

CITY COUNCIL
CITY OF NEW YORK

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TRANSCRIPT OF THE MINUTES

Of the

COMMITTEE ON TECHNOLOGY

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APRIL 14, 2021
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HELD AT: REMOTE HEARING VIRTUAL ROOM 1

B E F O R E: CHAIR ROBERT HOLDEN

COUNCIL MEMBERS: ROBERT HOLDEN
KALMAN YEGER
BRAD LANDER
ERIC ULRICH

A P P E A R A N C E S (CONTINUED)

JOHN PAUL FARMER

CLAYTON BANKS

CAROLINE MAGEE

GRETA BYRUM

2 SGT. LUGO: PC recording done.

3 SGT. BRADLEY: Sound recording done.

4 SGT. PEREZ: Backup is rolling.

5 SGT. LUGO: Thank you. Sergeant

6 Martinez, give your opening statement, please.

7 SGT. MARTINEZ: Good afternoon, and
8 welcome to today's remote New York City Council
9 hearing of the Committee on Technology. At this time
10 would all panelists please turn on their video. To
11 minimize disruption, please silence your electronic
12 devices and if you wish to submit testimony, you may
13 do so at testimony@council.nyc.gov, once again,
14 that's testimony@council.nyc.gov. Thank you for your
15 cooperation. We are ready to begin.

16 CHAIR HOLDEN: Good afternoon. I am City
17 Council Member Robert Holden, Chair of the Committee
18 on Technology, and I want to welcome you all to our
19 hearing today. It's a beautiful day in New York
20 City. In today's world, broadband is essential for
21 everything from finding a job to connecting with
22 friends and family, and even receiving medical care.
23 Unfortunately, this essential service is not
24 available to all New Yorkers. Accessibility and
25 affordability are common factors for the lack of

2 internet access. Often, even if the broadband
3 infrastructure is available, it is not always
4 affordable for a large number of New York City
5 residents. In January of 2020, the Office of New
6 York City Chief Technology Officer issued the New
7 York City Internet Master Plan calling it the most
8 ambitious plan for citywide broadband in the nation
9 which will spur better service at lower cost, close
10 the digital divide and bring universal broadband to
11 the homes and fingertips of all New Yorkers. Today,
12 we will discuss the deadlines, progress, obstacles,
13 and steps to achieve this inspiring goal. I want to
14 thank all of our witnesses for taking their time
15 today to discuss this important topic and their
16 willingness to find solutions to these important
17 issues. We have spent much time in this Committee
18 over the last year discussing the digital revival of
19 New York City and how it affects our economy and
20 society in general. In October 2020, we had a joint
21 hearing with the Land Use Committee on broadband and
22 the digital divide. In January, we had a joint
23 hearing with the Aging Committee on increasing senior
24 access to technology also relevant to this issue.
25 During these hearings, we learned about several

2 efforts that the Administration took to close the gap
3 in broadband coverage and access including the recent
4 announcement by the mayor committing \$157 million
5 dollars in capital investment for the Internet Master
6 Plan which with the launch of universal solicitation
7 for broadband citywide request for proposals RFP.
8 New York City Internet Master Plan has terrific goals
9 with the main one being to get all New Yorkers
10 connected and online and we hope to see the results
11 soon. This hearing will be a valuable step to
12 clarifying how we can work together and speed up the
13 implementation of the Internet Master Plan and close
14 the digital divide. We look forward to hearing
15 testimony from the Administration experts and
16 community advocates on this important issue. I'd
17 like to recognize the following City Council Members
18 who have joined us today. Councilman Yeger and
19 Council Member Lander. I would also like to thank
20 our wonderful Technology Committee staff, Counsel
21 Irene Byhovsky; Policy Analyst, Charles Kim (SP?);
22 and Finance Analyst, Florentine Kabor (SP?) for their
23 terrific work on this hearing. Also, my staff, I'd
24 like to thank them, Chief of Staff, Daniel Kazina
25 (SP?); Communications Director, Kevin Ryan (SP?); and

2 Legislative Director, Craig Karawana (SP?). I will
3 now turn it over to the Committee Counsel, Irene
4 Byhovsky to go over some procedural items. Thank
5 you.

6 **Error! Bookmark not defined.** Thank you
7 very much, Chair Holden. I'm Irene Byhovsky, the
8 Counsel to the Committee on Technology, and I will be
9 moderating this hearing today. Before we begin, I
10 would like to remind everyone that you will be on
11 mute until you're called on to testify. After you're
12 called on, you will be unmuted by the host. Please
13 listen for your name to be called as I announce the
14 panelists. We will be hearing testimony from the
15 Administration followed by testimony from members of
16 the public. During the hearing, if Council Members
17 would like to ask questions, please use the Zoom
18 raise hand function and I will call on you. We will
19 be limiting Council Member questions to five minutes.
20 All public testimony will be limited to five minutes
21 as well. After I call your name, please wait for a
22 brief moment for a Sergeant at Arms to announce that
23 you may begin before starting your testimony. Now, I
24 will call the Administration to testify. We will be
25 hearing testimony from New York City Chief Technology

2 Officer, John Paul Farmer, and at this time, I would
3 like to administer the affirmation. Mr. Farmer,
4 please raise your right hand. Thank you. Do you
5 affirm to tell the truth, the whole truth, and
6 nothing but the truth and answer honestly to Council
7 Member questions?

8 JOHN PAUL FARMER: I do.

9 COMMITTEE COUNSEL IRENE BYHOVSKY: Thank
10 you very much, Mr. Farmer. You may begin when ready.

11 JOHN PAUL FARMER: Thank you, and good
12 afternoon Chair Holden and Committee Members. As you
13 know, I'm John Paul Farmer, the Chief Technology
14 Officer of the City of New York, and I'm glad to be
15 back here with you today. I will discuss the NYC
16 Internet Master Plan, the city's plan to realize the
17 mayor's commitment to universal broadband for all New
18 Yorkers. The Master Plan is the most comprehensive
19 approach of any city in the country to end the
20 digital divide, reverse digital redlining and racial
21 inequity, and ensure that the implementation of new
22 technologies don't follow the historic patterns of
23 inequity, but indeed benefit everyone. The Internet
24 Master Plan is at its core, a 4G and 5G technology
25 plan, also an economic development plan, and a digit

2 equity plan. As you're aware, in January 2020, the
3 city released the NYC Internet Master Plan, this
4 comprehensive, bold, forward thinking approach, and
5 it's one that's been praised by our colleagues in
6 other cities around the country. The Master Plan
7 will transform the inequitable system that's for too
8 long resulted in digital redlining. Instead, it will
9 shift the market by opening up new access to
10 infrastructure to companies large and small who want
11 to help the city meet its affordability, performance,
12 and equity goals. The Master Plan reflects this
13 Administration's years of work on demonstration
14 projects, research, and reports, standards and policy
15 setting, and engagement with a wide array of
16 stakeholders that includes community organizations,
17 small internet service providers, and large incumbent
18 companies. The mayor's Internet Master Plan has been
19 praised by the country's leading broadband experts.
20 It's been called innovative, a game changer, and "the
21 most thoughtful and comprehensive blueprint by any
22 major city". The mayor put the Master Plan on path
23 to realize the city's goals by making the single
24 largest municipal investment in broadband in American
25 History, \$157 million dollars in capital funds.

