25 revenue service?

1                   MATTHEW SLADE: I assume so. That  
2 would have been done by Alstom. And that was  
3 after -- you're talking about after revenue  
4 service, you're talking about the two weeks before --  
5 sorry, yeah, after our revenue service  
6 availability, but before service commencement.

7                   CHRISTINE MAINVILLE: Correct.

8                   MATTHEW SLADE: So those vehicles were  
9 then being maintained by RTM and Alstom, so I  
10 wouldn't have had visibility of the paperwork to  
11 evidence that they were doing that, but I can't  
12 believe they weren't.

13                   CHRISTINE MAINVILLE: Okay. And at  
14 that point in time, the vehicles were in the City's  
15 hands, correct?

16                   MATTHEW SLADE: Correct. They had been  
17 sold. So when we achieved RSA, then bills of sale  
18 and car history books were transferred from, I  
19 guess from Alstom supplier to OLRT-C, and then from  
20 OLRT-C to RTG, then from RTG to the City, and then  
21 from the City back to RTM for the purposes of  
22 maintenance.

23                   CHRISTINE MAINVILLE: Got it.

24                   MATTHEW SLADE: But it's just a bunch  
25 of signatures on a document all that happen at the

1 same time, so...

2 CHRISTINE MAINVILLE: Okay, okay.

3 So going into operation, was there a  
4 sense that there may be some challenges in making  
5 the requisite number of trains available for  
6 service on any given day?

7 MATTHEW SLADE: I think every day was a  
8 challenge, because of that volume of work that  
9 needed to be done. I think there was, you know,  
10 sometimes the volume of work was increasing, you  
11 know, the list of issues was getting longer than  
12 the amount that were getting knocked off.

13 You have a limited number of hours  
14 available to do that work, and a limited amount of  
15 space. And I guess there was also limited  
16 resources.

17 I think -- and that's why, as we  
18 discussed before, having a soft opening would have  
19 been beneficial. Because it would have given them  
20 more access, more hands-on time to the vehicles to  
21 resolve those issues, and rectify issues.

22 CHRISTINE MAINVILLE: Do you recall an  
23 operational restrictions document?

24 MATTHEW SLADE: Yes. Not in detail,  
25 though, but try me.

1 CHRISTINE MAINVILLE: I'm sorry?

2 MATTHEW SLADE: I said not in detail,  
3 but I know it --

4 CHRISTINE MAINVILLE: No, I'm not going  
5 to quiz you on it.

6 MATTHEW SLADE: That's normal, right?  
7 All railways have them.

8 CHRISTINE MAINVILLE: Yes.

9 MATTHEW SLADE: They're a very common  
10 document. But they're unique to each jurisdiction.

11 CHRISTINE MAINVILLE: Right. And I  
12 just wonder whether you have any specific knowledge  
13 of whether it was passed on to RTM?

14 MATTHEW SLADE: Yeah, it would have been.

15 CHRISTINE MAINVILLE: By yourself,  
16 perhaps, or others?

17 MATTHEW SLADE: Either under letter  
18 from myself as the project director of OLRT-C, or  
19 purely by document control. But, yes, it would  
20 have gone to the City as the operator, and it would  
21 have gone to RTM as the operator of the system.

22 CHRISTINE MAINVILLE: Okay. Would you  
23 have any knowledge of whether RTM implemented  
24 anything applicable to them from that document?

25 MATTHEW SLADE: I would hope they did,

1 but I can't recall specifically what was in there  
2 that they may or may not have done, but they should  
3 have done.

4 CHRISTINE MAINVILLE: Do you think  
5 there was sufficient time for the maintainers,  
6 whether it would be RTM or Alstom, to review the  
7 documentation they received prior to going into  
8 operations, or whatever important documentation  
9 they needed to review, given how fast paced it was?

10 MATTHEW SLADE: You're talking  
11 generally, or are you talking about the operational  
12 restrictions document?

13 CHRISTINE MAINVILLE: Well, I would say  
14 let's start with the operational restriction  
15 document. But anything else you think would be  
16 critical for them to...

17 MATTHEW SLADE: So the operational  
18 restrictions document, there's been more than one  
19 version of it. It's released, a bit like the  
20 safety certificates for the vehicles, or for the  
21 signalling system.

22 So as the project progresses through, I  
23 guess through a trial running as we approached  
24 revenue service availability, and ultimately into  
25 service commencement, there were different releases



1 of that.

2 And then when certain software updates  
3 were done, and restrictions were removed, and when  
4 certain analysis was done, restrictions were  
5 removed. So that document was updated a few times  
6 in that, I would say month or two.

7 But whilst they might not have seen the  
8 actual document until they received it, they were  
9 party to the conversations about what was in it and  
10 what was being adjusted, or removed, or added. And  
11 certainly the gentleman who was, at the time,  
12 RTM in charge of yard operations, he works with me  
13 here at EllisDon, and I know that he was involved  
14 in those conversations.

15 So, yeah, I don't think that would have  
16 been -- shouldn't have been a surprise to anyone.  
17 And it shouldn't have -- it's not a large document  
18 to read or to digest, either.

19 CHRISTINE MAINVILLE: Right. And so  
20 would that be Claude Jacob, the person you're  
21 referencing?

22 MATTHEW SLADE: No, Murray Hill.

23 CHRISTINE MAINVILLE: Murray Hill,  
24 okay.

25 MATTHEW SLADE: He was the operations

1 director at RTM when we went into service.

2 CHRISTINE MAINVILLE: Got it, okay.

3 And do you have any knowledge of how  
4 information was transferred from RTM to Alstom for  
5 revenue service?

6 MATTHEW SLADE: No, that was -- I  
7 wasn't involved in that.

8 CHRISTINE MAINVILLE: Okay.

9 MATTHEW SLADE: I know that -- I mean,  
10 at the time, you know, most of the documentation  
11 that OLRT-C were providing to RTM, I think Alex  
12 Turner at the time was kind of keeping track of  
13 what we were handing over. And there was, you  
14 know, occasionally I'd get an e-mail from him  
15 saying, we really need this document or whatever,  
16 and we wanted to know where it was, or whether they  
17 had received it, or the latest version or whatever.

18 But, no, I had no idea how RTM were  
19 flowing documents down to Alstom. I'm pretty sure  
20 we provided, OLRT-C provided Alstom with access to  
21 our electronic document control system. So they  
22 had access to all of the documents. Aside from  
23 them being issued, stuff from RTM, they had access  
24 to our database.

25 CHRISTINE MAINVILLE: Okay. Who would

1 have been part of the systems engineering and  
2 systems assurance team for OLRT-C?

3 MATTHEW SLADE: So we had a few people  
4 that were within OLRT-C, and then we had an  
5 external specialist that we hired from the UK.

6 So internally within OLRT-C, that  
7 department was run, when I was there, by a  
8 gentleman called "Sean Derry". And Sean and I got  
9 along really well, but he's another ex-pat of the  
10 British Government. He's done a lot of system  
11 engineering around the world. And when I arrived  
12 they had already engaged with SEMP from the UK.  
13 And I've worked with them before in the UK, I've  
14 known Derek Wynne for a long time.

15 And so they were brought in to complete  
16 the -- that role of doing the system assurance and  
17 safety engineering.

18 CHRISTINE MAINVILLE: What's your view  
19 of the work that SEMP did and Mr. Wynne did on the  
20 project?

21 MATTHEW SLADE: In what regard?

22 CHRISTINE MAINVILLE: In terms of the  
23 level of competence and quality.

24 MATTHEW SLADE: Derek and his  
25 colleagues are, they're world class, okay? There's

1 not many organizations that do what they do. They  
2 carved themselves out a niche in the industry,  
3 globally. And I think -- and a lot of the  
4 individuals that work with Derek I know, and I've  
5 worked with before on other projects.

6 And I think there's, again, there's not  
7 many people that understand the engineering  
8 standards that they work to and that they fulfill  
9 their duties to. Which is why they were selected  
10 and brought in to work here in Ottawa.

11 CHRISTINE MAINVILLE: Do you know  
12 whether -- or what the City's plans were for  
13 running parallel bus service following the start of  
14 operations, and whether those plans changed in  
15 terms of the duration?

16 MATTHEW SLADE: I don't think any of  
17 their plans -- well, depends on what you mean when  
18 they changed. I suspect they changed when the RSA  
19 dates changed, as we discussed last time. But I  
20 think the City -- and I can't remember the date,  
21 but it's easy to find because it's in the media.

22 The City had a, I guess a specific date  
23 by which they have to notify their bus operators of  
24 redundancies, which would have triggered that date  
25 when the buses would stop.

1                   They were very public about the date  
2 when the buses would stop, and I think that was  
3 also tied into their annual timetable change. So I  
4 think there was a lot of coordination with  
5 timetable change, and redundancies and reallocation  
6 of staff. Because a number of those drivers that  
7 were made redundant became EROs, train drivers.

8                   CHRISTINE MAINVILLE: Okay.

9                   MATTHEW SLADE: So I think it was  
10 driven partly by when they predicted the RSA date  
11 was going to be, and then they counted obviously  
12 backwards. I assume, that's how I would have done  
13 it. The RSA date is here, and you have to give  
14 however many notes some redundancy. And then, you  
15 know, when your timetable changes, because it's  
16 pretty much the same date every year or very close.  
17 But we weren't party to any of those discussions,  
18 that was just --

19                   CHRISTINE MAINVILLE: You just knew  
20 from what was being announced?

21                   MATTHEW SLADE: Yes.

22                   CHRISTINE MAINVILLE: Similarly, did  
23 you know, or when did you understand that service  
24 was actually going to commence on the date on which  
25 it commenced in September?

1                   MATTHEW SLADE: I found out 14 days  
2 before.

3                   CHRISTINE MAINVILLE: So at RSA,  
4 effectively, around there?

5                   MATTHEW SLADE: Yeah. So again, I  
6 think it was the 30th of August, from memory,  
7 around that date.

8                   So we were asked to facilitate a train  
9 ride for councillors and local dignitaries,  
10 etcetera, etcetera. So RTG and OLRT-C provided an  
11 end to end run on the line, at which was followed  
12 by a -- it wasn't a council meeting, but it was a  
13 meeting called by the Mayor where all those people  
14 that had been on the train, went into the council  
15 offices. And then the Mayor and John Manconi  
16 announced that it would open on the 14th of  
17 September. And that was the first I knew of it,  
18 when I sat in that room and they made that  
19 announcement.

20                  CHRISTINE MAINVILLE: Did you have some  
21 concerns about --

22                  MATTHEW SLADE: I was surprised at how  
23 soon that date was. Mr. Manconi had regularly  
24 stated in the media and the Transit Commission that  
25 he would need a minimum of four weeks between

1 OLRT-C achieving RSA, and service commencement. So  
2 that would have been four weeks, and they announced  
3 it was only going to be two weeks.

4 They had also sent us a letter via  
5 Michael Morgan, I want to say during trial running,  
6 which changed the service that we would go into  
7 service at. And in that letter, it said that they  
8 were anticipating opening in Q4 of 2019.

9 So in my head, I had assumed that it  
10 would be somewhere after October the 1st. So when  
11 they announced September 14th, I was a little bit  
12 surprised. That's me being polite.

13 CHRISTINE MAINVILLE: Would you have  
14 conveyed, or do you know if anyone on behalf of the  
15 consortium conveyed concerns to the City?

16 MATTHEW SLADE: I don't think we would  
17 have conveyed concerns to the City. It was a city  
18 decision. We probably conveyed concerns internally.

19 CHRISTINE MAINVILLE: Just going back  
20 to the documentation handover.

21 You would be aware of information from  
22 Thales being provided to the operator, OC Transpo?

23 MATTHEW SLADE: Yes.

24 CHRISTINE MAINVILLE: So that would  
25 have been done through OLRT-C?

1 MATTHEW SLADE: Yes.

2 CHRISTINE MAINVILLE: Okay. And do you  
3 recall -- sorry. Go ahead.

4 MATTHEW SLADE: We received regular  
5 releases of documents with, as I call, software  
6 releases, software builds. Every time a software  
7 release was done by Thales, we would receive  
8 documents highlighting what have changed.  
9 Documents including a new safety certificate, any  
10 new operating restrictions, etcetera, etcetera.

11 And those were transmitted from OLRT-C  
12 to the City. Now, it became apparent in some  
13 meetings, that the operators, OC Transpo, had not  
14 received those documents from City of Ottawa.

15 So it's a bit -- I know we've talked  
16 about some of our organizations having different  
17 heads. The City had two heads as well. So we  
18 would write and correspond -- OLRT would write to  
19 RTG, RTG would write to City of Ottawa. We didn't  
20 write to OC Transpo, it went to City of Ottawa.  
21 And it was then down to City of Ottawa to transmit  
22 that information internally within their  
23 organization. And it became apparent that that  
24 wasn't happening.

25 So I would have meetings with their



1 operations leadership teams, so Troy Charter, Matt  
2 Pieters, etcetera. And I'd say, "those documents  
3 were issued to the City." And they'd have been sat  
4 with Michael Morgan, as part of the City, and  
5 they'd be sat in document control somewhere without  
6 realizing, actually, this is quite an important  
7 document that the operator needed.

8 So there was a huge lag, quite often,  
9 in the City providing information internally to  
10 OC Transpo. And as soon as we knew, you know, if  
11 it came to light that they didn't have those  
12 documents, obviously, I would just e-mail a copy to  
13 Troy and his team in the control room, whoever  
14 needed it, just to say, "hey, it's officially been  
15 sent to the City. But here's a copy, because you  
16 need it".

17 But, yeah, I wasn't routinely -- we  
18 weren't routinely aware that when we sent stuff to  
19 the City, the City weren't routinely distributing  
20 it internally.

21 CHRISTINE MAINVILLE: Right, okay.

22 And you've just indicated, I think you  
23 send it -- is it through Michael Morgan, typically?

24 MATTHEW SLADE: Yes. So Michael Morgan  
25 was the City of Ottawa project director. So

1 generally correspondence went from myself as  
2 project director to Peter Lauch as RTG. And then  
3 RTG would normally send my letter with a covering  
4 letter saying, "please find attached" and that  
5 would then be sent to Michael Morgan. And it would  
6 be cc'd to a few other people, but generally, that  
7 was the correspondence flow.

8 CHRISTINE MAINVILLE: In the lead up to  
9 RSA -- well, during the testing and commissioning  
10 and then trial running, I take it track priority  
11 would have been given to those, the testing and  
12 those aspects of the process, more so than to RTM  
13 or Alstom for maintenance preparedness?

14 MATTHEW SLADE: So there is, on any job  
15 of where you have infrastructure, there is a  
16 process whereby you make applications for track  
17 access. Well, it has to be controlled because of  
18 the safe nature of it.

19 And the team that managed track access  
20 reported to me, and the person in charge of that  
21 team reported to me. I don't remember Alstom or  
22 RTM ever requesting access for maintenance before  
23 RSA.

24 CHRISTINE MAINVILLE: Okay.

25 MATTHEW SLADE: And it was -- I mean,

1 they weren't doing any maintenance, and we asked  
2 them to come and either participate, or witness, or  
3 to help them learn, and it was always rejected. So  
4 their involvement was exceedingly limited. Through  
5 their choice, not through us prioritizing our work  
6 over their work.

7 I think they only started to get  
8 involved during trial running, or just before trial  
9 running. When I say "just before", I mean a matter  
10 of hours before. But they were not, other than  
11 resources that we were paying for from Alstom, so  
12 OLRT-C, were paying for some Alstom resources to  
13 participate, because Alstom is a variation, they  
14 weren't supposed to be doing any maintenance.