2 Through the development of the NYC Internet Master
3 Plan, the city identified a primary challenge. The
4 current oligopolistic system is broken, and it has
5 built digital inequity into the streets and
6 neighborhoods of New York. Historically, companies
7 alone determined rather technology would be deployed
8 and who would have access, often based on strategies
9 of exclusionary pricing. For decades, the city tried
10 that approach, but it failed the 3.4 million New
11 Yorkers who are under connected or fully
12 disconnected. The Internet Master Plan shows the
13 data, that 40% of NYC households are without home and
14 mobile connections and an astounding 18% have
15 neither. Due to decades of physically deploying
16 technology through an approached that unfortunately
17 failed so many New Yorkers, reversing digital
18 inequity requires changing the way we build and
19 deploy technology. The households without home and
20 mobile connections are disproportionately in majority
21 minority neighborhoods with high rates of poverty.
22 These are the same neighborhood with gaps in
23 infrastructure as identified in the Master Plan. The
24 city solution to this challenge is to take a new
25 approach, investing in infrastructure to reverse the

2 built inequity, opening up the market to competition
3 and engaging companies in reaching the city's
4 universal broadband goals, and the city is going to
5 achieve this by one, partnering to build or acquire
6 new infrastructure in areas of lowest competition and
7 lowest connectivity, two, leverage 100,000 public
8 real estate assets, publicly controlled real estate
9 assets to expand 4G and 5G networks equitably, and
10 three, enable service delivery that meets the city
11 broadband principals. This approach will generate an
12 increase in \$142 billion dollars in gross city
13 product, 165,000 jobs for the city, much needed for
14 economic recovery and to remain a competitive city
15 over the coming decades between now and 2045. Since
16 I testified on the city's universal broadband work in
17 October of 2020, the city has advanced its
18 implementation of the NYC Internet Master Plan. I'm
19 pleased to share that last month, the city released
20 its universal solicitation for broadband Request for
21 Proposals, the RFP. This RFP invites companies large
22 and small and anyone to propose solutions to address
23 the current inequitable system that is described in
24 the Internet Master Plan. Specifically, the city is
25 seeking proposals for three things: Number one, new

2 broadband infrastructure such as fiber conduit;
3 number two, asset managers to make that
4 infrastructure broadly available; and number three,
5 new, affordable internet service options that meet
6 the city's principals. We received significant
7 interest at the preproposal conference. More than
8 200 participants participated, and we're looking
9 forward to receiving proposals at the end of this
10 month. In May, the city will review these proposals,
11 begin negotiation, and proceed with the process of
12 licensing city assets, those 100,000 city controlled
13 asset I mentioned earlier. The mayor's office of the
14 CTO has created a digital tool that will help the RFP
15 Review Committee visualize and fully understand the
16 geographic and neighborhood impacts of the proposals
17 and how they would work together and compliment one
18 another. Those will support the Review Committee's
19 analysis and decision making. The 18 agencies that
20 have contributed their assets to this endeavor, are
21 key partners in making the Internet Master Plan
22 launch and implementation a success. It is the
23 contribution of their roof tops, street furniture,
24 spaces and buildings and more that will allow the
25 city to offer a first-ever coordinated point of entry

2 for multi-agency assets and increase the city's
3 ability to set higher standards of quality in
4 exchange for the use of those assets. The RFP allows
5 the city to seek partners who will meet the city's
6 broadband principals, that set high standards for
7 equity, affordability, choice, privacy, and
8 performance. This is instead of negotiating one off
9 ad hoc deals for having multiple standards for
10 multiple different providers. This new system allows
11 the city to realize the value of its assets and
12 ensure that the use brings significant benefits to
13 New Yorkers. The city has also prioritized working
14 with minority and women-own businesses, MWOBs as part
15 of this RFP. Since the fall 2020 hearing, the
16 Federal Government's new leadership has also shifted
17 its approach and the city finds itself new
18 opportunities related to broadband relief during the
19 pandemic. The Congressional Stimulus Bill passed in
20 early 2021 provided \$3.2 Billion dollars for the
21 Federal Communications Commission's new emergency
22 broadband benefits program. This program will offer
23 low-income New Yorkers the opportunity to access
24 subsidies for high-cost broadband that has been
25 essential for their health and safety during the

2 COVID-19 state of emergency. Eligible households
3 would receive \$50 per month towards broadband service
4 and a one-time discount of up to \$100 for the
5 purchase of a device. The mayor's office of the
6 Chief of Technology Officer is in communication with
7 outers to the agencies to coordinate and maximize
8 benefits of this new program for vulnerable New
9 Yorkers. Congress has recognized connectivity as a
10 key issue for economic recovery and is now
11 considering additional Legislation, The American Jobs
12 Plan that would provide nearly \$100 billion dollars
13 in funding for broadband. We hope that this is the
14 beginning of new opportunities on the Federal level
15 that will support and compliment the city's
16 leadership on broadband equity. As we near the
17 selection of proposals solicited by the RFP, the city
18 recognizes the importance of engaging with partners
19 and stakeholders. Organizations offering digital
20 inclusion resources, health, education, workforce and
21 other community-based organizations and financial
22 institutions, they will be essential partners in
23 insuring that New Yorkers with new affordable
24 internet service have the skills and tools to safely
25 access online resources so that they can meet their

2 goals and realize their dreams in our shared city.
3 In closing, I'm pleased to report that the city is on
4 a clasp of bold, much needed changes, and how we do
5 business and what we expect of companies engaging in
6 our broadband goals in broadening who it is work with
7 and what types of companies can work with us, and in
8 the quality of internet services options available to
9 residence. 2021 is shaping up to be a landmark year
10 of real transformative progress. Thank you for your
11 attention to this matter. I look forward to your
12 questions on this topic.

13 COMMITTEE COUNSEL IRENE BYHOVSKY: Thank
14 you, Mr. Farmer. I will now turn over to the Chair
15 for questions.

16 CHAIR HOLDEN: Thank you. Before I begin
17 some questioning, we've been joined by Council Member
18 Eric Ulrich. Thank you for your testimony, John Paul
19 Farmer, you laid out quite, some very important goals
20 and according to the Master Plan expanding internet
21 access will create 165,000 new jobs and up to \$49
22 billion dollars increase in person income and up to
23 \$142 billion dollars in incremental gross city
24 product by 2045. How did you arrive at these
25 numbers?

2 JOHN PAUL FARMER: Thank you for your
3 question, Chair Holden. It's an important question.
4 Looking at the economic impact was one of the
5 critical tasks for the Internet Master Plan to do to
6 understand the ROI because ultimately, these are
7 substantial investments that we're asking the city to
8 make, and the city needs to understand what the
9 benefits can be. So, these were developed with
10 expert consultants, HR&A being one of the primary
11 drivers of the research behind this report, working
12 on looking at the New York City market as well as the
13 impacts on other markets and assessing closing that
14 digital divide, there's 3.4 million New Yorkers who
15 are disconnected or under connected and looking at
16 what that means for economic productivity, looking at
17 the impact on small businesses and how much more
18 they're going to be able to better compete in an
19 increasingly global market place. This research was
20 done before the pandemic hit. I would suggest that
21 now it's even more essential and the incremental
22 impact in difference would likely be even higher
23 because you're looking at mom and pop businesses that
24 now have to compete with Amazon. These changes that
25 we've seen of people ordering things in because at

2 the time, it was the safer thing to do during the
3 pandemic, some of these behaviors are going persist,
4 so we need to make sure that all of our businesses
5 here in New York City have the baseline, high
6 quality, high speed, affordable internet that they
7 need to compete, so that's just for the small
8 businesses, and then you look at the rescaling that
9 needs to happen for so many members of our community.
10 We need to make sure people have internet access so
11 that they can get training, get new skills, they can
12 access job, even applying for a job often requires
13 being on a computer and sometimes a smart phone won't
14 do it. So, those are some of the things that we're
15 looking at in terms of how this was arrived at, this
16 was a REMI analysis which is commonly used in this
17 space and I'm trying to think what else I can give
18 you in terms of specifics there. Is there anything
19 else that you'd like to ... (crosstalk).

20 CHAIR HOLDEN: Well, other cities have,
21 obviously, have, like around the world, have
22 universal broadband in public, you know, municipal
23 broadband and you know, you can compare their
24 numbers. I mean, that's what I was hoping to hear.

2 Was there a cost analysis and the benefit analysis of
3 other cities around the world?

4 JOHN PAUL FARMER: Yeah, there absolutely
5 was, and when you look at, for instance, the number
6 of European cities, places like Stockholm, Sweden,
7 where they have a neutral host, open access fiber
8 network citywide. That is what we are looking to
9 build here. That will happen over time. That's not
10 going to happen just this year, and that's why the
11 numbers that were provided in the Internet Master
12 Plan are looking out to 2045, not simple this year,
13 next year, or the year after, because this is a
14 process to actually fully close the digital divide
15 and realize all of these benefits.

16 CHAIR HOLDEN: 2045, that's a long way
17 away.

18 JOHN PAUL FARMER: Yeah.

19 CHAIR HOLDEN: But ... (crosstalk).

20 JOHN PAUL FARMER: And one of the, I'll
21 just add that one of the challenges with these
22 estimates is that other American cities don't have
23 what we're talking about. So, here in the United
24 States where we got a certain set of rules from the
25 Federal Government, from the FCC, nobody has what

2 we're describing. So, we're not simply following
3 somebody's else path, we're blazing a new path.
4 Unfortunately, we're getting interest from others who
5 are looking actually to learn from what we're doing
6 here in New York and follow this path too.

7 CHAIR HOLDEN: Okay, we were looking at
8 the Master Plan and the words homeless or sheltered
9 do not appear on the Internet Master Plan. So, how
10 many shelters are equipped with internet access and
11 how long until all shelters and homeless have
12 internet access in your estimation?

13 JOHN PAUL FARMER: That's a very good
14 questions Council Member, Chair Holden.

15 CHAIR HOLDEN: Yeah, cause we did hear
16 that from, I'm sorry to interrupt, but we did hear
17 that from a lot of people in shelters, and you know,
18 I was on the General Welfare Committee that a lot of
19 the students couldn't do remote learning who were in
20 shelters, so that was concern. So, it's a very, very
21 important question is how fast we can get them on the
22 internet.

23 JOHN PAUL FARMER: Good question and
24 that's a group that is a priority. We know we need
25 to serve the folks who are most vulnerable, the folks

2 who are least connected and least able to afford it,
3 and that especially relates to families living in
4 shelters. It's one of the reasons that the mayor
5 made a commitment a number of months ago to wire
6 family shelters in particular, to start there. I
7 believe that the RFP that went out last month
8 specifically asks for proposals that address the
9 needs of DSS and HRA shelters. So, we are optimistic
10 and hopefully that in these coming weeks as we
11 receive the proposals back that those plans, those
12 proposals will include how to serve those living in
13 shelters.

14 CHAIR HOLDEN: Yeah, just back in July of
15 2020, the mayor said \$87 million dollars previously
16 allocated to the NYPD and an additional \$70 million
17 will provide broadband internet to, you know, 200,000
18 NYCHA residents and 400,000 other New Yorkers. Are
19 we on track with the RFP process and has any money
20 been spent so far, you know, on programs? I know you
21 mentioned it in your testimony, and if so, have we
22 seen a decrease in the number of NYCHA residents who
23 lack broadband internet, and can you give us any
24 numbers on that?

2 JOHN PAUL FARMER: Certainly, thank you,
3 Chair Holden. To the point of the question of when
4 the money will be spent, it will be spent based on
5 the proposals that we receive to the RFP. So, the
6 capital funds that you mentioned have not yet been
7 spent. Those will be spent in the coming months. We
8 are on track to make progress to reach the mayor's
9 stated goals and in terms of NYCHA residents, I think
10 you're aware of some of the programs during the
11 pandemic that have been specifically focused on NYCHA
12 residents. Obviously, the work that the Department
13 of Education as done getting tablets in the hands of
14 school children, the work that my office did working
15 to get internet-ready tablets and coaching for 10,000
16 seniors living alone or with other seniors in NYCHA
17 housing and the work that's happening in Learning
18 Bridges. These sites are the cornerstones, 75 of
19 them, I believe, are located in, sorry for the
20 background noise, in NYCHA residences and insuring
21 that children that are going to these cornerstones
22 have quality WIFI and broadband to support learning,
23 and of course, we all know that if we're doing things
24 like Zoom and Teams and video calls, that takes more
25 bandwidth. So, we upgraded the connectivity in these

2 cornerstones that are currently serving as Learning
3 Bridges, and it's important to note that even once
4 the Learning Bridges program ends once kids are fully
5 back in school, those sites will continue to have
6 that upgraded connectivity. So, those are some of
7 the things that we've done. When we look at the RFEI
8 that we initiated last year, that is leading to tens
9 of thousands of NYCHA residents who are benefiting
10 there, and we expect, and will prioritize NYCHA
11 residents as we review the proposals that we receive
12 to the RFP as well.

13 CHAIR HOLDEN: All right, so, you know,
14 the recently passed state budget mandated providing
15 \$15 a month internet service for a low-income New
16 Yorker. How do we reach that? How do we meet that
17 in New York City?

18 JOHN PAUL FARMER: That's a recent
19 proposal from the State, from the governor and we
20 certainly are fully onboard with low-cost, affordable
21 broadband, \$15 a month is a great price, one that
22 allows a lot of families and households that today
23 are priced out of market to participate. We are
24 working through the RFP by saying anybody who wants
25 to work with us, who wants to leverage the roof tops

2 and the rooms and the assets that the city controls
3 can come to us and propose affordable rates like, for
4 example, \$15 a month. In terms of mandating that in
5 the private sector when there is no negotiation,
6 there is no involvement with the city, my
7 understanding is that that is not an authority that
8 the city has, so we are really focused on how we can
9 partner with the private sector with community-based
10 organizations with non-profits who want to work with
11 us, who want to use these assets that we can deliver
12 to lower the barrier to entry, to lower their cost of
13 doing business and in return, they are committing to
14 providing low cost broadband at prices like the one
15 that you mentioned.