15 So I hired, I want to say, maybe four  
16 or five individuals out of their future maintenance  
17 organization to come and participate in some of our  
18 maintenance pre-RSA. And some of those people had  
19 either quit before RSA, from Alstom, or some of  
20 them made it through to the -- belonged to the  
21 maintenance, but they were only -- when they were  
22 participating, they were participating as OLRT-C,  
23 because we had subcontracted them, in essence.  
24 Whilst they were an Alstom employee at the time,  
25 they were being directed and working for OLRT-C.

1 CHRISTINE MAINVILLE: What about  
2 congestion at the MSF? I take it there was a  
3 process there as well to prioritize who needed  
4 access, given all the work that needed to be done?

5 MATTHEW SLADE: I'm going to say  
6 99 percent that the movements in the yard are  
7 Alstom's, right? They're not anybody else's. So  
8 they were responsible for producing a plan on a  
9 daily basis as to what vehicles they wanted moving  
10 into what location, where and when.

11 And RTM would facilitate that through  
12 the yard control. But very often what was  
13 expected, was not achieved, either because of  
14 last-minute changes or because the volume of moves  
15 that were required to be done could not actually be  
16 achieved in the timeframe that was required. And  
17 then when that was compounded then with vehicles  
18 that were not performing, that were brought in and  
19 were, you know, you ended up with trains out of  
20 position, vehicles that were not capable of being  
21 moved on their own, it was a very, very challenging  
22 environment.

23 CHRISTINE MAINVILLE: And so as between  
24 Alstom supply or manufacturers, and Alstom  
25 maintenance, was that up to Alstom to manage who

1 would get what trains to work on?

2 MATTHEW SLADE: So we only ever saw  
3 Alstom, we didn't see production -- at that stage,  
4 we didn't see production maintenance, warranty,  
5 whatever they want to call it. You didn't see  
6 that. You got a list of vehicle moves from Alstom,  
7 and that was it. What work they were doing on  
8 those vehicles, whether that was deficiencies,  
9 retrofits, or maintenance work, had no idea.

10 We were just facilitating moving those  
11 vehicles around the yard into different locations.  
12 So we didn't get a list from Alstom production  
13 saying, "we want these trains in these locations".  
14 We didn't get a list from Alstom maintenance  
15 saying, "we need trains in these locations".

16 We just got one list, with moves that  
17 were for us to implement.

18 CHRISTINE MAINVILLE: Got it. Were  
19 there any issues with spare parts, that you know  
20 of, going into RSA?

21 MATTHEW SLADE: Not that I know of.  
22 I'm just trying to think if there was anything.  
23 No, I don't think so.

24 CHRISTINE MAINVILLE: Is it typical in  
25 your experience to have this type of structure with

1 RTM having subcontracted the bulk of the  
2 maintenance to a subcontractor like Alstom?

3 MATTHEW SLADE: It's not uncommon. I  
4 think a lot of maintenance, generally, is  
5 subcontracted out from transit agencies. There are  
6 pros and cons, but it's not uncommon.

7 CHRISTINE MAINVILLE: Did it cause  
8 challenges here for Alstom maintenance not to have  
9 a direct link to OC Transpo as the operator?

10 MATTHEW SLADE: I don't think it  
11 affected Alstom necessarily. I think, I  
12 mean, it's -- it's difficult. I think the, you  
13 know, it's one of those things, I guess if it  
14 performed well, we wouldn't be having this  
15 conversation, so it wouldn't be an issue, right?

16 I think -- yeah, I mean, it's hard to  
17 answer that one, as to whether there's pros and  
18 cons to them -- I think we now, they are now  
19 included in most of the conversations directly with  
20 the City. But that's more through RTM and RTG  
21 almost forcing Alstom to be present, rather than  
22 Alstom wanting to be present.

23 It's convenient for them to have issue  
24 of it by RTM.

25 CHRISTINE MAINVILLE: Are you aware of

1 any challenges early on in operations with Alstom's  
2 system, Alstom maintenance systems not  
3 communicating with the City's IMIRS system?

4 MATTHEW SLADE: IMIRS. Vaguely. I  
5 have, you know, I can't tell you specifically what  
6 I remember. I know there were conversations around  
7 the different systems that the organizations used,  
8 and consistency of what is being put into those.

9 There was also, you know, it was clear  
10 in those early days that what people were writing  
11 down into work orders, or into those systems, were  
12 generally, generally only meant anything to the  
13 person who wrote it, which is never helpful, but  
14 that is something that comes with time. You've got  
15 to be able to write things that are transferrable  
16 to any individual that picks it up and reads it.  
17 Some of those very early ones, you could read it  
18 and you can give it to five different people, and  
19 five different people would understand something  
20 different from it.

21 But with regards to the systems, I  
22 don't have any real recollections.

23 CHRISTINE MAINVILLE: And the issue you  
24 just spoke about, I take it that's a matter of  
25 experience, not having a mature operator, a mature

1 maintainer, perhaps?

2 MATTHEW SLADE: Yeah, possibly. And  
3 the way people explain. Because I guess some of it  
4 is input by the individuals, and some of it is  
5 recorded by our help desk. So it's all down to,  
6 you know, protocol and experience, yeah, I guess.

7 CHRISTINE MAINVILLE: What knowledge  
8 did you have of the maintenance plans, or perhaps  
9 you only got that once you were with RTM. But do  
10 you have a view about the level of planning and  
11 adequacy of the plans?

12 MATTHEW SLADE: So I'll go back a  
13 little bit of the way. So OLRT-C were responsible  
14 for writing high-level operating procedures, and  
15 that included some maintenance procedures.

16 So those were issued by OLRT-C to RTM,  
17 and RTM then reviewed and accepted those, and they  
18 then took those and created their own documents.

19 OLRT-C provided operations and  
20 maintenance manuals for all of their systems and  
21 equipment that were provided as part of the  
22 construction contract. And those generally  
23 included maintenance procedures from the original  
24 equipment suppliers, the OEMs.

25 So it would tell you how to maintain a



1 CCTV camera, or this, that or the other. And RTM  
2 and Alstom were generally trained in all of those  
3 manuals and equipment. But then the actual plans  
4 themselves, some of them I probably saw once I was  
5 involved with RTM. But not for review or comment,  
6 just to know, you know, something came up and I  
7 said, oh, it would be good to see the plan and I'd  
8 get visibility of the plan.

9 I haven't seen many, or any of the  
10 Alstom ones. But I know that RTM reviews those and  
11 audits those, but they didn't get them routinely, I  
12 guess. So visibility of those had been limited, I  
13 would say, my personal opinion.

14 CHRISTINE MAINVILLE: You mean the  
15 visibility during -- even since the start of  
16 operations on an ongoing basis?

17 MATTHEW SLADE: Yes.

18 CHRISTINE MAINVILLE: Do you know why  
19 that is?

20 MATTHEW SLADE: Well, I haven't asked  
21 for a lot of them. Some of them I've asked for,  
22 and some of them I've seen. But I mean, they  
23 exist. But I think, I think -- generally, I think  
24 RTM only sees them if they are undertaking an audit  
25 against them.

1                   So if they're going to do an audit for  
2 Alstom against the maintenance plan, but I suspect,  
3 I don't know, were those plans -- whether the  
4 Alstom plans ever went to RTM for acceptance, I  
5 don't know.

6                   They would have gone to the maintenance  
7 director, anyhow. They wouldn't have come to me.

8                   CHRISTINE MAINVILLE: Okay. Could we  
9 speak about some of the breakdowns and then the  
10 derailments that occurred after service?

11                  MATTHEW SLADE: Yes.

12                  CHRISTINE MAINVILLE: Perhaps we could  
13 start with the flat wheels --

14                  MATTHEW SLADE: Okay.

15                  CHRISTINE MAINVILLE: -- and whether  
16 you have an understanding of what caused that  
17 problem?

18                  MATTHEW SLADE: I do. So I mean flat  
19 wheels are something that all railway systems  
20 suffer with; it's not something you can avoid. The  
21 only thing is how you manage them or, you know, I  
22 guess deal with them.

23                  So we were having flat spots occur,  
24 which comes as a result, generally, of an emergency  
25 brake application on the train. And I guess it

1 became an issue, because we have a machine at the  
2 maintenance facility called a "wheel lathe", which  
3 takes wheels that have flat spot, and turns them  
4 and makes them perfectly round again. We had an  
5 issue with the wheel lathe, which then highlighted  
6 the number of vehicles that had flat spots.  
7 Because we had a lot of trains that were out of  
8 service because of flat spots. And the wheel lathe  
9 can only do so many wheels and so many trains at a  
10 time. So there was a, in essence, a backlog of  
11 vehicles that needed to have their wheels trimmed.

12           And so it was being managed, but until  
13 that machine then had a few issues, it became  
14 abundantly clear that we were probably having more  
15 flat spots than we would have anticipated.

16           So we pulled together a team of people  
17 to look specifically at flat spots, including some  
18 external consultants. And there were a number  
19 of -- whilst the root cause is emergency brake  
20 application of the vehicle, there are lots of  
21 different triggers to cause a vehicle to emergency  
22 brake.

23           So lots and lots of data was analyzed,  
24 because every time a vehicle emergency brakes,  
25 that's recorded in the data logging system on the

1 vehicle, and on the signalling system, so it was  
2 all reviewed. And the number of changes were  
3 recommended and made to reduce the number of  
4 emergency brake applications.

5 And some of those were software  
6 adjustments within the Thales signalling system.

7 There were changes to the guideway  
8 intrusion detection system, which also has the  
9 ability to trigger emergency brakes.

10 And then there was some changes to, on  
11 the braking system on the train, with regards to  
12 how it performed at different temperatures, ambient  
13 temperatures, weather-related.

14 There were changes to the sand and the  
15 sand supply system that's used for adhesion on  
16 slippery tracks that's delivered via the train.

17 And then there was a, for want of a  
18 better term, a re-education to OC Transpo on how to  
19 utilize the Thales train control system in  
20 different rail adhesion conditions.

21 CHRISTINE MAINVILLE: And the  
22 weather-related one you mentioned, do I understand  
23 that that required a change of setting on the  
24 operator side, in terms of the controls?

25 MATTHEW SLADE: Yes. So I'm going to

1 get a bit techie now, so stop me if it doesn't make  
2 sense.

3 The OC Transpo operate the trains and  
4 the system from the TOCC, the train operations  
5 control centre -- or Transit Operations Control  
6 Centre, which is just along the road from the  
7 maintenance facility. In there is also the  
8 computers that drive everything, and that's where  
9 the operators sit that control the system.

10 Part of the Thales train control  
11 system, part of the ATS, the automatic train  
12 system, there is the ability to apply different  
13 acceleration and braking rates to the vehicles.

14 And that is -- it's a very simple  
15 system for the operator. I mean, it's very  
16 technical on the vehicle, but for the operators  
17 themselves, they basically have three settings that  
18 change the parameters of the back brakes. It's a  
19 case of literally selecting one of those three  
20 settings, depending on how the vehicles are  
21 performing on the main line.

22 So, I guess the easiest way to describe  
23 it is a bit like ABS in your car. If your wheels  
24 lock up, you know, you're sliding, it changes the  
25 performance of the brakes. That's the sense of the

1 thing, it predicts -- you find that -- it applies  
2 the same amount of braking force, but it does it  
3 over a longer period of time, so rather than it  
4 coming to a sudden stop, it drives gradually to a  
5 station. A bit like when you're driving in your  
6 car in winter, you know what braking distances are,  
7 you increase your braking distances because of the  
8 slippery conditions of the road. And that does it,  
9 because the trains brake and accelerate on their  
10 own; you just select one of those three settings on  
11 the train control console and that applies it  
12 across all of the fleet on the guideway.

13           And that is something that OC Transpo  
14 wasn't doing, and they now routinely do it every  
15 single day.

16           CHRISTINE MAINVILLE: Now, are you  
17 aware of, earlier, with requests to the City to  
18 change that profile?

19  
20           MATTHEW SLADE: The conversation about  
21 changing brake profiles is separate.

22           Those three different settings that are  
23 in the Thales system are -- they're not something  
24 you can adjust, they're fixed. So it applies --  
25 crudely, I'm going to say you have 100 percent

1 braking and acceleration rate, 75 percent and  
2 50 percent, and then, depending how slippery it is,  
3 you select which one you want to use.

4           There was a separate conversation,  
5 which I think is what you're alluding to, around  
6 changing the braking rate on the vehicles.

7           CHRISTINE MAINVILLE: Okay. So  
8 that's --

9           MATTHEW SLADE: An actual engineered  
10 change to the performance of the brake system on  
11 the train, which is not necessary.

12           CHRISTINE MAINVILLE: So the  
13 conversation that did happen with the City about  
14 changing the brake rates --

15           MATTHEW SLADE: Yes.

16           CHRISTINE MAINVILLE: -- that, you're  
17 saying, is not connected to the emergency braking  
18 wheel flat issue?

19           MATTHEW SLADE: The City believed it  
20 was, but it isn't.

21           CHRISTINE MAINVILLE: And so why did it  
22 need to be changed from a --

23           MATTHEW SLADE: It didn't, and it  
24 hasn't been.

25           CHRISTINE MAINVILLE: Okay.

1                   MATTHEW SLADE: The brake rate on the  
2 vehicles is still the same as it was from the first  
3 day the trains ran. What is different is the fact  
4 they are now using the Thales system the way it  
5 should be used, to adjust that percentage on a  
6 daily basis.

7                   CHRISTINE MAINVILLE: Right, okay.

8                   MATTHEW SLADE: We have never, ever  
9 changed the actual vehicle braking performance.

10                  CHRISTINE MAINVILLE: Okay. Do I  
11 understand that the City was -- or OC Transpo was  
12 not initially changing the rate on a daily basis?

13                  MATTHEW SLADE: Correct.

14                  CHRISTINE MAINVILLE: Was that  
15 discussed with them earlier on?

16                  MATTHEW SLADE: Yes. Numerous times,  
17 it was -- requests were made to use that function,  
18 and it wasn't being used.

19                  We were trying to explain to them that  
20 if they used that function, it would benefit the  
21 performance of the railway. And eventually they  
22 agreed to. I don't know why it changed, why  
23 eventually they agreed to do that.

24                  I think the argument for and against it  
25 was about the overall trip time, how it would



1 impact the journey time for the passenger, which  
2 the City was very, very sensitive to over the --  
3 you know, over the, I guess, reliability of the  
4 system.

5 So they would rather have had an  
6 end-to-end journey time and suffer flat spots than  
7 potentially slow the system down to reduce the  
8 number of flat spots and then -- I mean, the  
9 difference, the overall difference -- and I think  
10 that's what did it in the end, was we said, look,  
11 time the train using the three different modes of  
12 -- in the Thales system.

13 And not many passengers obviously ride  
14 from one end of the line all the way to the other  
15 end. Most of them get off at one of the  
16 intervening stops. But if you went across the  
17 entire alignment, on a day when the 50 percent rate  
18 was applied, I think it adds something like less --  
19 it's certainly less than three minutes, and it's  
20 probably closer to a minute on your overall journey  
21 time across the entire line, which a passenger  
22 generally wouldn't notice.

23 CHRISTINE MAINVILLE: Okay. And when  
24 you say you had an issue with the wheel lathe, was  
25 that just because it couldn't keep up with the

1 demand? Or were there actual issues with the lathe  
2 itself?

3 MATTHEW SLADE: A lot of it was down to  
4 the way it was being operated. So it was being  
5 used too aggressively, let's say. So the speed at  
6 which you turn a wheel, the machines are sensitive  
7 to, and so you're supposed to take your time to do  
8 it. But it was, I think, because of the backlog,  
9 people were trying to go too fast. And we had a  
10 issue with build-up of swarfs inside the machine  
11 and the machine was not capable of coping, the way  
12 it was being used. But it wasn't being used, let's  
13 say, appropriately.

14 CHRISTINE MAINVILLE: Okay.

15 MATTHEW SLADE: So, again, you know, we  
16 had service engineers out. We retrained some  
17 staff. And it is what it is.

18 CHRISTINE MAINVILLE: Was that under  
19 OLRT-C warranty, or was that performed by the  
20 maintenance teams for Alstom?

21 MATTHEW SLADE: I think, initially,  
22 OLRT-C brought in the equipment supplier. They  
23 came in from Germany. We had a few issues with  
24 getting them over and visas and etcetera, etcetera.  
25 And then we ended up adding in a, for want of a

1 better term, a WiFi connection into the unit so  
2 they could access it remotely from Germany, to save  
3 them from flying out.

4 But then, after that, I guess one of  
5 the things that I've lobbied for, for a long time,  
6 was for RTM to have a millwright in their  
7 organization, someone to look after all of the  
8 equipment in the maintenance facility. And  
9 eventually, they did recruit one in the end and so  
10 it was the -- and we're talking months apart, but  
11 then, you know, those machines are now maintained  
12 internally by the millwright.

13 CHRISTINE MAINVILLE: Could you speak  
14 to the cracked wheels?

15 MATTHEW SLADE: Yes.

16 CHRISTINE MAINVILLE: So these started  
17 being observed in July 2020.

18 MATTHEW SLADE: Okay.

19 CHRISTINE MAINVILLE: And then could  
20 you speak to your understanding of what the cause  
21 of that was?

22 MATTHEW SLADE: Sure. So, I can't  
23 remember the specific date -- I'm sure you have it  
24 there -- so, I received a phone call one evening  
25 from the project director at Alstom to say, "Hey,

1 guess what? We got a bit of an issue that you need  
2 to be made aware of." And it was the fact they'd  
3 found a cracked wheel.

4 And I, unusually, I guess it wasn't  
5 normal for me, but it was a serious issue. So I  
6 phoned John Manconi personally and said, "John, you  
7 need to understand we're -- we've got a big issue  
8 and we need to stop trains and start inspecting  
9 wheels."

10 And so we started a fleet-wide  
11 inspection, and I'm pretty sure TSB were called in  
12 as well by the City to help inspect. So, some  
13 components of the train, bogies, were quarantined  
14 until the TSB could arrive. And we went through a  
15 deep review, and it turns out that it's --  
16 essentially, the cracks were induced as a result of  
17 a setscrew being installed in the wheels when the  
18 wheels were originally assembled onto the bogies.

19 Those setscrews didn't need to be  
20 there. They're there for the purpose of removing  
21 the wheels from the train. They're a maintenance  
22 tool that get delivered with the wheels to the  
23 assembly. And they were -- some of them were  
24 protruding through the wheel such that, when the  
25 wheel was bolted onto the hub, it was putting undue

1 stress into the wheels and causing the cracks.

2           Those setscrews should either have been  
3 completely removed before the trains were  
4 assembled, or at least backed off such that they  
5 weren't protruding through the wheel, and replaced  
6 with a plug. So they were in there to stop --  
7 essentially, obviously, trains are dirty, they get  
8 very dirty very quickly from running on the  
9 railway. So you either normally have a plug or  
10 something over the holes so the holes don't get  
11 filled with dirt and grime. So when you do want to  
12 put those setscrews in for the purposes of  
13 maintenance, that you can get them in easily.

14           But there ended up -- as I understand  
15 it, there was, I guess, a gap in communication --  
16 when I say "communication," I mean documentation --  
17 whereby the wheel supplier didn't write in their  
18 documentation that these were to be removed before  
19 being installed on the trains. And there was then,  
20 also, I guess, a gap in Alstom's procedure that  
21 didn't tell them to remove them or check that they  
22 were backed out such that they weren't protruding  
23 through the wheel.

24           So these wheels were put on the trains  
25 and then, obviously, the amount of torque that goes

1 through a lug nut or a wheel nut on one of these is  
2 immense, and it's created a stress fracture around  
3 the setscrew hole. So all of those wheels had to  
4 be regularly inspected for cracking until such time  
5 that the wheels could all be replaced.

6 CHRISTINE MAINVILLE: Right. That was  
7 the proposal put forward to address the issue, to  
8 get the fleet running again pending replacement?

9 MATTHEW SLADE: Yeah. It was referred  
10 to as the "Green Wheel Program," I guess. So we  
11 deemed red wheels ones that were cracked and  
12 couldn't go into service and green wheels ones that  
13 were good, so... And they were inspected on a -- I  
14 can't remember the frequency of dates, but they  
15 were inspected, I think every three days, something  
16 like that, until such time that they could be --  
17 the wheels could be replaced.

18 CHRISTINE MAINVILLE: Did the City not  
19 at some point not allow the trains to run if they  
20 had red wheels?

21 MATTHEW SLADE: Well, it only became --  
22 it became more of an issue for them, I'm going to  
23 say after the derailment, more recently, when we  
24 went back into service as part of the  
25 return-to-service plan. They then changed the

1 position where they had been saying that some  
2 trains could go into service with a red wheel. And  
3 they stopped that, and they said, no red-wheeled  
4 trains, which was, I think, perfectly reasonable.  
5 I think it took Alstom far too long to replace all  
6 those wheels.

7           You know, it was -- I know we were in  
8 COVID and there was probably supply chain issues,  
9 and it's also a large order that is, I guess not  
10 necessarily normal, but, yeah, it took -- we should  
11 have changed those wheels far quicker.

12           CHRISTINE MAINVILLE: And is that now  
13 completed?

14           MATTHEW SLADE: I think we might be on  
15 the last train. If it's not all done, then there's  
16 one to do.

17           CHRISTINE MAINVILLE: Okay.

18           MATTHEW SLADE: It's 99 percent done.

19           CHRISTINE MAINVILLE: Okay. Do you  
20 recall some track buckling?

21           MATTHEW SLADE: Yes.

22           CHRISTINE MAINVILLE: Likely the summer  
23 of 2020?

24           MATTHEW SLADE: Yes.

25           CHRISTINE MAINVILLE: So what was the

1 cause of that?

2 MATTHEW SLADE: So, sun kinks, as we  
3 call them, or track buckling, is, again, something  
4 that is normal for ballasted track. So you don't  
5 get it on slab track, you don't get it on concrete  
6 direct fixed track, but you get it on ballasted  
7 track.

8 Again, it's not an uncommon thing to  
9 experience. And, again, I think the manner in  
10 which it is managed and dealt with in Ottawa is  
11 probably -- again, I think they're probably getting  
12 better at it, but the -- I guess in the first  
13 couple of years, the way they managed and dealt  
14 with that was not ideal.

15 CHRISTINE MAINVILLE: How so?

16 MATTHEW SLADE: Well, I mean, it's  
17 difficult, right? So everyone -- the political and  
18 public pressure is, you know, this thing shouldn't  
19 ever happen, but you can't -- it doesn't work like  
20 that. The track moves constantly, all day, every  
21 day; 365 days a year, the track is moving. It's a  
22 live piece of infrastructure.

23 And the track in Ottawa is more prone  
24 to movement in the summer than the winter as a  
25 result of the requirements of the PA. And I think



1 the guideway techs from Alstom Maintenance and the  
2 way in which they are instructed to deal with  
3 temperature-related track movement is, and has  
4 been, challenging. And the City giving them access  
5 to the guideway during the day, and the amount of  
6 maintenance that gets done on the track has  
7 probably been insufficient to minimise the amount  
8 of movement.

9 CHRISTINE MAINVILLE: And what in the  
10 requirements in the PA make it more prone to  
11 movement?

12 MATTHEW SLADE: So there's a -- and I  
13 can't tell you exactly what the clause number is,  
14 without going and looking for it. So there is a  
15 clause in the Project Agreement that requires rail  
16 brakes, as a result of cold weather, to be a  
17 specific -- no more than a certain size.

18 So, light rail vehicles have smaller  
19 wheels than a CN or CP or a GO train type vehicle,  
20 like, the wheels are a smaller diameter. And as a  
21 result, if a rail breaks in the winter, which is  
22 not uncommon because of the stressors in the rails,  
23 you want to make sure that, if they do break, when  
24 the gap opens, that a wheel can still go over it so  
25 the risk of derailment in the winter is far

1 reduced.

2           So, as a result of the PA being  
3 prescriptive as to how big that gap can be in the  
4 winter, that means that to design a stress-free  
5 protection for the rails means that, in the summer,  
6 you're going to be more prone to movement as a  
7 result of protecting the rails against bigger  
8 breaks in the winter. Which I think is sensible,  
9 because, generally, rail breaks generally happen in  
10 the winter, when the tracks are colder, and they  
11 generally happen, obviously at the coldest point in  
12 time, which is normally overnight. And a broken  
13 rail is not necessarily an easy thing to see in  
14 darkness, and yet a kink in the middle of the day  
15 in summer is obviously visible to a train operator,  
16 to a driver.

17           So if it's a kink, they can always --  
18 you know, they could potentially slow down or they  
19 can at least report it before it's too late,  
20 whereas a break in the winter is a harder thing to  
21 manage.

22           So that's why the PA is the way it is,  
23 but that has inherently resulted in having a track  
24 formation, a track design, that is more susceptible  
25 to movement in the summer.

1 CHRISTINE MAINVILLE: Are you aware of  
2 any -- of the track perhaps being more suitable for  
3 heavy rail than light rail?

4 MATTHEW SLADE: So it is, I would say,  
5 a little bit unusual for this type of vehicle to  
6 run on ballasted track.

7 So this, we talked last time, it's  
8 what's called an LRT, a light rail vehicle. Apart  
9 from being a low-floor vehicle, it's actually  
10 pretty much what we refer to as a streetcar or a  
11 tram, it's designed to run in the street, which  
12 obviously you don't have ballast and ties.

13 So it's the track form that is  
14 dominantly, I think at least 50 percent, if not  
15 maybe more than 50 percent, is ballasted, is --  
16 it's not ideal. It's not normal for a vehicle like  
17 this to run on track like that. It doesn't mean it  
18 can't, because obviously it can, but ballasted  
19 track requires, obviously, maintenance.

20 And, again, the Project Agreement for  
21 Ottawa requires the track in Ottawa to be  
22 maintained to a Class 5 standard, which is actually  
23 far higher than what the railway actually is. So  
24 the standards that the City require the track to be  
25 maintained to are in excess of what that track

1 would normally be maintained. Does that make  
2 sense?

3 CHRISTINE MAINVILLE: Do you mean the  
4 agreement, then, does set out enhanced maintenance  
5 requirements?

6 MATTHEW SLADE: Yes.

7 CHRISTINE MAINVILLE: But why would  
8 that track have been used if there is a track more  
9 suitable for this type of train?

10 MATTHEW SLADE: Again, that might also  
11 be in the PA. I can't remember off my head whether  
12 it specifically stated ballasted track or not. I'd  
13 have to check the PA as to whether or not it was  
14 done because the PA required it or whether it was  
15 done because that's what the designer selected.

16 CHRISTINE MAINVILLE: Could it have had  
17 to do with the fact that the PA required or pointed  
18 to the AMIRA standard?

19 MATTHEW SLADE: AREMA.

20 CHRISTINE MAINVILLE: AREMA, sorry.

21 MATTHEW SLADE: Yeah, it might be. I  
22 would have to read up, go back through the track  
23 section of the PA to familiarize myself with what  
24 it says in there.

25 But I think the only thing that -- you

1 know, and I was involved with a lot of  
2 conversations with the City about changing the  
3 neutral temperature of the track and understanding  
4 how we can make it less sensitive to hot weather,  
5 etcetera. The City is actually -- so, on the two  
6 contract -- on the east-west extension, they have a  
7 different -- they've changed the PA clause on that  
8 job. So I think they recognized the rail break.  
9 And our engineer, the OLRT-C track design engineer,  
10 wrote a paper on the need to change that clause  
11 about the size of rail breaks.

12 But I think, at the moment -- and then  
13 some work with RTM in looking at maintenance  
14 practices and, you know, good standards from  
15 elsewhere in Europe where this kind of track is  
16 used more commonly. And I think we're quite  
17 comfortable at the moment with enhanced -- you  
18 know, doing more maintenance and ensuring that the  
19 track is in its best condition it can be, such that  
20 these temperature fluctuations have less of an  
21 impact on it.

22 CHRISTINE MAINVILLE: And just to have  
23 it, do you know what type of tracks would have been  
24 more suitable in this case?

25 MATTHEW SLADE: What we call slab

1 track.

2 CHRISTINE MAINVILLE: Slab track, okay.

3 MATTHEW SLADE: Yes, which is, you  
4 know, essentially concrete rather than -- concrete  
5 with direct fixation, rather than a ballast and  
6 ties.

7 So, some of the job is. So, the tunnel  
8 is all slab track. Down at the west end, Tunney's,  
9 is slab track. So there are sections of slab  
10 track. All the bridges are slab, which can't be  
11 generally done with ballast on bridges, but that's  
12 more normal for a streetcar-type vehicle.

13 CHRISTINE MAINVILLE: And then is it  
14 possible that this track-wheel interface might have  
15 caused some of the vibrations that were  
16 encountered?

17 MATTHEW SLADE: Yes. So you get,  
18 again, I'm going to say a phenomenon, you get a --  
19 it's not really a defect. You get a track  
20 condition known as corrugation, which essentially  
21 creates a wave from the head of the rail such that  
22 you end up with vibrations being transmitted into  
23 the vehicle. But the wave effect on the rail comes  
24 from the vehicle in the first place, partly the  
25 vehicle and partly the geometry of the track. So,

1 the alignment of the track, OC, as you probably  
2 know, has some tight curves in it. And  
3 corrugation, you can't ever prevent it. You can  
4 reduce the likelihood of it propagating, but you  
5 can't prevent it.

6 The best way of managing it is to do  
7 regular grinding of the rails, to keep the head of  
8 the rail in as smooth a condition as possible, and  
9 to ensure that the wheel-rail interface is  
10 optimized so the profile of the wheel is best  
11 suited to the geometry and the alignment of the  
12 track, and to ensure that the rail is suitably  
13 lubricated such that the wheel and the rail  
14 interface has a good lubrication system.

15 So the job has a couple of areas where  
16 there has been corrugation, and it got very bad, I  
17 would say in 2020. Yeah, I think it's 2020. And  
18 then there was some geographical grinding in  
19 specific areas, where we had bad corrugation. Then  
20 there was a more extensive grinding program. But  
21 it's something that needs doing annually, grinding,  
22 that is.

23 And we know that the vibrations from  
24 the corrugation were having a detrimental impact on  
25 some of the components of the vehicle.

1 CHRISTINE MAINVILLE: Okay.

2 MATTHEW SLADE: But that was down to  
3 Alstom to maintain the track and prevent the  
4 corrugation or minimise the corrugation. They  
5 didn't, and the byproduct of that is they have  
6 increased maintenance on their vehicle.