16 CHAIR HOLDEN: All right, so, you know,
17 you mentioned those 10,000 tablets to NYCHA residents
18 and then you held a training session, and I think at
19 the last hearing, there were few people, 11% or so or
20 less that actually attended those, you know, training
21 sessions. Have you held more training session since
22 then?

23 JOHN PAUL FARMER: So, I'm trying to
24 follow which, the 11% figure, where did that come
25 from?

2 CHAIR HOLDEN: That's what, the 11% ...

3 MAN: 7%.

4 CHAIR HOLDEN: 7%, sorry. But, you know,
5 there weren't, at the time, this was at the last
6 hearing, you mentioned that, and we were quite
7 interested that not many people were being trained on
8 it. We're just worried, if people aren't trained,
9 especially seniors ... (crosstalk).

10 JOHN PAUL FARMER: Mm-mmm.

11 CHAIR HOLDEN: You know, because we have
12 programs to train senior in our senior centers and
13 that hasn't happened either with the senior centers
14 being closed. So, we're concerned about if people
15 are educated on how to use the tablets.

16 JOHN PAUL FARMERS: So, those numbers
17 don't ring a bell to me. I'd have to go back and
18 check, but we are working actively, we've seen a lot
19 of engagement from the recipients of the tablets with
20 the coaching services that have been provided by
21 OATS, Older Adults Technology Services, a non-profit
22 with expertise in the space, and OATS continues to
23 provide this coaching to a large number of seniors.
24 I'd have to go back and check and get you those
25 numbers.

2 CHAIR HOLDEN: Well, we just checked. We
3 have an exact number, 789 out of 10,000 people, you
4 know, got actual instructions on how to use the
5 tablet. We're just concerned that ... (crosstalk).

6 JOHN PAUL FARMER: Yeah.

7 CHAIR HOLDEN: We hope that it continues,
8 the training continues, and it just doesn't fall by
9 the wayside, that's all.

10 JOHN PAUL FARMER: Absolutely and agreed
11 on the importance of this training and coaching. I'm
12 just wondering rather that figure is specifically
13 about using the tablet as opposed to accessing
14 exercise classes. There are a variety of types of
15 engagement that have occurred between older adults
16 and OATS. I think it was beyond the figure that you
17 got in front of you.

18 CHAIR HOLDEN: Yeah, but again, this is
19 what we were given as how many people attended, but
20 that's, although the Internet Master Plan does not
21 set any concrete deadlines, according to page 57, it
22 looks like there is a deadline like you mentioned, it
23 was in June, I think for you know, for the RFPs or is
24 it in May?

2 JOHN PAUL FARMER: Are you referring to
3 2021 or 2020?

4 CHAIR HOLDEN: 2021.

5 JOHN PAUL FARMER: Uhm ... (crosstalk).

6 CHAIR HOLDEN: You said, the RFPs, you're
7 going to look at the RFPs in May or June, cause at
8 one point, we did get in June of 2021. Has it moved
9 up to May or ... (crosstalk)?

10 JOHN PAUL FARMER: Yeah, the good new is
11 we will be looking at these proposals in May and
12 we'll be getting through them as quickly as we can
13 and moving on the ones that can be implemented most
14 quickly. So, that will be May, it might be into
15 June, the licensing process will start as soon as
16 possible thereafter, and that's all going to them
17 lead to organizations putting equipment in place and
18 ultimately starting to deliver service later this
19 year. I do want to go back to the prior question and
20 make sure that it's fully understood that OATS is not
21 the only way in which we are working to deliver
22 digital inclusion work. So, there are a variety of
23 programs, millions of dollars a year that the city is
24 spending to ensure that we are doing outreach,
25 working with community groups. You correctly pointed

2 out that it's been an extra challenge during the
3 pandemic because a lot of the physical convenings are
4 not happening, but we've been working to support
5 agencies and outside groups who have moving to
6 virtual experiences during this time, and frankly,
7 I'd expect to see some of these virtual convenings
8 and virtual coachings continue. We're also bring on
9 some now digital inclusion resources into my office
10 to work specifically in conjunction with the RFP
11 process and the implementation of the Internet Master
12 Plan, and then finally on the tablet front, the
13 10,000 tablets with DIFTA, again I'm happy to go back
14 and look and try to get better numbers for you, but
15 tablet utilization is nearly 100%, so rather or not
16 people are calling OATS and asking how to use the
17 tablet, clearly people are using the tablets rather
18 that's because they already knew how to do it or
19 maybe a family member coached them, a friend, so,
20 we're getting the outcomes that we want from the
21 program.

22 CHAIR HOLDEN: Yeah, but it's real hard
23 to measure though, isn't it, how effective the
24 tablets are? That's why I think some testimonials

2 are important from, you know, how did those tablets
3 change their life?

4 JOHN PAUL FARMER: Absolutely.

5 CHAIR HOLDEN: I mean, we need to get
6 data on this because just handing somebody a tablet,
7 I know, we've had a little bit of that in DOE,
8 obviously, we need to train people, we need to have
9 the proper connections, internet connections and the
10 proper speeds and so forth and so on, but we need, if
11 we're going to lay out a lot of money and then, what
12 we were concerned with, the lack of training that it
13 could be a lot of ways to let's say, money, if their
14 not trained properly, if their not using it, but you
15 know, how do measure that somebody using it? I mean,
16 do you send them a questionnaire?

17 JOHN PAUL FARMER: Those are all fair
18 points, and what we've seen is, we have received
19 testimonial that are, that really touch your heart,
20 people getting appointments with their Cardiologist
21 online so they can stay safe during the pandemic.
22 People who have described the benefits to their
23 mental health, people who have gotten groceries
24 delivered by having a tablet, and this is actually
25 maybe the most common thing, is just connecting with

2 family in a way that's safe. Staying connected to
3 family and peer groups during the pandemic, so we've
4 received those testimonials. In terms of how we've
5 been measuring it, we've been looking at the data on
6 usage. We have not been pushing too hard on reaching
7 every single one of the 10,000 people because
8 frankly, we don't want to burden them. There were no
9 strings attached to this program. The program is to
10 put tablets in people's hands and then first
11 understand, are they being used, so we will continue
12 to access how they're being used, but we also don't
13 want to burden the people who have received them who
14 have a lot going on in their lives, especially during
15 this difficult, challenging time.

16 CHAIR HOLDEN: I'm just going to refer
17 this to January 6. He had a hearing, my office
18 together with the office of Council Member Moya and
19 Council Member Ampry-Samuel, sent you a letter with
20 11 follow up questions, and as of this date, we've
21 yet to hear from your office. So, I want to go over
22 some of those questions if I may.

23 JOHN PAUL FARMER: Okay.

24 CHAIR HOLDEN: And you might have
25 answered some of them, but we did have, this is why,

2 you know, why we have these hearings, so we can get
3 answers. So, in your testimony then, you stated that
4 the city will invest in new infrastructure that can
5 be shared by multiple broadband operators and used
6 for a variety of technologies. How much is the
7 investment and what is the new type of infrastructure
8 that we're looking at?

9 JOHN PAUL FARMER: So, it's too early to
10 say what the invest will ultimately be. This is
11 coming the capital funds that we describe previously,
12 but in terms of the technologies, I would refer to
13 the Internet Master Plan which describes an array of
14 potential technologies. We're not saying that all of
15 these will be proposed or all of these will be
16 appropriate in every part of New York City, but we're
17 looking at modern approaches to how you provide
18 connectivity in addition to the more traditional
19 digging up the streets, putting fiber in the ground.
20 That's still going to be necessary in places, but we
21 also got fixed wireless, leveraging rooftops. We
22 know that's going to be probably a common theme in
23 the proposals that we receive. There are other
24 things too though, CBRS, Citizens Broadband Radio
25 Service Networks. We're looking at the role that

2 Edge Cloud is going to be playing in the rooms and
3 buildings, so to the point of multiple assets,
4 multiple providers, using the same physical asset,
5 that's a priority because we're looking to have
6 competition in the service, and so, in order to get
7 competitive service, you need to have multiple
8 providers there and that hasn't always been
9 prioritized. In the past, people have looked for a
10 silver bullet, they've looked for one company that's
11 going to provide, one technology that's going to
12 solve the problem everywhere, and that hasn't worked
13 here in New York City, and it hasn't worked in other
14 cities where it's been tried either. So, that's why
15 we're taking this portfolio approach where we're
16 inviting in as much competition as the market will
17 provide, and we're lowering the barriers to entry to
18 make the cost of coming into these markets, these
19 neighborhoods lower than they've ever been before,
20 and that's the goal here. That's what we're trying
21 to do. We'll be able to give you more clarity in the
22 coming months once we have the proposals in hand and
23 we can ... (crosstalk).

24 CHAIR HOLDEN: Okay, we also, we asked
25 for a breakout of the budget before the Internet

2 Master Plan sort of from the office, so, if we can
3 get that also, we'd have a better understanding of
4 what we can expect. Just back on the wireless, at
5 least today, the wireless technology that exists has
6 to be line of site so buildings can get in the way
7 possibly, so, is that currently what you understand?

8 JOHN PAUL FARMER: Yeah, there's line of
9 site, and there's non-line of site. They both
10 exists. There are certainly benefits to having line
11 of site available, so that's the most straight
12 forward, but there are companies out there that have
13 proposed interesting conversations previous, non-line
14 of site solutions and we'll see if those end up being
15 part of the proposals that we receive.

16 CHAIR HOLDEN: All right, so, testimony
17 provided at the hearing by advocates for children of
18 New York and some news reports have drawn attention
19 to the fact that some families, like I mentioned
20 before about the homeless shelter residents cannot
21 connect to the internet, and you know, are we waiting
22 for the RFP, I mean, to solve this? You know,
23 because we might even be into another school year
24 before we can get them connected. So, are you aware
25 of similar issue with signal blockage in NYCHA

2 buildings? Do you know about any of that because
3 that's what we're hearing?

4 JOHN PAUL FARMER: In terms of rather
5 we're waiting to solve these urgent problems, the
6 answer is no, we're not.

7 CHAIR HOLDEN: All right.

8 JOHN PAUL FARMER: We're taking action to
9 make sure that kids can learn, to make sure that the
10 people who are most vulnerable in the community, most
11 in need of connectivity get it. So, it's a multi-
12 tonged approach. It's looking at what are the things
13 that we have do now because there is an emergency,
14 there's a pandemic, there's an impact on, again,
15 education, on people being able to safely get the
16 services they need, but we're also looking at how do
17 we transform the market? Because if we only do the
18 emergency actions, putting tablets in people hands,
19 subsidizing service, that doesn't transform the
20 market, and that ends up meaning that people continue
21 to be priced out and the only way to solve that
22 problem is the city using tax dollars indeterminately
23 forever and ever, and instead, we believe the smarter
24 way to transform the market is this approach that
25 we're taking. It's focused on competition and

2 focused on partnership in the role that the city can
3 play to lower those barriers to entry, drive more
4 competition in the market, and bring down prices, but
5 to get to the core of your question, we are not
6 viewing that as the only thing that the city needs to
7 do. We recognize the urgency and that's why we've
8 taken the number of approaches that we've been
9 talking about in the past 12 months or so.

10 CHAIR HOLDEN: Okay, another thing on the
11 January hearing, you mentioned that the Internet of
12 Things, the IOT Taskforce Working Group, at the time,
13 you were not ready to answer questions about the
14 group. Do you have an update, you know, inform us of
15 the group's goals, who is in the group even, or has
16 the group met yet, and what was discussed?

17 JOHN PAUL FARMER: Sure, so, we're very
18 happy that the Internet of Things strategy was
19 released earlier this spring, so that is out, and
20 we've been working both with agencies as well as
21 organizations out there in society who are focused on
22 this issue and focused on ensuring that in New York
23 City IOT is productive, it's fair, we have a healthy
24 eco-system. We've got a thriving startup community
25 that can employ people, but also these tools can be

2 used to benefit New Yorkers, things like flood
3 monitoring, things like pedestrian counting in ways
4 that respect people's privacy and digital rights.
5 So, we're happy that that's out. In terms of the
6 working group, there is a Smart City Collaborative
7 that is being put together as we speak. I've been
8 involved. Our director of Smart Cities and IOT, Paul
9 Rothman (SP?) has been driving this work, and we've
10 invited; I don't have the exact number off the top of
11 my head, but I'd be happy to get it to you, we've
12 invited probably a dozen plus, maybe 20 different
13 agencies that are doing work or might be doing work
14 to benefit from Internet of Things Technologies.
15 These are folk like the Department of Transportation,
16 folks like the Department of Buildings, NYC Cyber
17 Command, again, it's a pretty full list and those
18 convenings will be happening throughout this year.
19 The Smart City Collaborative specifically has not yet
20 met but will be meeting in the next couple of months,
21 and the working group that existed before that,
22 helped informed the strategy itself, and so that's
23 essentially a growth of the stakeholder group is
24 what's going on right now, the Smart City
25 Collaborative ... (crosstalk).

2 CHAIR HOLDEN: But they're still meeting,
3 they're still meeting?

4 JOHN PAUL FARMER: Yes, there's nothing
5 that will prevent them from meeting. I don't know
6 when they most recently met.

7 CHAIR HOLDEN: Yeah, can you get back to
8 us on that because we'd like to see how many
9 meetings, you know, what was discussed, you know,
10 throw some light on this, so it's just not behind the
11 scenes get together or Zoom meetings. We'd like to
12 see this progress, but the Internet Master Plan sites
13 are 29% of the households do not have a broadband
14 subscription at home. If this true, why do we have
15 this situation? I mean, 29%, do you have some causes
16 for that?