7 CHRISTINE MAINVILLE: And aside from  
8 the issues already mentioned, would the choice of  
9 track have had other implications for how the  
10 trains ran or issues encountered?

11 MATTHEW SLADE: No, I don't think per  
12 se the track is the problem. The track is  
13 relatively standard. It's standard rails, it's  
14 standard -- it's not unusual.

15 Some of it, some of the curves are on  
16 the tight side for the speeds. But that was again,  
17 I guess, the alignment was dictated by the City.  
18 They chose where the stations were going to go and  
19 they chose the alignment between the stations, so  
20 it is what it is. There's not much you can do  
21 about that. But you can manage those rails and the  
22 track through maintenance regimes. It's all  
23 manageable.

24 But, otherwise, I think, you know, I  
25 don't see -- there's no specific issues with the



1 track.

2 CHRISTINE MAINVILLE: Okay. What about  
3 the derailments in the yard at the maintenance  
4 facility? Do you know why those would have  
5 occurred?

6 MATTHEW SLADE: The ones specifically  
7 with the light rail vehicles, or are you talking  
8 about all derailments? Because we have equipment  
9 in the yard that occasionally derails as well. Or  
10 are you talking about the trains?

11 CHRISTINE MAINVILLE: Well, are they  
12 caused by different things?

13 MATTHEW SLADE: Sometimes. I mean, the  
14 issue, again, in the yard, so the tightest curves  
15 we have are in the yard.

16 Generally, the speeds in the yard are  
17 slower, which, contrary to popular belief, it  
18 actually increases your likelihood of derailment,  
19 especially with wheels that are freshly turned on a  
20 lathe, which obviously it's in the shed, and then  
21 it comes out the shed. Fresh wheels, tight curves,  
22 slow speed, it actually increases the risk of  
23 derailment.

24 There was -- the vehicles were -- so  
25 the lubrication of the rails comes from the

1 vehicles, it has an onboard lubrication system.  
2 The vehicles were not lubricating in the yard at  
3 all. So up until -- I can't remember when -- a  
4 year and a half ago maybe, two years ago, I can't  
5 remember when it was -- there was no lubrication  
6 being applied in the yard, which increases the  
7 friction on the wheels to the rail and increases  
8 the likelihood of the wheels climbing off the  
9 rails. So there's a number of things that are  
10 contributing factors to the derailments in the  
11 yard.

12           RTM has installed a wayside lubricator  
13 that automatically lubricates the rails now.

14           Alstom were -- as a result of the  
15 derailments, Alstom were manually greasing the  
16 rails with a -- you know, walking on the track with  
17 a brush and tub of grease and were greasing the  
18 rails. RTM installed a wayside lubricant so  
19 somebody didn't have to do it manually.

20           And they've changed their practices on  
21 how they move trains and where they can and can't  
22 stop. And so, yeah, hopefully, the things that are  
23 in place now will reduce the likelihood of  
24 derailments in the yard. I won't say stop because  
25 I don't think you'll ever stop it. All railways

1 have derailments, and I know people don't like  
2 hearing that. But if you look statistically at how  
3 many derailments there are a day, around the world,  
4 it's a huge number. So they are inevitable. It's  
5 just you just got to try and reduce the likelihood  
6 of them occurring.

7 CHRISTINE MAINVILLE: Are you able to  
8 speak to some of the power supply failures, I think  
9 related to the line inductors?

10 MATTHEW SLADE: So, yeah, I mean, we  
11 haven't had power supply failures per se on the  
12 system. So I think the overall power supply, the  
13 traction power supply system, so the TPSS's, as we  
14 call them, which are dotted along the guideway, and  
15 the OCS has been pretty reliable.

16 The vehicles had a few power-related  
17 issues, and they're not all the same. The ones  
18 you've just mentioned with the line inductor, line  
19 inductors are a huge electrical winding that goes  
20 on the roof of the train. I say "huge," I mean,  
21 it's probably a metre by a metre and it looks like  
22 a coil.

23 And we were having a lot of arcing and  
24 flashes and issues, predominantly in the fall and  
25 the winter. And after much investigation, it

1 became apparent that the line inductors were not of  
2 the highest quality. They had manufacturing issues  
3 for that particular component. So the insulation  
4 that was on them wasn't perfect, and so you were  
5 getting electrical arcs. And you were getting a  
6 build-up of dirt on the roof of the trains that was  
7 also affecting conductivity. And there were short  
8 circuits happening as a result of those things.

9           And so they -- Alstom has -- I don't  
10 know whether they changed the supplier or whether  
11 they just went back to them and went through a new  
12 QA process to have the insulation better, and  
13 better installed. They changed the framing that  
14 they're on to help increase insulation, and they  
15 now have put a lid on it, for want of a term, an  
16 enclosure over the top of the line inductors that  
17 they didn't have before, to stop dirt and grime  
18 getting in there.

19           So all those things have been done now.  
20 I don't think we've had a line inductor failure  
21 since those remedial works were done.

22           There's other electrical issues as  
23 well. We had -- before revenue service, we had --  
24 there's a line contactor on the roof. I think  
25 we're on revision four of that component now that

1 had various different issues with it, again, as a  
2 result of the supply of the component.

3           And then I guess the biggest one --  
4 well, I don't know whether it's bigger than the  
5 line contactors, the line inductors -- it probably  
6 is -- is the issue with the auxiliary power supply,  
7 the APS or CVS, depending on whether you're  
8 speaking French or English, it's either the CVS or  
9 the APS, which provides the auxiliary power  
10 supplies on the roof. And that's component that's  
11 manufactured by a company called Additel, and we  
12 have an ongoing issue with those that they are  
13 failing on far too frequent a basis.

14           And Alstom are now looking at changing  
15 the supplier of those pieces of equipment.

16           CHRISTINE MAINVILLE: And these quality  
17 supplier issues, are these typical? I mean, I take  
18 it there are always some, but are there more in  
19 this case?

20           MATTHEW SLADE: Yeah, there are more  
21 here, and I think we touched on it last time when  
22 we spoke.

23           I think certainly the line inductor and  
24 certainly the APS, the suppliers of those  
25 components both changed for this vehicle as a

1 result of the Canadian content requirement in the  
2 PA.

3           So, if you bought a Citadis in Europe,  
4 those components would have come from a different  
5 supplier. And I think -- so the line inductors  
6 were made down in America, I want to say in New  
7 York State. I can't remember the specific  
8 location. And the APS's are from Québec somewhere,  
9 a company called Additel.

10           And I think, you know, inherently, I  
11 think the other thing that we touched on last time  
12 as well is the fact that this train runs at  
13 1,500 volts instead of 750 volts. So, I think,  
14 when you compile all those things together, you  
15 probably compound the issue.

16           Having said that, I think generally  
17 Alstom has a pretty good quality control system  
18 even on their supply chain. And I don't know why  
19 there was -- why maybe these key components haven't  
20 had that level of rigour. Maybe they had it  
21 initially and then -- but I think it's not the same  
22 as using the same supplier that they used for every  
23 single vehicle elsewhere in the world.

24           CHRISTINE MAINVILLE: Right. And you  
25 said the OCS, the overhead catenary system, was

1 pretty reliable, but there were issues with that  
2 system, correct?

3 MATTHEW SLADE: We've had a couple of  
4 issues. And, again, I know the public and the  
5 media and politicians see them as major. So we  
6 have -- one thing that we've had a few issues with  
7 is failure of a component called a Parafil, which  
8 is a -- it's a cable, not an electrical cable; it's  
9 actually an insulated cable. It's essentially a  
10 rope with a rubber sheath around the outside.  
11 We've had a few of those fail.

12 We did some analysis. We had a couple  
13 fail during construction, and they were suffering  
14 with a form of corrosion, actually, on the rubber  
15 which came from or appears to come from -- and only  
16 affect the Parafils that are near to road bridges  
17 that go over the railways. And it looks like the  
18 -- some of the chemicals that they put into the  
19 grit and salt that they put on the roads in the  
20 winter, actually, when that turns into mist and is  
21 sprayed up into the air by the vehicles going --  
22 road vehicles going along the roads, it then,  
23 actually, it settles on those components. Then,  
24 with the amount of electricity that's running  
25 through those adjacent electrical cables, you end

1 up with this fatiguing and corrosion on the rubber.

2 So they are supposed to be cleaned  
3 annually. In the maintenance manual from the  
4 supplier, it says they should be cleaned annually.  
5 They weren't being cleaned annually, routinely, by  
6 Alstom. So, during that first big shutdown that we  
7 had, RTM went through and cleaned them all and  
8 replaced any that looked like they had any issues  
9 with them.

10 Any that have failed have generally  
11 been replaced with one that has a larger diameter,  
12 so it has increased strength. And like I said, it  
13 only appears to be affecting certain ones. So,  
14 some of those have failed, and we've had -- I think  
15 we had two failures this year. But again, Alstom  
16 has got far better at responding to those and being  
17 able to replace them. So, when one does fail,  
18 instead of taking hours or days to replace or fix,  
19 they're generally fixed within, you know, half an  
20 hour or an hour or whatever. So the response times  
21 got better on those.

22 Then the only other issue that was --  
23 again, the language that people use, it's not  
24 helpful or correct when they talk about the wires  
25 coming down. We had an issue at St. Laurent



1 station -- I'm trying to think when it was, maybe  
2 January of '20, January or February of '20, where  
3 in the tunnels we actually have -- instead of  
4 having catenary that is strung, it's actually in a  
5 rigid rail. And a piece of the contact wire had  
6 been pulled out of the rigid rail. Not much of it,  
7 and it was pulled out by a train.

8           We don't know a hundred percent what  
9 caused that, whether it was a bolt that held the  
10 rigid rail to the soffit at the tunnel or whether  
11 it was the tail of the contact wire that comes out  
12 the end of the rigid rail, whether that had been  
13 bent through use such that it interfered with the  
14 pantograph on the train. You'll never be able to  
15 prove which one it was. But that caused an issue  
16 with power at St. Laurent and then required a  
17 section of that to be reinstalled. But those are  
18 the only real issues that we've had.

19           The other power issues that we've had  
20 have come as a result of the train. So with those  
21 line inductors and APS's, depending how they trip,  
22 they have the potential to actually put power or  
23 put short circuits into the system, which then  
24 trips the OCS. So a majority of it has been  
25 vehicle-based, but we have had some instances with

1 the OCS, but nothing that I would say is  
2 particularly drastic or systemic or, you know, it's  
3 -- with improved maintenance and more frequent  
4 maintenance, those issues should reduce.

5 CHRISTINE MAINVILLE: In terms of the  
6 annual maintenance you referenced, you said RTM  
7 ended up cleaning them, even though, as I  
8 understand your evidence, it was part of Alstom's  
9 scope?

10 MATTHEW SLADE: Yes.

11 CHRISTINE MAINVILLE: In terms of the  
12 switch and sensor issues, there were switch  
13 failures particularly in the winter of 2020.

14 Do you recall whether those were due  
15 just to snow?

16 MATTHEW SLADE: So, I don't -- again, I  
17 guess it's how stuff gets described. We haven't  
18 had any real switch failures. So, the switches are  
19 made up of a series of systems. So, you have the  
20 actual mechanical switches, which are the rails  
21 that transfer a train from one set of tracks to  
22 another set of tracks. They are connected to a  
23 motor and a set of rods which is part of the Thales  
24 signalling system, the switch motor. And then  
25 independent of that, you have a switch heating

1 system, which is there to reduce or prevent snow  
2 and ice build-up.

3 The majority of the issues that we were  
4 having were -- I'm going to say probably more than  
5 90 percent were in the winter and as a result of  
6 snow and ice. And so it wasn't the switches  
7 themselves, it's more related to the heating  
8 system.

9 Again, the heating system has been  
10 replaced on some of them. Personally, I don't  
11 think that was required. I don't think the heating  
12 system was being maintained appropriately and I  
13 don't think it was being operated appropriately,  
14 which is why I think we were having all those  
15 issues. And the fact that they are -- the fact  
16 that the new heaters are -- everything's got, I'm  
17 going to say a little bit better. We still had  
18 disturbed switches this winter, even with the new  
19 heaters. It's all about knowing how to maintain  
20 and use the equipment that was designed and  
21 installed. So I think there's, again, learning  
22 curves that we're still going through, from all  
23 sides.

24 But there were -- some of those switch  
25 heaters did have sensor issues and a few other bits

1 and pieces. But, you know, if I had been operating  
2 or in charge of the system, I probably would have  
3 run it differently. The heaters were going on and  
4 off with snowfall. Well, by the time snow is  
5 falling, it's too late. Those rails should have  
6 been heated well above ambient long before snow  
7 started. I wouldn't turn the heaters off  
8 throughout winter, I would just leave them on.

9 CHRISTINE MAINVILLE: So they were  
10 being turned off?

11 MATTHEW SLADE: Oh, they were on a  
12 sensor so they were automatically going on and off,  
13 either with -- depending on what the ambient  
14 temperature was or depending on what the snowfall  
15 was. But the temperature of a rail, which is  
16 obviously a large piece of metal, is -- when it's  
17 cold, it's a lot colder than ambient; and when it's  
18 hot, it's a lot hotter.

19 When we were talking about the rail was  
20 moving in the heat, earlier, if ambient temperature  
21 is 30 degrees centigrade, the rails are probably  
22 going to be close to 50 degrees centigrade.  
23 Conversely, in the winter, if it's minus 20, then  
24 the rails are probably at minus 30.

25 The heating system, I think, that we

1 had probably was sufficient. It was easy for  
2 people to say it wasn't, but I don't think  
3 routinely we were -- (a) they weren't probably  
4 maintained appropriately before winter started.  
5 And, you know, people just don't really -- naively  
6 think, oh, well, you know, it's a bit like your  
7 furnace in your house or whatever: It worked last  
8 year, I'll just turn it back on, it will work this  
9 year. Those things need regular maintenance,  
10 especially when they're not used often.

11           And I would have run them a lot longer.  
12 I wouldn't necessarily have used the sensors. You  
13 can override them manually from the control room.  
14 I would have turned them on and off, depending on  
15 the weather forecast or -- it's a bit like winter  
16 tires. You put them on when it's minus seven or  
17 it's seven degrees, and you take them off when the  
18 spring comes. You could quite easily do that with  
19 those and you'd probably have saved a lot of  
20 heartache that we went through.

21           CHRISTINE MAINVILLE: And were some of  
22 these issues experienced during the winter  
23 preceding RSA, so when testing was happening?

24           MATTHEW SLADE: Yeah, there was, we did  
25 have some issues. And we modified -- OLRT-C

1 modified some of those switch heaters to improve  
2 performance. We learned that actually where the  
3 heat was directed affected -- you know, improved  
4 the performance of the switches.

5           Again, you're asking two big bits of  
6 metal to bend when you force the switches to move.  
7 So, obviously, the colder they are, the harder they  
8 are to move from one side to the other. That's  
9 part of what the heat does, apart from melting snow  
10 and ice. And I think, you know, we modified those  
11 heat ducts. We did a few things to improve them.  
12 And we learned through that period about how to  
13 maintain them, about replacing heating elements,  
14 replacing fans, and all that sort of stuff.

15           We talked earlier about Alstom not  
16 participating in advance of revenue service. If  
17 they had been out there that winter with us, with  
18 us being OLRT-C, checking all that equipment and  
19 checking and replacing those components, they'd  
20 have known what they needed to do, you know, or  
21 been more, I guess, more skilled and more  
22 knowledgeable on the assets.