17 JOHN PAUL FARMER: Yeah. A lot of people
18 talk about lack of access and what you really end up
19 realizing is access is a primary issue in rural
20 areas. In urban areas, there's still access issues
21 in very specific parts of cities like ours, but
22 really is an affordability issue. That is the core
23 crisis, is affordability and the relatively few
24 companies that provide the option, and again somebody
25 might live in place where they only have two options,

2 and so, those prices stay high and they never come
3 down. As productivity improves, you would expect the
4 prices to come down, but there is no market pressure
5 for that to happen, and so a bunch of people are just
6 priced out of the market, and it just doesn't make
7 sense for them, and you look at what has existed as a
8 solution. The Federal government has their Lifeline
9 Program which is a subsidy, but the challenge there
10 is that that can be only be used once per household,
11 not every person, and it can be only be used for home
12 broadband or mobile. So many folks choose to use
13 that subsidy if they know about it for mobile which
14 means that they can't use it for home and the other
15 members of their family can't use it for mobile
16 either. So, the solution set that has existed until
17 now, simply has not been sufficient to close this gap
18 and close this digital divide. You also look at the
19 fact that one of the reasons prices actually are
20 higher in the neighborhoods that need low prices the
21 most, these are the lowest income neighborhood, the
22 ones that are too often majority minority
23 neighborhoods that are being affected here, it's
24 because historically, there's been an underinvestment
25 in the broadband infrastructure, the fiber, the

2 conduit, the backbone, the stuff that people need to
3 cheaply provide the service, just doesn't exist in a
4 lot of the neighborhoods that need it most, and so
5 you've got the neighborhoods that can afford higher
6 prices, actually have a lower cost of deliver cause
7 the infrastructure is already there. The
8 neighborhoods that can't afford it, there's a really
9 big barrier to entry to someone coming in and that's
10 what we're looking to address with the open access
11 neutral host broadband infrastructure that the city
12 will own through this substantial historic investment
13 of the Internet Master Plan is doing, and then we'll
14 be managing that with an Asset Manager who makes that
15 broadly available to any company, large or small.
16 So, the cost of doing business in say, East New York
17 or Brownsville will come down dramatically when that
18 open access neutral host network is available.

19 CHAIR HOLDEN: So, looking at the causes,
20 do you think that exclusive agreements by internet
21 providers in buildings contribute to a lack of
22 coverage?

23 JOHN PAUL FARMER: I like to see
24 competition. So, I think exclusive agreements, even
25 though a lot of building might think hey, we're

2 getting a good deal, this makes sense, over the long
3 run ends up keeping prices higher for everybody, and
4 so, I would prefer to see competition over
5 exclusivity.

6 CHAIR HOLDEN: All right, cause the map,
7 you know, you look at most, the map of coverage in
8 the New York City and the internet service providers,
9 most of the city really only has a few choices.

10 JOHN PAUL FARMER: That's right.

11 CHAIR HOLDEN: Which is, you know,
12 hopefully we can solve this because that's why we pay
13 such high prices in New York City, and you're right,
14 the neighborhood that can afford it have more of a
15 choice which that's, like you said, it should
16 reversed, so the Internet Master Plan states that
17 fiberoptic infrastructure is relatively sparse
18 throughout the rest of the city. Outside of lower
19 Manhattan, which we were just talking about, you
20 know, and again, we have to look at the root causes
21 so we just don't keep doing the same thing over and
22 over again. So, you know, that's why this group that
23 is meeting, we need to really find out how we don't
24 fall into the same traps that these internet
25 providers are just going to keep doing the same thing

2 and effect the rest, and especially the people who
3 can't afford it, give less choices and less service
4 and slower speeds and so forth and so forth.

5 CHAIR HOLDEN: Yeah, that's why, to what
6 you said there about fiber availability, so
7 commercial fiber is you know, is necessary for
8 competitive option for small businesses all around
9 the city too. We've spent a lot of time talking
10 about home broadband, critical, but also, we need to
11 make sure we are supporting our small businesses
12 because in this day in age, they've got to be able to
13 get online and serve people digitally if they want to
14 compete and if we want to keep jobs and small
15 business in the borough where they've grown up and
16 flourished and not force them to move to lower
17 Manhattan or a place that's got a more density of
18 fiber options, we've got to make sure that's another
19 constituency that we're thinking about and ensuring
20 is served.

21 CHAIR HOLDEN: So, back to the IOT
22 working group, what type of public outreach will your
23 office do on, you know, because we really want to
24 educate people obviously as to what's going on and
25 you know, what kind of things can they expect,

2 improvement can they expect in their service, so is
3 there outreach from your office on that?

4 JOHN PAUL FARMER: So, I think there's a
5 bit of a difference here between the IOT working
6 group versus broadband service, so yes, IOT will
7 benefit from better broadband service, but the
8 outreach that the IOT work is incorporating is
9 separate from the RFP and the investments that are
10 being made by the city here with the Internet Master
11 Plan. So, I think I'd have to go back and check with
12 my team to see what the specific plan is, I'm happy
13 to get back to you with that. If I could take a
14 moment to go back to the question around the 10,000
15 tablets for older adults and the training that OATS
16 in particular has provided, I got a note from my team
17 with some specific numbers that I just want to make
18 sure I share with you. OATS has delivered virtual
19 training to 9,709 participants. Now, that is non-
20 unique so somebody might have received training
21 multiple times, but clearly, that's much higher than
22 7% or 11% of the participants and ... (crosstalk).

23 CHAIR HOLDEN: How did they do this
24 during the pandemic? I'm curious.

2 JOHN PAUL FARMER: Virtually, so a lot of
3 phone calls. They actually received and handled over
4 58,000 phone calls for this program, so that's
5 support calls in and out and those sessions lasted as
6 long as 121 minutes, so these were not just 30
7 seconds, 60 seconds. Some of these were very hands-
8 on, really helping someone achieve what they want and
9 learn something new. So, we look at the
10 effectiveness of that program and you asked earlier
11 about how we access that, how we judge that. These
12 are the types of metrics that we're tracking to
13 understand the breath of the benefit.

14 CHAIR HOLDEN: So, let me just ask you a
15 general question. Do you support municipal network,
16 a network built by New York City?

17 JOHN PAUL FARMER: Well ... (crosstalk).

18 CHAIR HOLDEN: Rather than private
19 companies?

20 JOHN PAUL FARMER: My take is that all
21 options should be on the table, and when you look at
22 the Internet Master Plan, it specifically did not
23 rule anything out and I think that's the right
24 approach. We're going to get proposals in the next
25 couple of weeks and that is going to tell us a lot.

2 We've seen from the level of interest in the NYCHA
3 RFEI which only, put on the table, assets control by
4 one particular authority of New York City, not over a
5 dozen and didn't have any capital investments. We
6 saw substantial, dozens of different companies came
7 to the table there. We're going to find out what
8 level of interest and how deeply serious even the
9 large incumbents are about working with us in this
10 new way through the RFP and once we see that level of
11 interest, that's going to help us understand how much
12 it might make sense to continue iterating on this
13 path of partnership and engagement or consider other
14 options.

15 CHAIR HOLDEN: Okay, you mentioned, you
16 kind of touched on this before, but on internet
17 access, where in the city do we have the biggest gap,
18 so like specific neighborhoods?

19 JOHN PAUL FARMER: So, in terms of
20 boroughs, it's the Bronx. The Bronx has the lowest
21 rates of internet adoption. When you look
22 neighborhood by neighborhood, you see the lowest
23 rates in the city are places like (inaudible) I know
24 is somewhere in the 40s, I believe. I think it's
25 something like 46%, 48% adoption. When you look at

2 the wealthiest parts of the city, you're looking at
3 90 something percent. I mentioned during my
4 testimony that the city and this Administration have
5 run a number of pilot programs to more deeply
6 understand this challenge and understand what really
7 works as a solution, and one of the things that we
8 did is we worked in Queen's Bridge houses, largest
9 public housing project in North America and worked to
10 deliver free public WIFI to all the residents there,
11 and the adoption we saw go from around 50% to over
12 90%. So, we saw the adoption when price was taken
13 out as an issue, we saw the adoption change from what
14 it looked like in a lot of the other lowest income
15 neighborhoods in the city to rival the highest income
16 neighborhoods in the city, and that really proved
17 that the argument that some of these large companies
18 have been making for years, that well, you know,
19 lower income folks, they just don't want it. They
20 don't know how to use it. They can't benefit from it
21 the same way. Those arguments were proven wrong, and
22 so, what we're looking to do now is work in the rest
23 of the neighborhoods of the city that currently have
24 those lower adoption rates and through this RFP
25 process, through implementation of these proposals,

2 make sure that they've got low-cost option available
3 so that we can boost up those adoption rates.

4 CHAIR HOLDEN: So, on affordability, is
5 the CTO looking at bulk purchases, you know,
6 bundling, a number of purchases like they're always
7 trying to sell us with these internet service
8 providers. Are you looking at a bulk purchase for
9 the city, for city users?

10 JOHN PAUL FARMER: Well, sir, we look at
11 both purchasing as promising for community groups,
12 thinking about how a community can gather its power
13 to do that with purchasing, there might be
14 opportunities there. In terms of the city doing the
15 purchasing itself, the challenge there is that then
16 you're looking at using tax payer dollars in a way
17 that the companies that have suggested that in past
18 frankly see as never-ending, and so we would prefer
19 to get solutions that are really, just a low cost
20 that is provided from the company to the subscriber,
21 that's the cleanest, simplest, most sustainable way
22 to do this. If that does not happen, then I would
23 just say we again, leave every option on the table.

24

25

2 CHAIR HOLDEN: All right. Irene, do we
3 have any questions from my colleagues, cause I can go
4 on, but you're muted, okay.

5 COMMITTEE COUNSEL IRENE BYHOVSKY: I
6 apologize. I was on mute. As of right now, I do not
7 see any questions from Council Members, and I just
8 want to remind Council Members if you would like to
9 ask questions, please use the Zoom raise hand
10 function. I do not see any questions right now, any
11 questions from Council Members.

12 CHAIR HOLDEN: Okay, I'll just go ahead
13 and continue. So, my colleagues, they just have to
14 do the raise hand function, but did your office work
15 with DOIT or were you asked by DOIT to work on the
16 vaccine site, you know, for the city, because
17 obviously, the major problems that they had ongoing
18 and some of them are still ongoing? So, were you
19 asked?

20 JOHN PAUL FARMER: We were not asked, and
21 we have not worked on that particular project.
22 Obviously, it's a very important project. We all
23 want to see that succeed. We also recognize that
24 there are resources around the city, around the
25 Administration and we need to be able to divide and

2 conquer and ensure that all of the projects of the
3 city are successful.

4 CHAIR HOLDEN: Okay, so according to the
5 report, your office will develop a uniform contract
6 language based on recommended policies and standards
7 to be used as a template for future WIFI development.
8 Was that done?

9 JOHN PAUL FARMER: Can you clarify where
10 that language is coming from?

11 CHAIR HOLDEN: The internet report, the
12 Master Plan.

13 JOHN PAUL FARMER: That's in the Master
14 plan?

15 CHAIR HOLDEN: Yeah.

16 JOHN PAUL FARMER: We have developed
17 standard language for licensing agreements. For
18 example, those following on the RFEI, that language
19 will be used again with partners that we work with
20 through the RFP, so I believe that is what you are
21 referring to and the language that was in the
22 Internet Master Plan is referring to those standards
23 that have been created and are in practice now
24 through the RFEI work and will be used again in the
25 RFP work.

2 CHAIR HOLDEN: Yeah, I'm just wondering
3 if we can get a copy of the template ... (crosstalk0.

4 JOHN PAUL FARMER: I believe so. I will
5 check with my team. I don't think there's any reason
6 that we wouldn't be able to provide that.

7 CHAIR HOLDEN: Okay, and I'll ask a few
8 more questions, you know, hopefully some of my
9 colleagues might have a question, but during the
10 briefing with our Committee on Public WIFI last
11 summer, your colleagues, the former Deputy Joshua
12 Breitbart mentioned that your office would be working
13 with Cyber Command to issue updated cyber security
14 protocols applicable for public WIFI. What is the
15 progress on drafting these protocols?

16 JOHN PAUL FARMER: That is a very good
17 question. We've got a great working relationship
18 with NYC Cyber Command. The city is fortunate to
19 have such terrific expertise on the cyber security
20 front. I'll need to check with them and see where we
21 stand, what's been completed and to the extent
22 there's more work to do where that stands. We'll
23 take that as an item to get back to you on.

24

25

2 CHAIR HOLDEN: Okay, I think that's, do
3 we have any questions from my colleagues, we'll go
4 back again?

5 COMMITTEE COUNSEL IRENE BYHOVSKY: No, I
6 do not see any Council Members wishing to ask any
7 questions. Do you have any more questions to the
8 Administration, Chair?

9 CHAIR HOLDEN: I think we over things. I
10 think we covered most of the areas that I wanted to
11 cover, but if my colleagues have anything; I just
12 want to, you know, the Link, do you consider the Link
13 NYC kiosk successful?

14 JOHN PAUL FARMER: That's a good
15 question, and as you know, the Link NYC kiosks
16 started before my time, and that's also administered
17 by DOIT, so I think DOIT would be in a better
18 position than me to discuss what has worked well with
19 Link.

20 CHAIR HOLDEN: But again, you don't have
21 an opinion on it?

22 JOHN PAUL FARMER: Well, I mean, when I
23 look at and we can go back to the Internet Master
24 Plan, how it views the world, we need connectivity in
25 public spaces, so home and mobile is critical, but we

2 also need to think about connectivity in public
3 spaces, and so one of the things that Link NYC
4 attempts to do is provide that. Now, we know that we
5 don't have the coverage that was originally planned
6 and that means there are public spaces in the city
7 where we know we want to have coverage and
8 connectivity and it doesn't exist. So, in that
9 regard, I think the goal and intent is allottable and
10 something that we need to continue to focus on. In
11 terms of the execution, I do want to defer to my
12 colleagues who actually manage those programs.

13 CHAIR HOLDEN: Okay, all right, so, just
14 a couple more questions. I think in your testimony,
15 previous testimony, you mentioned that most ISPs
16 collect data on their customers, we know that. Such
17 data can include IP addresses, browsing history and
18 other sensitive information. Is data collection a
19 factor that you consider when you review proposals
20 for ISPs?