23           CHRISTINE MAINVILLE: I think we'll  
24 take a break. We can go off record.

25           -- RECESS TAKEN AT 10:31 A.M. --

1 -- UPON RESUMING AT 10:47 A.M. --

2 CHRISTINE MAINVILLE: There were  
3 occurrences where debris or some material fell on  
4 the train tracks. Do you recall that?

5 MATTHEW SLADE: You'd have to be more  
6 specific.

7 CHRISTINE MAINVILLE: Sure. Some of it  
8 may have been parts of another train or a part of  
9 another train that came loose. This would have  
10 been in February 2020.

11 MATTHEW SLADE: Okay.

12 CHRISTINE MAINVILLE: So you can tell  
13 me if that doesn't refresh your memory or you don't  
14 have awareness of that. But I wonder how common  
15 that is or not, whether that's something that does  
16 happen on a train line or not.

17 MATTHEW SLADE: It does. But, I mean,  
18 it's unusual on a train -- on a light rail system,  
19 I would say. It's more common, I guess, on a heavy  
20 rail, and what have you.

21 I assume you're referring to some of  
22 the speed sensor brackets or the sanding brackets.  
23 We got some hardware off some of the trains, which  
24 was essentially as a result of the corrugation I  
25 talked about earlier and the vibrations and the

1 wave length of those corrugations, and the  
2 vibrations were going into the vehicle.

3 So I know that Alstom redesigned the  
4 brackets for the sanding nozzles. I don't know  
5 that they installed the redesigned ones, they  
6 replaced them all because they were showing signs  
7 of fatigue. And I know that that was -- I don't  
8 know what they did with the speed sensor brackets,  
9 but we had a few issues with those as well.

10 I think, generally, now I suspect  
11 they're probably -- probably, I would hope, they  
12 are now checking things over a bit more thoroughly  
13 than they were previously with regards to tightness  
14 of bolts. I mean, those were not bolt loosening  
15 issues, those were actual metal fatigue issues.

16 CHRISTINE MAINVILLE: Okay. Does the  
17 nature of this bogie, or the design of it, require  
18 more accurate torquing of bolts than is typical?

19 MATTHEW SLADE: I wouldn't say that.  
20 Again, it doesn't matter what the component is,  
21 whether it's a bogie or anything, right?  
22 Everything has an engineered torque to it and they  
23 need to be respected.

24 I think the bogie is a separate issue.  
25 But I think one of the things that they've got,



1 again, is what we call witness marks, which are the  
2 little touches of paint on the head of the bolt and  
3 then whatever the bolt's going into, so that it's  
4 very easy to visually see if it's rotated and  
5 loosened at all. I think they've got better at  
6 that.

7 But, no, I mean, like these vehicles,  
8 torquing of bolts on -- whether it's a car, a  
9 train, an airplane, a building or whatever, right,  
10 torque settings are torque settings, and they're  
11 calculated and engineered and designed and, you  
12 know, that's -- it doesn't mean they don't need  
13 checking regularly. No different than the lug nuts  
14 on your car, you check them every now and then,  
15 right? Or certainly after you've taken them off  
16 with winter tires, summer tires, etcetera.

17 CHRISTINE MAINVILLE: Okay. What are  
18 the bogie issues that you --

19 MATTHEW SLADE: Well, I mean, the bogie  
20 has gone through at least two retrofits, I think.  
21 And we had an issue during assembly. I mean, it  
22 pre-dated me, but some of the vehicles are still  
23 undergoing, we had some issues -- again, quality  
24 issues on the supply of those bogies, which again  
25 were locally sourced from Québec, I think.

1                   So a number of the bogies had poor  
2                   quality weldings and poor quality castings, so they  
3                   were replaced. They then -- as a result of one of  
4                   the first maintenance exercises, it became apparent  
5                   that the bogies were missing lubrication ports to  
6                   be able to add grease. So they went through a  
7                   retrofit program where all the bogies were removed,  
8                   sent away to have grease nipples added to them.

9                   Obviously, and then we've had the other  
10                  issues associated with bearings and axles.

11                  CHRISTINE MAINVILLE: Yes.

12                  MATTHEW SLADE: And I think -- sorry,  
13                  just to finish. I mean, I've never asked the  
14                  question directly, but, you know, I don't know why  
15                  this particular bogie was selected for this  
16                  vehicle, when Alstom has other bogies that might be  
17                  better suited to this one. So this bogie is called  
18                  an IPONAM bogie, I-P-O-N-A-M. That's for "North  
19                  America," the last part; I don't know what the  
20                  "IPO" stands for.

21                  They also do a bogie called an Ixege,  
22                  I-X-E-G-E, which they actually advertise for the  
23                  Citadis vehicle, which is more suitable for tight  
24                  radius curves and higher-speed running. And I  
25                  don't know why they didn't install that bogie

1 because, on paper, and on their own marketing  
2 documentation, it sounds like it's a more  
3 appropriate bogie to have for our geography on this  
4 job.

5 CHRISTINE MAINVILLE: Could it have to  
6 do with the 100 percent low floors --

7 MATTHEW SLADE: No.

8 CHRISTINE MAINVILLE: -- do you know if  
9 that required a redesign? No?

10 MATTHEW SLADE: No, it's designed for  
11 the Citadis vehicle. It's a bogie that's available  
12 for the Citadis program, so if you ordered a  
13 Citadis, you could specify that bogie.

14 CHRISTINE MAINVILLE: Do you know if  
15 the Citadis in Europe, though, is a hundred percent  
16 low floor?

17 MATTHEW SLADE: Yeah, they are.

18 CHRISTINE MAINVILLE: It is?

19 MATTHEW SLADE: Essentially, like, the  
20 height of the floor is consistent on all the  
21 Citadis vehicles.

22 CHRISTINE MAINVILLE: So maybe we can  
23 move to the derailments, speaking to the axle and  
24 bearing failure.

25 Let's start with derailment number one

1 at Tunney's Pasture. Can you speak to that one?

2 MATTHEW SLADE: Yeah. So, essentially,  
3 the vehicle had been taken out of service at  
4 Tunney's and then had been parked at Tunney's for  
5 several hours during service, which is not an  
6 uncommon thing to do, to put a train at one of the  
7 terminal stations in one of the empty platforms.  
8 You can operate those terminal stations on one  
9 platform quite efficiently. So we either normally  
10 stage a spare or we put one of the trains that's,  
11 you know, had an issue in one of those platforms.

12 And then, rather than impacting  
13 service, we'd park it there until the day quietens  
14 down and then we'd take it away back to the yard,  
15 when it's less likely to cause an impact to the  
16 traveling public. Which is what we'd done with  
17 this one. It had been parked in a platform. It  
18 came to -- it had been looked at and assessed and  
19 said just leave it there until a better time to  
20 take it back to the yard.

21 And then -- so when it derailed, it was  
22 empty, it was out of service, obviously, other than  
23 the operator and the technician that were on board.  
24 And it was departing Tunney's and it was going  
25 across a crossover, I believe, to go on to the

1 other track, and so it was travelling a relatively  
2 low speed, and it was at that point that it  
3 derailed. And it was in the evening. It might  
4 have even been dark by then. It was -- I can't  
5 remember what time it was. It was after peak  
6 service so it would have been after seven o'clock,  
7 I would have thought.

8           And I guess the easy way to put it is  
9 the wheel became detached from the axle, which I  
10 would classify as a catastrophic failure of the  
11 axle or the -- you know, the interface between the  
12 wheel and the axle.

13           So then we had to -- decision was made,  
14 well, you can't obviously move a vehicle when it's  
15 derailed and it's got a wheel that's removed. So  
16 we had -- we did a fleet-wide check on all the  
17 vehicles to see what had caused it. We instigated  
18 that. And we arranged for something called a skate  
19 to be brought to site to allow us to -- which  
20 allows you to move a train with a wheel missing, or  
21 what have you. So it was re-railed and then a  
22 skate was put under that bogie to assist with  
23 getting it back to the yard. Obviously, TSB were  
24 involved. And as a result of that, the -- and the  
25 result of the ongoing bearing investigation, the

1 vehicles now undergo a bearing check every seven  
2 and a half thousand kilometres.

3 CHRISTINE MAINVILLE: And is there an  
4 understanding now of the root cause of that  
5 failure?

6 MATTHEW SLADE: I'm going to say yes,  
7 and no. So, there is a -- I believe there's a  
8 draft report in circulation now -- I think it's  
9 only been available for about a week -- which is  
10 from Alstom, which has some thoughts in it. But I  
11 think the report is missing a lot of information  
12 that I think is required to be able to determine  
13 what the real root cause is. Because I'm not  
14 convinced with what the document says at the  
15 moment, but that's -- I think it's part of the way  
16 there, but I don't think it's got everything in it.

17 CHRISTINE MAINVILLE: Can you start  
18 with what -- a summary of what that document says  
19 or points to, in terms of the root cause?

20 MATTHEW SLADE: It talks about  
21 vibration from the track, again, from the  
22 corrugation that we talked about. And it talks  
23 about the stresses as a result of the geometry,  
24 i.e. the tight curves of the track. And then it  
25 has some long-term recommendations and some

1 short-term recommendations, all of which relate to  
2 vehicle maintenance or infrastructure maintenance.  
3 But I think there's -- you know, it refers to all  
4 sorts of studies and things that were done, but  
5 none of those are appended to it or included in it  
6 and there's not a -- so I don't have access to all  
7 the data to be able to understand how they actually  
8 got to the conclusion that's in it. And there are  
9 some other things that I believe need to be  
10 considered that may or may not have been  
11 considered, and without all that information, I  
12 don't know whether they were.

13 CHRISTINE MAINVILLE: And what are  
14 those other items that you would consider?

15 MATTHEW SLADE: So there are some other  
16 issues with those bogies and those axles. So,  
17 again, I can't tell you the date off the top of my  
18 head, but it became apparent that the splines on  
19 the ends of the axles were wearing prematurely.  
20 And the backlash on the splines is pretty excessive  
21 on some, or getting to a point where it's on the  
22 limit where they need to be replaced.

23 There was a study done into the wear on  
24 the splines that suggested that the axles were  
25 bending slightly and were, as a result of the

1 weight of the vehicle and the weight of the  
2 passengers, which suggested -- and there's a  
3 recommendation from Alstom to replace the axles.  
4 None of that is documented in that report or  
5 referenced. Because I kind of -- I wonder if the  
6 condition of the splines and the bending of the  
7 axles actually has an impact on the forces that are  
8 being applied through the bearing, whether they're  
9 being applied as the bearing would expect them to  
10 be or was designed to receive them or not.

11           There was originally a plan to start  
12 replacing axles on those cars already, and it  
13 hasn't started. So there's a lot of questions  
14 around that that still need answering before I'm  
15 going to accept or, you know, believe that the root  
16 cause is what they believe it is. I think there's  
17 other factors that need a lot more interrogation.

18           These axles and the bogies are, they  
19 just don't seem to be -- I don't want to say "fit  
20 for purpose" but they're not coping well with the  
21 environment that they're in, i.e. the curves and  
22 the speed and the geometry.

23           CHRISTINE MAINVILLE: Okay. And just  
24 to be clear, is that a quality issue with the axle  
25 itself, potentially?



1 MATTHEW SLADE: Yeah.

2 CHRISTINE MAINVILLE: And was that  
3 sourced locally?

4 MATTHEW SLADE: So that's an  
5 interesting question. So, Texelis, I don't know  
6 where they're based. They're an interesting  
7 company, Texelis. So, they don't do the bogies,  
8 they only do the axles. But they do a variety of  
9 different axles for different applications, they're  
10 not railway-specific. And they have a railway  
11 division, but they provide -- for instance, if you  
12 went on their website, you'll see that they provide  
13 axles for military vehicles, whether they be tanks  
14 or people movers, things that are in war zones.  
15 They do a lot of heavy-duty axles, which I think is  
16 why the axle that we have is designed the way that  
17 it is.

18 The axle -- it's quite unusual, the  
19 axle that we have on the train. It's not what I  
20 would have expected to be on the train. It's a bit  
21 more industrial. The bearings are unusual; it  
22 doesn't have roller bearings, as the -- but anyway,  
23 I think -- I don't know where the axles came from.  
24 I know they came from Texelis, but whether they  
25 were manufactured here, as in North America, or

1 whether they came from Europe, I'm not entirely  
2 sure.

3 CHRISTINE MAINVILLE: Okay. Do you  
4 have a view on whether heat sensors should be in  
5 place to detect this kind of issue?

6 MATTHEW SLADE: I don't think they  
7 would make any difference, really. I think -- so,  
8 I know at the time, there was a lot of conversation  
9 from TSB and the media and other people, including  
10 myself. So, I raised the question of something  
11 called a hot axle box detector, which is a  
12 relatively standard piece of wayside equipment.  
13 It's used on heavy haul predominantly, and on  
14 heavier trains, commuter trains and what have you,  
15 long-distance trains. And it's a device that  
16 measures the heat of the axle bearings as they go  
17 over them.

18 I've never ever seen those used on a  
19 light rail vehicle.

20 So, the technology is out there, but as  
21 I understand it from talking to the Alstom  
22 engineers, is that the temperatures that this  
23 bearing saw, those detectors would not have  
24 detected this. So you've got to have enough  
25 knowledge to know -- I mean, yeah, you can put

1 detectors on anything, but it's only any good if  
2 it's detecting what it needs to detect.

3           You can, for instance, put  
4 colour-changing paint and tape on the axles, for  
5 instance. You know, you can get these paints that  
6 change colour with temperature. You could do that.  
7 But it's not going to tell you anything quick  
8 enough, I don't think, or it's not going to be  
9 sensitive enough to give you the information.

10           I think, if you were to actually  
11 install sensors into the axles and the bearings,  
12 like, the engineering effort -- you would have to  
13 redesign the bogie, you would have to redesign the  
14 axles, to be able to add all that instrumentation,  
15 and then you're adding a load more information and  
16 computerization into the vehicle, which is already  
17 very, very complex and heavy. I don't -- for what  
18 it would cost and what it would tell you, I don't  
19 see that it's a viable or sensible option.

20           I think a different bogie or a  
21 different axle and a different bearing  
22 configuration would make more sense. Still a huge  
23 cost implication and time implication, but I would  
24 look at, like I said, those other bogies that  
25 Alstom manufacture. I would look at a different

1 solution -- overall different solution to those  
2 bogies before I started -- you know, you could fit  
3 instrumentation, and they think it's going to be  
4 your saviour and it's going to prevent anything  
5 like this happening again. I don't think anything  
6 out there exists that could do that.

7 CHRISTINE MAINVILLE: So, short of what  
8 you've described, is there still some risk of this  
9 happening again?

10 MATTHEW SLADE: At the moment, with the  
11 measuring bearings every seven and a half thousand  
12 kilometres, the risk is mitigated, on a short-term  
13 basis. I mean, this is not something you can carry  
14 on doing for the next 30 years. So a solution  
15 needs to be arrived at.

16 Now, whether that is different  
17 bearings, different axle, different bogie, I don't  
18 know. But something -- there needs to be a --  
19 something needs to happen that changes -- I would  
20 think, that removes that seven and a half thousand  
21 kilometre inspection, because I don't think that's  
22 sustainable or sensible.

23 CHRISTINE MAINVILLE: Or?

24 MATTHEW SLADE: Sensible.

25 CHRISTINE MAINVILLE: Sensible, okay.

1 And then do you want to move to the second  
2 derailment?

3 MATTHEW SLADE: Sure. So, whilst  
4 unrelated, it kind of is related. So, we do know  
5 that the root cause was lack of torque to the bolts  
6 that held the gearbox to the vehicle. But the only  
7 reason that gearbox came off is because that axle  
8 was replaced as part of the bearing inspection. It  
9 had failed a bearing inspection and so it had been  
10 dismantled to have a new axle and bearings put in  
11 it.

12 So, if the first derailment hadn't  
13 happened, then you wouldn't have ever had to do  
14 that, so therefore the second one wouldn't have  
15 happened.

16 I think there was -- in the early  
17 stages, there was a lot of -- I don't want to say  
18 "panic," "panic" is the wrong word, but there was a  
19 lot of interest obviously in what had happened, and  
20 there was a lot of early thoughts that were then  
21 found to be wrong.

22 So, going through the reports of what  
23 happened, it makes -- it makes more sense to read  
24 the later reports rather than the earlier reports  
25 because there's some misinformation in some of

1 them, from -- just from, I guess, the urgency with  
2 which people wanted answers. So, for instance, one  
3 of the very early reports from TSB said the train  
4 had derailed before it arrived in the station. It  
5 didn't. It derailed on departure. So there is  
6 some information out there that just needs -- has,  
7 I guess, some caution around it.

8           And it was only, you know, during the  
9 shutdown and after -- after we, being not the TSB  
10 and not the police, got access to the vehicles and  
11 the site that we started to put the pieces of the  
12 puzzle together that, you know, resulted in  
13 understanding what had happened.

14           You know, I think, obviously, you know,  
15 the root cause is the human -- the human error. I  
16 don't necessarily -- you know, the person who  
17 torqued the bolts up or didn't torque the bolts up,  
18 I don't hold that individual responsible. There  
19 was a shift change, and paperwork was lacking.  
20 But, you know, there's always a supervisor.  
21 Someone put that vehicle into service when it  
22 probably shouldn't have gone into service, knowing,  
23 you know, if they'd done due diligence and all the  
24 steps, they'd have known those bolts haven't been  
25 torqued up.

1                   And it was clear from -- my opinion,  
2 from the evidence physically on the site, there was  
3 -- the train had started to drop debris, as you  
4 referred to earlier, bolts, when it was travelling  
5 in the opposite direction. So it had been dropping  
6 parts off of the train for over half an hour, this  
7 is half an hour end to end, and some of those parts  
8 were found on the adjacent track, which means when  
9 the train had been travelling in the other  
10 direction.

11                   It's unfortunate that we haven't been  
12 able to talk to the operator, the driver at the  
13 time, or understand their witness statement or  
14 their record of events. As I understand it, at the  
15 point of derailment, that they were at the opposite  
16 end of the train, so they might not have felt it  
17 when it derailed. But when it was on the other  
18 track, losing parts, they would have been directly  
19 over that, they would have been, you know, nearer  
20 it.

21                   So, considering that the drivers are so  
22 quick to tell us that they've got a flat spot, or  
23 they -- you know, the train doesn't feel right,  
24 whatever, it's surprising that nothing was known  
25 about it before it got to Tremblay Station.

1                   As you're probably aware, one of our  
2 staff was on the train and got off because he was  
3 concerned, and he made a phone call.

4                   So, and then the fact the train went so  
5 far after it departed Tremblay, I find quite  
6 surprising that the operator wasn't aware, and that  
7 the train went that far.

8                   CHRISTINE MAINVILLE: Right. And am I  
9 right that there were additional quality control  
10 measures put in place at Alstom following that?

11                  MATTHEW SLADE: Yeah. I think  
12 they've -- you know, it's not the only incident  
13 we've had where there's been human error as being  
14 the root cause. You can -- you know, I'm not  
15 saying you can -- you can never get rid of all of  
16 it. There's always a chance that it might occur,  
17 with human error.

18                  But, yeah, the checks and balances that  
19 are in place now are more stringent than they were  
20 before. And I think they are acutely aware of,  
21 obviously, the implications.

22                  So things have improved.

23                  CHRISTINE MAINVILLE: Have they  
24 improved also -- I understand there's been a merger  
25 with Bombardier, and has that had an impact on



1 Alstom's performance on maintenance?

2 MATTHEW SLADE: So, I don't know if  
3 they would call it a merger. They call -- they  
4 bought Bombardier -- [overspeaking]

5 CHRISTINE MAINVILLE: Yes -- [overspeaking]

6 MATTHEW SLADE: So, depending on who  
7 you talk to, whether they regard it as a merger or  
8 a hostile takeover, or whatever, but the advantage  
9 of that was helpful for Ottawa, because Bombardier  
10 has a large facility at Kingston, which is not too  
11 far away, and which gave Alstom access to local  
12 resources with expertise in light rail transit.  
13 And certainly when we had these significant  
14 incidents, they were able to rely on local  
15 expertise that they didn't have otherwise. If they  
16 hadn't merged with Bombardier, you know, we would  
17 have been reliant on communications to and from  
18 Paris, and I don't know where they would have  
19 brought people from.

20 You know, we talked in our last session  
21 about the labour force in Ottawa and the skill  
22 sets, etcetera. So, having access to the  
23 Bombardier -- the ex-Bombardier staff out of  
24 Kingston has certainly helped with resources and  
25 their ability to react. And I think, on the

1 vehicle side, they have improved and they have  
2 got -- as a result, they've got a lot more  
3 resources on site than they had before. I think  
4 they've always been under-resourced, but they've  
5 now got a lot more people at the MSF.

6 But I would still -- my caution is that  
7 they are still heavily vehicle-focused and their  
8 infrastructure resources are still lacking.

9 CHRISTINE MAINVILLE: So, for those  
10 aspects of the infrastructure that they are  
11 responsible for maintaining?

12 MATTHEW SLADE: Yes.

13 CHRISTINE MAINVILLE: Okay.

14 MATTHEW SLADE: Track, OCS, signalling,  
15 wayside systems, I think they need to increase  
16 their resources and increase their skill set.

17 CHRISTINE MAINVILLE: Would Thales ever  
18 be brought in to retrain the trainers, as part of  
19 that?

20 MATTHEW SLADE: If Thales were needed  
21 to come back in to do that, it would have to be a  
22 variation, because they delivered all of the  
23 training that they were required to deliver.

24 I know that Alstom engaged an ex-Thales  
25 employee who was involved in the testing and

1 commissioning, to help them re-train and understand  
2 more about the Thales system, which was a good  
3 thing. I helped instigate that.

4 I knew the individual well, and they  
5 were looking for a new role and a new opportunity,  
6 and I put them in touch with Alstom and suggested  
7 that they rely on this resource, or hire this  
8 resource, on a contract basis to help improve their  
9 knowledge, understanding and skill set.

10 So, it's not training, as in certified  
11 specific training, because this individual is  
12 ex-Thales rather than still at Thales, but it is, I  
13 would say, coaching and familiarization and  
14 improving their reaction and their response to  
15 certain things that's occurred.

16 But, no, I'm not aware of there being  
17 any additional training requested or implemented.

18 CHRISTINE MAINVILLE: Do you have any  
19 additional comments on maintenance failures that we  
20 haven't touched on already?

21 MATTHEW SLADE: Just generally, you  
22 mean? Or...

23 CHRISTINE MAINVILLE: Yes, just  
24 generally.

25 MATTHEW SLADE: I think there's a -- I

1 think the way -- I think the maintenance, the  
2 maintenance of the infrastructure, can be improved  
3 dramatically. I don't -- I guess I don't --  
4 personally, I don't like the way it's done. And I  
5 guess that's just a reflection of my experience  
6 from Europe and the way infrastructure is  
7 maintained there, than what is done here. I think  
8 there's a lot of room for improvement, I guess.  
9 And it's getting the focus that it needs now, but  
10 it's still a challenge.

11 CHRISTINE MAINVILLE: What would you  
12 say are the main differences between how the  
13 systems are maintained in Europe versus here?

14 MATTHEW SLADE: I think, in Europe,  
15 everything is a lot more hands-on. So, for  
16 instance, track inspections, which are generally  
17 done daily, you have different intervals, but  
18 generally, good, in normal, I would expect, in the  
19 -- back home in the UK, I would expect a track  
20 maintainer to walk a mile or two of track a day on  
21 foot, with some tools and some spares, and just go  
22 along and just physically look at what the  
23 infrastructure looks like.

24 And if you do -- I mean, I'll work in  
25 kilometres. It's best part of 13 kilometres. If

1 you do a kilometre a day, then, by the end of  
2 26 days, you've done the whole alignment and then  
3 you're back again. And it means that when you're  
4 walking along it, you will notice and recognize and  
5 see if there's any changes. You would notice  
6 corrugation occurring on the head of the rail. You  
7 would notice if things were missing, and what have  
8 you, and you would write notes and you would, you  
9 know, keep a log of how everything is, whereas, at  
10 the moment, Alstom inspects track in a vehicle. So  
11 they will get into a -- what we call a high rail  
12 vehicle, so it's like an F150 with rail wheels on  
13 it, and they'll just drive along the alignment.

14           And I don't feel that you can -- from  
15 the cab of an F150 through a windshield at night,  
16 in darkness, you can adequately assess the  
17 condition of the track. As opposed to walking  
18 along it, at walking pace, rather than travelling  
19 at 5 or 10 kilometres an hour in the cab of a  
20 truck.

21           But I just think it's things like that,  
22 and it's a bit like an OCS inspection, the catenary  
23 that's up in the air. Again, I would expect that  
24 to be done at eye level, i.e. get up there and look  
25 at it and get in a -- what we call a bucket truck,

1 a high rail bucket truck, and get up close to the  
2 equipment, and, as you go along, you give it a  
3 clean and keep going.

4 But, again, it's done from ground  
5 level, looking up, in the hours of darkness. It's  
6 not done during the day. But it's challenging.  
7 They don't make it as easy as it could be. And  
8 they don't necessarily do it to a level of detail  
9 or rigour that I would expect them to, or I would  
10 want them to.

11 And they'll argue that they're doing it  
12 in compliance with the standards, or with regards  
13 to the regime that's required, or their maintenance  
14 plan. But that's all very well and good, we talked  
15 about plans earlier, but if the plans aren't right  
16 in the first place, it doesn't help.

17 So, I just -- I think, especially with  
18 everything that's gone on, you know, more vigilance  
19 would make more sense. And it doesn't appear to  
20 exist with the infrastructure side of things. I  
21 think on the vehicle side, they're spending a lot  
22 more time, you know -- as we know, every seven and  
23 a half thousand kilometres, they're looking  
24 underneath them now, which is very frequent. But  
25 it's all reactive to events that have occurred.

1 CHRISTINE MAINVILLE: Have there been  
2 resourcing issues, including more recently?

3 MATTHEW SLADE: At RTM or at Alstom  
4 or...?

5 CHRISTINE MAINVILLE: I was asking  
6 about Alstom, but if there's some on RTM's end,  
7 please do --

8 MATTHEW SLADE: Alstom has a fairly  
9 high churn of resources, even up to management  
10 level. They've brought in some new management,  
11 which is good. But they've always had a -- excuse  
12 me, a regular churn of staff, both, you know, at  
13 manual labour level, all the way up to management  
14 level.

15 I think generally there's often --  
16 there's a lot of vacancies there, regularly  
17 advertised. If you went on to Indeed and typed in  
18 "Alstom," that's where you'd probably find 30  
19 vacancies on a fairly regular basis. Which I think  
20 is reflective of the nature of the workforce, as  
21 I've said before, in Ottawa, and are reflective of  
22 the pressures of working on that project, which  
23 is -- you know, it's a challenge that maybe  
24 probably wasn't assessed effectively early enough  
25 on.

1 CHRISTINE MAINVILLE: Do you think the  
2 fact of RTM and Alstom not getting paid for some  
3 time after operations started, given all the  
4 deductions or penalties, do you think that would  
5 have had any impact on their performance?

6 MATTHEW SLADE: I don't know that it's  
7 had an impact on their performance. It certainly  
8 created a lot of stress and pressure in the  
9 businesses. You know, I think you only have to  
10 look at Alstom's global revenue; they're a company  
11 that can suffer a little bit of pain quite easily.  
12 You know, they're bigger than -- their revenue is  
13 larger than SNC's and EllisDon's combined. They're  
14 a big organization with a big income, so they can  
15 suffer that.

16 I think it's just -- it's stressful for  
17 those individuals that have P&L responsibility for  
18 the various different businesses, for sure. And  
19 it's hard. I mean, we talked about incentivization  
20 versus penalization last time. And I think, you  
21 know, when you want -- I say "you" -- when the City  
22 or the council or whoever wants people to perform  
23 better, it's hard for them to do that when they're  
24 paid less.

25 So, I mean, we haven't held back on any



1 resources, and we haven't held back on any  
2 finances, either during the construction or during  
3 the maintenance, and I don't think Alstom has  
4 either, and it's just an added pressure that's  
5 challenging, you know. Some of these companies  
6 have shareholders and they have expectations, and  
7 it's tough.

8 But, yeah, I think -- yeah, it's just  
9 tough.

10 CHRISTINE MAINVILLE: We didn't speak  
11 about the door failures, or some of the door  
12 issues. Do you know what that's linked to  
13 ultimately, or were there several causes?

14 MATTHEW SLADE: Are you talking about  
15 the passenger doors, or are you talking about the  
16 cab doors?

17 CHRISTINE MAINVILLE: What's the  
18 distinction?

19 MATTHEW SLADE: Okay. So, the cab door  
20 is the internal door that the operator goes through  
21 to get into his cab of the train to operate. They  
22 had some issues with those at the end of  
23 construction and when we went into revenue service.

24 And then there is the passenger doors,  
25 which are the doors the likes of you and I would

1 use to board and alight the train.

2 CHRISTINE MAINVILLE: I was thinking of  
3 the passenger ones, but were there issues, yes,  
4 with both?

5 MATTHEW SLADE: Yeah. So we had issues  
6 with the -- I'll start with the cab doors, because  
7 that's what I started talking about.

8 So, the cab doors, we had an issue with  
9 those during production. They were -- they're  
10 glass, and they were regularly breaking,  
11 shattering, cracking, and so we went through a very  
12 late design change. And I think even when we went  
13 into service in September of 2019, some of those  
14 trains had temporary Lexan plastic doors, cab doors  
15 in them, until such time as the redesigned doors  
16 were available to be installed.

17 So we had an issue with those, which  
18 was on -- I think it was on the deficiency list. I  
19 can't remember if it was on the term sheet or not,  
20 but certainly it was on the deficiency list, and it  
21 was a retrofit item.

22 Then, on the passenger doors, we had a  
23 few issues during testing and commissioning with  
24 them, which predominantly related to what we call  
25 the EDR, the emergency door release, which is the

1 red handle on the inside that a passenger would  
2 pull in case of an emergency.

3           So, we had an issue with those where  
4 they weren't -- they were either hard to operate or  
5 they weren't consistent across the fleet, or even  
6 across the train, or even across one handle. If  
7 you pulled it three times in a row, it didn't  
8 necessarily perform the same way each time. So  
9 those went through a retrofit, on the handles and  
10 on the mechanisms that are inside those doors.

11           And then when we got into service, we  
12 had a number of issues that were door-related, that  
13 ended up -- caused quite a lot of upset in the  
14 community, I guess, because passengers were being  
15 blamed for either holding doors open, or forcing  
16 doors open, and the doors weren't ever designed for  
17 that kind of, I don't want to use the word "abuse,"  
18 that kind of use.

19           So we ended up with a variation from  
20 the City to modify the doors, which was  
21 predominantly software-related. It's called  
22 H-bridge. I don't know what the "H" stands for.  
23 But there was a modification done to make the doors  
24 less susceptible to failure as a result of  
25 passenger intervention.

1                   We had some other items on the doors on  
2 the minor deficiency list with regards to the  
3 sensitive edges. I think all of those have been  
4 resolved now. And we had the variation from the  
5 City, and the H-bridge has been fixed, and I don't  
6 think there's been many issues since.

7                   There was a bit of education required  
8 at the beginning, of familiarity with regards to  
9 being able to what we call isolate doors, i.e., a  
10 door that might say that it's not working properly,  
11 the operator can leave his cab, go to that door,  
12 isolate it such that the train control system no  
13 longer sees that as a fault and still allows the  
14 train to move.

15                   But some of that was familiarization  
16 and, you know, their ability to respond to those,  
17 like I said before, the learning curve. They're  
18 all pretty quick to deal with that sort of issue  
19 now. It's pretty rare that you have to send a  
20 technician out to a door.

21                   We still get door faults. You always  
22 will. It's the one item on any fleet, globally  
23 around the world, that has the most failures,  
24 always. Doors are always a very -- just from the  
25 number of cycles that they go through and the

1 passenger interface, etcetera, there, it's a hard  
2 thing to not fail.

3 CHRISTINE MAINVILLE: Okay. And I take  
4 it this software -- this software change and the  
5 improvements that were made, these are all Alstom  
6 components, correct?

7 MATTHEW SLADE: Yes, it is.

8 CHRISTINE MAINVILLE: Were there some  
9 delays in getting a proper change control board in  
10 place with RTM?

11 MATTHEW SLADE: Don't know, because I  
12 can't remember when it started.

13 CHRISTINE MAINVILLE: Okay.

14 MATTHEW SLADE: I would say probably --  
15 maybe yes, okay? I can't remember when it started,  
16 so I can't say emphatically. I think -- obviously,  
17 a control board is a sensible thing to have, and I  
18 think -- I don't know that everybody recognized the  
19 need for it or the importance of it at the time.

20 I think it was also important because  
21 of the status of the Stage 2 fleet, which is still  
22 being assembled, because there's changes that are  
23 coming and going with regards to these vehicles.  
24 Which there shouldn't be, but there is. And so,  
25 with the changes that are due to come, not just on

1 the vehicle but there will be software updates from  
2 Thales when Stage 2 gets integrated as well. It's  
3 important to have that board in place; whether it  
4 was early or late, I don't know.

5 I think the delays on the construction  
6 side of the project probably impacted all of that,  
7 because it has an impact on the Stage 2 fleet,  
8 still which is late, and an impact on the ongoing  
9 Thales work in the yard as well.

10 So I think there's all of those things  
11 that are late, which is probably what also impacted  
12 it, if the Change Control Board was late, is  
13 probably as a result. It might not have been  
14 needed initially, but when people realized we still  
15 had work to do on the Stage 2 works, it became  
16 apparent that it was a sensible thing to have.

17 CHRISTINE MAINVILLE: What are the  
18 implications, from your perspective, of the yard  
19 not being automated yet?

20 MATTHEW SLADE: There aren't any.  
21 Sorry, it wasn't supposed to be automated yet.

22 CHRISTINE MAINVILLE: Well, I  
23 understand that it's not automated because of the  
24 Stage 2 vehicles being part of the mix and being  
25 manufactured.

1                   MATTHEW SLADE: I don't know what you  
2 do or don't know about the automation of the yard.

3                   So, the automation of the yard was not  
4 a City requirement, okay? That was an  
5 RTM/OLRT-C/RTG decision. And during construction,  
6 when we were struggling with schedule, OLRT-C and  
7 Thales agreed to put the yard automation on hold in  
8 order to get focused on getting the main line  
9 signalling and train control system done for  
10 Stage 1.

11                   So that was put on hold, and the  
12 agreement was that we would restart the  
13 implementation of the automation in the yard once  
14 Stage 1 had gone into service. So, it was never --  
15 you know, everyone always knew it wasn't going to  
16 be done Stage 1.

17                   And it was a -- it was an internal  
18 decision to automate the yard, it wasn't the City's  
19 decision.

20                   CHRISTINE MAINVILLE: Okay.

21                   MATTHEW SLADE: The fact that it still  
22 isn't done doesn't have any impact on service. All  
23 it impacts is a commercial agreement between OLRT-C  
24 and RTM.

25                   CHRISTINE MAINVILLE: Okay.

1                   MATTHEW SLADE: That's the only thing  
2 it impacts.

3                   CHRISTINE MAINVILLE: So it doesn't  
4 make it more difficult to get the trains available  
5 -- to get the trains ready or out? No?

6                   MATTHEW SLADE: No. So, people will  
7 tell you that it probably is, and I don't agree,  
8 because (a) it was never originally part of the  
9 contract to do it, so they would always have had to  
10 have operated the yard the way we're operating it  
11 now.

12                   Secondly, it's not -- I'll admit that  
13 it's not helpful having Stage 2 trains sit around  
14 the yard at the moment, but then if all the Stage 2  
15 fleet was delivered when it was supposed to be  
16 delivered, all of them would have been there by  
17 now, and they're not, they're late, so there are  
18 actually less trains there than there would be.

19                   So, you know, it doesn't have any real  
20 impact other than the fact that now we are having  
21 to test and commission the yard whilst we're also  
22 operating a railway. But that decision was made a  
23 long, long time ago, when we decided to put it on  
24 hold whilst we were concentrating on getting  
25 Stage 1 alignment up and running.



1                   So the fact that, yeah, okay, there's  
2                   frustration in being able to give Thales access to  
3                   the yard to do the testing, and there's frustration  
4                   from Alstom saying, "While they're testing, we  
5                   can't move trains around the yard." There's a bit  
6                   of, you know, management and negotiation and, you  
7                   know, movement to plan around that, but the only  
8                   issue is a commercial issue. There is no issue for  
9                   delivering service.

10                   CHRISTINE MAINVILLE: Do you have any  
11                   understanding of the causes of the delays to the  
12                   Stage 2 vehicles?

13                   MATTHEW SLADE: Well, they're late  
14                   because Stage 1 was late.

15                   CHRISTINE MAINVILLE: That's what I  
16                   just wanted to clarify.

17                   MATTHEW SLADE: Stage 1 was late,  
18                   obviously, and then Alstom -- so the original  
19                   contract with Alstom had a date by which they were  
20                   asked to vacate the MSF from production  
21                   perspective.

22                   That was supposed to tie in with them  
23                   running service. And if they had asked for an  
24                   extension to that date, they would have been -- you  
25                   know, we would have let them carry on, you know,

1 doing certain activities at the MSF, but they  
2 decided -- they bought or leased Brampton, and they  
3 decided they wanted to relocate to Brampton.

4           And they had good reason for wanting to  
5 do that, but that then added delay to the  
6 production. And, actually, they've actually, I  
7 think, currently -- I think they've actually  
8 stopped production for 12 months now because  
9 they're busy building -- they were so late with the  
10 Stage 2 fleet for Ottawa, they've started building  
11 fleet for Hurontario and Finch. So, rather than  
12 being late on several contracts, they just said,  
13 "Well, we're already late on Ottawa. We'll just be  
14 even more late and stop production for a year while  
15 we build other fleets."

16           So, they are a long way behind, and we  
17 have some unfinished Stage 2 trains at the yard in  
18 Ottawa, and we have -- now we're in a situation  
19 where they've stopped assembly for the time being.

20           CHRISTINE MAINVILLE: Is there still  
21 some retrofitting or other assembly-type work being  
22 done at the MSF?

23           MATTHEW SLADE: Well, you've got these  
24 incomplete Stage 2 cars that need to be finished.  
25 You've got a number of cars that have had --

1 they've ended up being donor vehicles, for want of  
2 a better term, where they've been -- if the Stage 1  
3 fleet have had issues and they've needed parts,  
4 they robbed them off of the vehicles that haven't  
5 been yet commissioned or sold to the City. So,  
6 there's -- I guess it looks a bit like a graveyard,  
7 a boneyard of trains that have had various bits  
8 taken off them.

9           So there are, I don't know how many;  
10 I'd have to ask Sharon how many vehicles were there  
11 specifically that were in the state of  
12 incompleteness, but there's a number of trains  
13 there at the MSF that are, I guess, taking up prime  
14 real estate, that are unusable.

15           CHRISTINE MAINVILLE: Is that impacting  
16 maintenance, in terms of the space at the MSF or  
17 other --

18  
19           MATTHEW SLADE: They're in the storage  
20 shed, so you could argue they're not taking up any  
21 space or not affecting maintenance, but those  
22 vehicles are going to have to be moved to the point  
23 in time to facilitate the Thales testing. So  
24 they're -- you know, just moving, I use the term,  
25 "dead trains," moving immobile trains around

1 requires a little shunting vehicle, takes a lot of  
2 time, a lot of energy, a lot of resources. It will  
3 be easier if the vehicles weren't there, but it  
4 costs a lot of money to take them away and bring  
5 them back again, but it is what it is.

6 CHRISTINE MAINVILLE: In terms of the  
7 manufacturing and assembly that went on at the MSF,  
8 is that something you're aware of having been done  
9 much elsewhere, in terms of building or having a --  
10 well, not -- let me rephrase. Not using an  
11 already-existing, proven sort of production line?

12 MATTHEW SLADE: I'm not aware of any  
13 vehicles being assembled in a maintenance facility  
14 before. They sometimes will go through a mid-life  
15 overhaul. Like, if you go to countries that have  
16 large fleets that have high mileage on them, they  
17 might do an overhaul at a maintenance facility.  
18 But not built from scratch. I've never seen that  
19 done anywhere. I'm not aware of it ever having  
20 been done before. It might have been, but I'm not  
21 aware. Normally, they're done in assembly  
22 facilities.

23 CHRISTINE MAINVILLE: Right. Are you  
24 able to speak to who, if anyone, assessed OC  
25 Transpo's readiness for service?

1                   MATTHEW SLADE: I don't -- I don't know  
2 for certain, but I don't think anybody did. I  
3 think -- so, the independent safety assessor, who  
4 was an individual, or he's an individual, Sergio  
5 Mammoliti, at the time worked for the TUV. He was  
6 responsible for assessing the system as being safe  
7 for passenger service.

8                   I think if you asked him directly did  
9 he assess people as to whether or not they were  
10 ready, I think he would probably say, no, but it --  
11 that wasn't part of his role. His role was -- as  
12 safety assessor was to say it was safe for  
13 passenger service.

14                   I think he was the only person, the  
15 only individual, that looked at all of the  
16 organizations, whether it was OLRT-C, RTM, or OC  
17 Transpo. I'm not aware of anyone else doing  
18 anything independently to assess -- I mean, I guess  
19 the City might have had -- you know, they had  
20 consultants like STV, they had consultants on board  
21 who would be giving opinion, but I don't know that  
22 they hired in anyone specifically to assess their  
23 readiness.

24                   CHRISTINE MAINVILLE: Okay. And just  
25 one question I had to clarify on the trial running,

1 the morning and afternoon meetings.

2 MATTHEW SLADE: Yeah.

3 CHRISTINE MAINVILLE: I just wanted to  
4 clarify, if you recall, which team assessed the  
5 maintenance performance, in terms of -- I  
6 understand that aspect of the trial running to  
7 involve some level of, you know, quality, judgment  
8 or, you know, assessment of how significant any  
9 given issue is or not.

10 Was that part of the morning meetings,  
11 the morning team meeting's role, or would that be  
12 the afternoon meeting?

13 MATTHEW SLADE: The morning team  
14 reviewed all of the data that was -- because  
15 there's volumes of data that's produced by the  
16 vehicles and the maintenance teams and everything.  
17 Volumes of data that gets produced, is there -- is  
18 measured or looked at to see whether or not the  
19 maintenance practices were meeting the requirements  
20 of the trial running plan or the contract PA.

21 So they would crunch all that data, and  
22 they would provide all of that data and  
23 substantiation to the afternoon meeting, with a  
24 recommendation as to whether they thought it was a  
25 pass or a fail.

1                   But then the afternoon meeting would  
2 assess what they had presented, would assess the  
3 material, they would look at specific items, and  
4 would then either -- I guess, 90 percent of the  
5 time, maybe higher, they would agree with whatever  
6 was recommended from the morning meeting, but  
7 sometimes there might be a conversation that might  
8 -- it might have changed the score; whether it  
9 changed it from a pass or fail, I don't know, but  
10 it might have changed the percentage, maybe, which  
11 would have been based on, again, information that  
12 would have come from that morning meeting. Or  
13 maybe they might have said, "Look, we've said it's  
14 a fail but you need" -- you know, if they wanted  
15 the executive level to make the overall decision,  
16 they might have presented something that says,  
17 "We've classified it as a fail, but these are the  
18 things that occurred, it's up to the executives to  
19 decide if it's still a fail or if it's a pass or  
20 vice versa."

21                   CHRISTINE MAINVILLE: Are you  
22 referencing just now the maintenance in particular,  
23 or any of the categories?

24                   MATTHEW SLADE: No, the maintenance in  
25 particular. That's what you asked for, right?

1 CHRISTINE MAINVILLE: Yes. No, I just  
2 want to make sure that's what you were still  
3 talking about.

4 MATTHEW SLADE: No, no. Yeah.

5 CHRISTINE MAINVILLE: Okay. So the  
6 afternoon meeting team would get some description  
7 or account of the types of events that occurred and  
8 what was happening on the ground to then assess?

9 MATTHEW SLADE: Yeah, but it was a  
10 substantial packet of documentation. There would  
11 be an e-mail, and attached to it would be, I don't  
12 know, six or more documents that included all the  
13 data, whether it was PDFs or Excel files, that had  
14 everything that basically built up to the decision  
15 or the recommendation that they had put forward.

16 So that was published on a daily basis  
17 between the morning meeting and the afternoon  
18 meeting, such that it was available for review and  
19 comment.

20 CHRISTINE MAINVILLE: And were there  
21 other categories where the morning meeting would  
22 provide a recommendation?

23 MATTHEW SLADE: Yeah. It wasn't just  
24 the maintenance practices. I mean, they pulled  
25 together all of the information that was fed up to



1 the panel.

2 CHRISTINE MAINVILLE: Okay. So they  
3 would also crunch the data and provide a  
4 recommendation, even, for instance, on the  
5 operational category, the travel time and the  
6 headway?

7 MATTHEW SLADE: Yes.

8 CHRISTINE MAINVILLE: And do you recall  
9 any changes to those recommendations, whether it  
10 was pass/fail ultimately?

11  
12 MATTHEW SLADE: I mean, I can't  
13 remember any of them categorically, but I'm sure,  
14 if I really spent the time and effort to go through  
15 all the morning documents and then the afternoon  
16 documents, I'd be able to see whether or not any  
17 decisions that moved one way or the other.

18 CHRISTINE MAINVILLE: Okay.

19 MATTHEW SLADE: I mean, the information  
20 is all there. It would just take a very long time  
21 to go through it. I can't remember specifically  
22 any going one way or the other, from a fail to a  
23 pass or a pass to a fail, as a result of a  
24 discussion that was held in the afternoon meeting.

25 I think -- like I said, I think, in my

1 previous session with you, I don't think we ever  
2 had any long, drawn-out, contentious discussions  
3 about, you know, whether it was a pass or whether  
4 it was a fail on any individual category or on the  
5 overall day. They were generally unanimous  
6 decisions. Those meetings were generally very,  
7 very quick, 20 minutes, 30 minutes, and they were  
8 not contentious in any way whatsoever.

9 CHRISTINE MAINVILLE: And would the  
10 morning team meetings ever give an overall  
11 recommendation about whether the day was a pass?

12 MATTHEW SLADE: No.

13 CHRISTINE MAINVILLE: Okay.

14 MATTHEW SLADE: No, and everyone was  
15 kept separate for very good reasons, for that  
16 reason specifically so, you know, very few people  
17 knew what the scoring criteria was, very few people  
18 knew what the actual -- no one saw the scorecards  
19 other than the people on the panel.

20 At the time, the City had a problem  
21 with an individual in their organization who was  
22 leaking information to the media, so everything was  
23 buttoned down as tight as it could be. You know, I  
24 had -- even my CEO was asking for copies of  
25 documents, and there's e-mails from him -- from me

1 to him, saying he can't have them, but I would tell  
2 him if it was a pass or a fail on the date, but I  
3 wouldn't give him any more details than that, just  
4 so that he had knowledge for the Board, as much as  
5 anything, as to where we were trending on the whole  
6 trial running. But the information that was in  
7 that room stayed in that room.

8 CHRISTINE MAINVILLE: And what's the  
9 reason for that?

10 MATTHEW SLADE: Because of the problem  
11 with the media. People were leaking information  
12 out, like documents, e-mails. There was people in  
13 the media, and in the public, who had information.  
14 They were getting information from somewhere within  
15 the City's organization, and it was agreed amongst  
16 all parties that they didn't want the media or the  
17 public tracking whether or not we were trending for  
18 a pass or a fail or whatever, or trying to  
19 second-guess what was going on.

20 So, I guess it was combined discussion  
21 amongst RTG and the City, was that all of this  
22 would be kept as -- "secretive" is the wrong word,  
23 but it, you know, was in a very close-knit group as  
24 possible, because it was so political.

25 CHRISTINE MAINVILLE: Okay. You

1 indicated last time, I believe, that Steve Nadon  
2 was on the morning trial running.

3 MATTHEW SLADE: Yes.

4 CHRISTINE MAINVILLE: Are you sure  
5 about that?

6 MATTHEW SLADE: I thought he was.

7 CHRISTINE MAINVILLE: Okay.

8 MATTHEW SLADE: Or he might -- no, I  
9 thought he was. Because what we had was we had an  
10 issue -- I know, you know, we've talked about work  
11 orders and things like that in the maintenance  
12 system. We had a situation where we had a minor  
13 deficiency list from substantial completion that  
14 was agreed with the independent certifier, that had  
15 a load of deficiencies that we knew we had to  
16 correct over a period of time, okay? So they were  
17 known issues.

18 And then we had individuals, during  
19 trial running, raising work orders for those things  
20 that were known as deficiencies and were saying,  
21 "You're failing your maintenance practices because  
22 you haven't gone and fixed that." But it wasn't  
23 down to RTM to go and fix it because it was a  
24 deficiency on OLRT-C and they had a year or  
25 whatever to go and fix it. So there was a period

1 when -- I guess at the beginning of trial running,  
2 when the scoring from the morning or the  
3 discussions from the scoring in the morning meeting  
4 was the, "Oh, you're failing because all these work  
5 orders have been raised," and we're like, "You  
6 can't raise work orders against a known deficiency  
7 that you know is not going to be closed for another  
8 12 months."

9           So there was -- the person that knew  
10 more about the minor deficiencies list than  
11 anybody, with time, was Steve Nadon. So I think he  
12 got sucked into that morning meeting. He might not  
13 have been originally one of the attendees, but when  
14 it was clear that the -- that some of those minor  
15 deficiencies were being classified as maintenance  
16 issues, then Steve was either asked to attend or, I  
17 don't know, told to attend, because he could sit  
18 there, and when they said, "Oh, CCTV camera X, Y, Z  
19 has got an issue," and he'd say, "Well, that's not  
20 a maintenance issue, because it's line item 1198 on  
21 this Excel spreadsheet as a deficiency."

22           So he might not have been on the  
23 original invite list, but he certainly participated  
24 as a -- from a purpose of making sure that they  
25 were not artificially scoring it incorrectly.

1                   So he was involved. Whether he was on  
2 the original invite list for those morning  
3 meetings, I can't remember without pulling out the  
4 calendar invite and having a look.

5                   CHRISTINE MAINVILLE: Do you know who  
6 from OLRT-C would have been there in addition to  
7 him?

8                   MATTHEW SLADE: No, not off the top of  
9 my head.

10                  CHRISTINE MAINVILLE: Okay. Fair  
11 enough. Anything else that we haven't discussed in  
12 the last two interviews -- or this interview and  
13 the last one, that you'd like to address?

14                  MATTHEW SLADE: That's a hard one. I  
15 can't remember everything we've discussed.

16                  I think -- I don't know, really. I  
17 think, other than me just giving a general opinion  
18 on bits and pieces, you know, I think I've answered  
19 all the questions that you've asked. I don't think  
20 I'd change anything, but...

21                  CHRISTINE MAINVILLE: In terms of a  
22 general opinion, what would you point to as, you  
23 know, root causes, in terms of perhaps external  
24 factors or contributing factors to what may have  
25 led to the fact that this project encountered the

1 issues it did?

2 MATTHEW SLADE: Well, I think -- okay.

3 So, part of it is just -- I don't know how to put  
4 this -- the unusual quirkiness of Ottawa as a city  
5 that it is, with its political pressures. I've  
6 never -- and I'm working in other cities at the  
7 moment doing similar projects, and they don't have  
8 the level of political pressure that Ottawa has.

9 Now, whether that was down to  
10 individuals, or down to the City, I don't know.  
11 But it's a -- it played a significant part in how  
12 stuff was done, the relationships between all of  
13 the parties. So, I think that has had an impact,  
14 and it puts undue pressure -- still constantly  
15 today, it still puts undue pressure on the project  
16 and on the people. And I don't know that that  
17 could ever be stopped. It's hard to undo that once  
18 it's done.

19 A lot of it is from behaviours which  
20 are learned from individuals, and they're a  
21 reflection from leadership down.

22 Part of it is -- I know we've talked  
23 about it, and I know you've talked to other people  
24 about it, probably more than me, and they're better  
25 suited to answer. Part of it is down to the nature

1 of the P3. I think, you know, this is an  
2 exceedingly complex project. Even by transit  
3 standards, this was a complex project. If I  
4 compare it to my other ones, it is probably the  
5 most complex one.

6 And projects of this nature, I guess,  
7 were successful if everyone acts with the same good  
8 partnership intentions, for the good of the  
9 project, irrespective of what it says in the  
10 contract. But I know from -- again, you know, I  
11 relate back to my previous careers in Europe. And,  
12 you know, the P3 model is not used for transit,  
13 certainly in the UK anymore. There's -- I'm sure  
14 you've read, there's been some horrific cases of P3  
15 failures on transit jobs there. And it's not a  
16 form of contract that's used for transit. It's  
17 still used successfully in healthcare and other  
18 social projects, but it just -- for whatever  
19 reason, it doesn't seem to be the right method of  
20 delivery for transit jobs.

21 I think part of it -- you know, we bid  
22 the job on a price. Whether that price and the  
23 affordability budget in the first place was right  
24 or not is something that is -- I guess could be  
25 looked at. I mean, transit jobs here are more



1 expensive generally than other places in the world,  
2 but I think that's a reflection of the maturity of  
3 the industry as a whole.

4           And I think it was just, you know, an  
5 amalgamation of all those things. It just tends to  
6 compound, right? And, I guess, if you look at it  
7 from the outside in and you read all the media and  
8 everything, it looks like it's been horrendous, but  
9 I don't think it has been. We had a long period,  
10 almost 12 months, of 98 percent plus on the system.  
11 And I think, even when there is an issue, I know it  
12 will affect the individuals whose journey it was at  
13 that point in time and they're the ones that  
14 suffer, but, generally, I think, for a new system,  
15 it hasn't performed that badly. But I think  
16 everybody was expecting it to be absolutely  
17 perfect, which is all down to how the City managed  
18 the media from day one. And I think managing  
19 expectations has been the biggest challenge in  
20 this, and I think it still is a challenge going  
21 forwards. You can see that if you look at any of  
22 the transit commissions that are ongoing. I think  
23 that's the thing that we'll -- you know, this will  
24 all, you know, cease to be an issue in the future.

25           Are we going to change anything? No,

1 people have learned a great deal. You know, it's a  
2 learning curve at the front of a job. I don't  
3 think the job was designed badly, built badly or is  
4 being maintained badly. I think it's just -- it's  
5 new to everyone, and people need to understand that  
6 when you do something new for the first time, it's  
7 tough.

8 CHRISTINE MAINVILLE: And aside from  
9 the procurement and contract model, are there areas  
10 of improvement -- recommendations that you might  
11 think of to address some of the issues you've  
12 highlighted? Some are difficult, like the  
13 relationship and the --

14 MATTHEW SLADE: There are some easy  
15 ones, and I think, looking at some of my other  
16 project agreements on some of my other jobs, some  
17 of those things appear to be -- "fixed" is the  
18 wrong term. It's different from province to  
19 province, I guess. But there are some things that  
20 were -- that are in the Project Agreement that I  
21 just -- you know, sometimes you look at it and just  
22 go, "Why is that in there?" And some of those  
23 things still hurt us now. And they're not  
24 necessarily related to the performance of the  
25 vehicle or the performance or the design of the

1 infrastructure.

2 I mean, and I don't know whether this  
3 has come up with anyone else yet or whether it --  
4 but one of the things I struggle with now operating  
5 at board level in these organizations, so there is  
6 a -- obviously, we have Mario Guerra in at the  
7 moment who's seconded in, right, from his VP role  
8 within SNC and he was a board member before, but  
9 he's an interim general manager, essentially. And  
10 we haven't had a general manager since Claude Jacob  
11 left. And I don't know if you know why that is,  
12 but we've been looking, recruiting, head-hunting  
13 globally, throughout our three businesses, to look  
14 for candidates for the general manager, and we've  
15 made a number of job offers to individuals, but the  
16 City has the overall decision as to who RTM hires  
17 as the general manager. And, like, I don't know  
18 how they can have that with their level of  
19 experience that they have, or how they can  
20 determine how we want to run our business or who we  
21 think is the right person to run our business.

22 And they've had -- it's not just that  
23 role. Even when I became project director, I'd  
24 been there as the systems director for a year and a  
25 half; I had to interview with four people at the

1 City before I was accepted as the project director,  
2 even though all the people that interviewed me had  
3 known me for a year and a half.

4 And I think, you know, we're -- you  
5 know, don't get me wrong, Mario is doing a great  
6 job, and I'm pleased he's there and doing it, but  
7 we've made job offers to people, and we've hired  
8 people who the City have then turned around and  
9 said, "We don't like that person," only based on a  
10 piece of paper. They've never interviewed someone.  
11 They've looked at their CV and said, "No." And  
12 we've hired that person. In fact, we redeployed  
13 that person into another project at vast expense.  
14 We moved them internationally, you know.

15 And it's just an example of other stuff  
16 and behaviours that make the relationship a  
17 challenge. Things that are in the PA, you know,  
18 even to change that, we'd have to get a formal  
19 contractual change with the City, which is -- even  
20 that is a hard thing to do.

21 I just think we're still -- if we want  
22 things to get better, then things like that have to  
23 be easier to change, and people need to recognize  
24 that we're making these recommendations or  
25 decisions for the good of the project, not because

1 we want to do anything underhand or untoward or  
2 unhelpful to either the City or Ottawa, the general  
3 public and the ridership.

4 We're in this for 30 years. It's not  
5 that we're doing things intentionally to hurt  
6 people or -- you know. And that just doesn't seem  
7 to -- I don't know why, it doesn't seem to flow  
8 through the contract to the City and everything  
9 else. I think it's -- there are challenges like  
10 that that I think need to be broken down and  
11 changed.

12 And I think revisiting some of the PA,  
13 even now, would be beneficial to all parties, based  
14 on where we are with this inquiry and everything  
15 else. The outcome should be -- I'd like to see,  
16 you know, a grown-up decision that says, maybe this  
17 isn't the right -- not necessarily change pricing  
18 or anything like that, but just how the form of  
19 contract works and how we engage one another, and  
20 how we, you know, do the best for the City, because  
21 it's not conducive at the moment.

22 CHRISTINE MAINVILLE: At the moment,  
23 yeah.

24 Just before we wrap up, any other easy  
25 ones that you -- as you've said, easy or

1 identifiable areas of the contract that jump out to  
2 you that --

3 MATTHEW SLADE: Well, I mean, I know,  
4 you know, others talk about it far more eloquently  
5 than I do, about the penalty regime and how it's  
6 being applied, compared to how it's being applied  
7 in other agencies and what have you.

8 I think it's all part of the whole  
9 thing. And I think, you know, we have -- we, now  
10 with my EllisDon hat on, you know, we're working in  
11 three different projects that are like this, P3  
12 LRTs, joint ventures. We have a lot of experience  
13 on these now. As do our partners, you know. And I  
14 think, as an industry, we kind of need to --  
15 something I've been trying to do, outside of my day  
16 job, is trying to get into creating an industry  
17 organization that can help provinces and businesses  
18 talk and understand what the best thing is for  
19 their, you know, cities, municipalities, moving  
20 forward.

21 So I talk to a lot of other agencies, I  
22 talk to -- even ones that were not involved in our  
23 relationships, Waterloo and what have you, and I  
24 think there's a big part to play that is a  
25 long-term thing for transit in Canada. It's not

1 just Ottawa.

2 CHRISTINE MAINVILLE: Thanks very much,  
3 unless you have anything else you wanted to add.

4 Let me check with my colleague and your  
5 counsel, if there's any follow-up questions.

6 EMILY YOUNG: Nothing from me, thanks.

7 MANNU CHOWDHURY: No questions from me  
8 either.

9 CHRISTINE MAINVILLE: Thank you. So we  
10 can go off record.

11

12 -- Concluded at 11:54 a.m.

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1 REPORTER'S CERTIFICATE

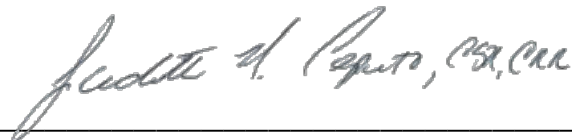
2  
3 I, JUDITH M. CAPUTO, RPR, CSR, CRR,  
4 Certified Shorthand Reporter, certify;

5 That the foregoing proceedings were  
6 taken before me at the time and place therein set  
7 forth; at which time the interviewee was put under  
8 oath by me;

9 That the statements of the presenters  
10 and all comments made at the time of the meeting  
11 were recorded stenographically by me and  
12 transcribed at my direction;

13 That the foregoing is a Certified  
14 Transcript of my shorthand notes so taken.

15  
16 Dated this 25th day of May, 2022.

17   
18 \_\_\_\_\_

19 NEESONS, A VERITEXT COMPANY

20 PER: JUDITH M. CAPUTO, RPR, CSR, CRR  
21  
22  
23  
24  
25



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