21 JOHN PAUL FARMER: That's an excellent
22 question. Right on the nose, and the five principals
23 that the Internet Master Plan lays out on literally
24 the first page, one of those is privacy, and we need
25 to make sure that companies are respecting the

2 privacy of their users, their subscribers, that the
3 data that is being collected, is being collected with
4 a purpose to provide a better service, cause many
5 times, there's a real reason for a company to want to
6 have certain type of data. What we don't want to see
7 is companies just gobbling up data for no good reason
8 or just to have the data because they might come up
9 with a reason to use it later, and we certainly don't
10 want to see them gobbling up data and selling it
11 through data brokers in this kind of grey market
12 that's currently out there, and so, privacy is one of
13 the those five principals and we are going to be
14 accessing the proposals against those five principals
15 and that's baked into how the Review Committee is
16 going to operate.

17 CHAIR HOLDEN: But again, how do you
18 monitor that? Let's say they sign contracts, how do
19 you monitor that that they're not taking this data,
20 cause we've companies doing this all the time, so how
21 do we monitor that they're abiding by the contract?

22 JOHN PAUL FARMER: Well, there are
23 organizations here in the city, but also maybe State
24 and Federal that would be interested in this issue.
25 You look at the Department of Consumer and Worker

2 Protection, making sure that companies are treating
3 consumers fairly, that they're actually doing what
4 they say their going to do, and obviously at the
5 State and Federal level you've got organizations that
6 care about the same issues. We want to work with the
7 organizations that have the resources to follow up to
8 do inspections, to ensure that, you know, they audit,
9 whatever the approach that makes sense, we're going
10 to work with them to ensure that they understand what
11 these companies have agreed to with us and to ensure
12 that is actually what ... (crosstalk).

13 CHAIR HOLDEN: Do you all just have any
14 standards for privacy? Again, what are some of the
15 standards that you want them to meet other than just
16 not, you know, using private information, but again,
17 how far can they go? We need to know perimeters
18 here.

19 JOHN PAUL FARMER: So, we've got the
20 Attorney General whose working on this issue. We
21 know, we've got the mayor's office. My apologies
22 again for sirens. We've got the Mayor's Office of
23 Information and Privacy, led by the Chief Privacy
24 Officer. So, we've got a variety of colleague here
25 in the city, but also at the State and Federal level

2 who are working on this day in and day out. We have
3 not, as an office, viewed this as an issue for us to
4 take the individual lead on, but instead to work with
5 the experts that we have access to. I guess I would
6 say the city has standards, going back to the Chief
7 Privacy Officer and the work that Laura Grona (SP?)
8 and her team do, so the city has standards. We lean
9 into those, and we incorporate those into things like
10 the RFP. So, we're not developing stand alone,
11 different standards, we're working with what exists.

12 CHAIR HOLDEN: Okay, so it's got to be a
13 little clearer though, I think, all right, so, at
14 this time, I think my last question, I'm thinking
15 this might be it. The following question was asked
16 several times; however, we are still waiting for the
17 answer. February 25, 2020, October 30, 2020, in May
18 2019, your office issued a report called Truth in
19 Broadband, Public WIFI in New York City. According
20 to this report, the CTO's office would collect
21 relevant agreements, agreements between the city and
22 WIFI providers for free public WIFI systems and post
23 them on the website. It's on page 22 of the report.
24 Are these agreements collected and posted?

2 JOHN PAUL FARMER: I will need to check
3 on that and see where they are posted and where to
4 the extent that we can get that information to you so
5 you can just see it yourself. We'll get that to you.
6 As you mentioned, that was May 2019, it was just
7 before I joined the office. So, I agree that we
8 should be following through on any commitments that
9 were made, but that is something that preceded me,
10 and I have to check with my team to get some more
11 details on what came out of it. Chair Holden, I
12 think you're muted.

13 CHAIR HOLDEN: We just sent a letter to
14 you all just asking, a recent letter asking a number
15 of questions and hopefully, we can get a response
16 within a few weeks even because of them, like I said,
17 we never received a response, so if you could answer
18 in a timely fashion, I won't go over the letter, but
19 you should have it in your office, so, if we could
20 get some of those answers and some of the questions
21 today that weren't answered, if you could get back to
22 us.

23 JOHN PAUL FARMER: Certainly, that makes
24 sense.

2 CHAIR HOLDEN: And thank you so much,
3 thank you.

4 JOHN PAUL FARMER: I was going to say one
5 thing that I think you asked about privacy, it sounds
6 like you want a little more information than I
7 provided, and one thing I hadn't mentioned that I
8 should have, is the Legislation that the mayor
9 proposed that Council Member Koo introduced, I
10 believe it's still in front of the Council on privacy
11 that focuses on internet privacy, I think, very
12 relative to the question that you were asking. That
13 might be a good place for us continue the
14 conversation.

15 CHAIR HOLDEN: Good, okay, thank you so
16 much. I'll turn it back, thank you again for your
17 testimony and again, let's work together and
18 hopefully, we'll have some good news in the next few
19 months about the, you know, bridging the digital
20 divide in New York City finally, so thanks so much
21 John Paul Farmer, I appreciate it so much, thank you.

22 JOHN PAUL FARMER: Thank you Chair for
23 having me. It's an important issue and we're looking
24 forward to working with you to continue to make more
25 progress.

2 CHAIR HOLDEN: Okay, back to Committee
3 Counsel.

4 COMMITTEE COUNSEL IRENE BYHOVSKY: Thank
5 you, Mr. Farmer. I do not see any questions from
6 other Council Members, and we will now turn on public
7 testimony. I would remind everyone that unlike our
8 typical Council hearing, we will be calling
9 individuals one-by-one to testify, and once your name
10 is called, a member of our staff will unmute you and
11 the Sergeant at Arms will give you the go ahead to
12 begin after setting the timer. We will ask you to
13 limit your testimony to five members will have an
14 opportunity to ask questions after each panelist has
15 completed testimony. I would like now to welcome our
16 first panelist to testify. We will be hearing
17 testimonies from Clayton Banks, from Caroline Magee,
18 and Greta Byrum. Mr. Banks.

19 CLAYTON BANKS: Thank you very much and
20 thank you.

21 SGT. BRADLEY: Time begins.

22 CLAYTON BANKS: Can you hear me?

23 COMMITTEE COUNSEL IRENE BYHOVSKY: Yes.

24 CLAYTON BANKS: Okay, good, so just would
25 like to say first of all, good afternoon, and certain

2 Chair Holden and Members of the Committee on
3 Technology. This is a very important subject. I'm
4 Clayton Banks, CEO of Silicon Harlem and this is just
5 an honor to be able to testify today. I want to
6 clearly start off with I love the Internet Master
7 Plan. I think it's extraordinary and I'm very proud
8 that from the beginning of the Internet Master Plan,
9 it had inclusion built right in. We, here in Harlem,
10 actually were presented the Internet Master Plan on
11 January 23, 2020, right before the pandemic, so you
12 know, literally Harlem was at the table, and I have
13 to say that doesn't always happen when it comes to
14 new initiatives in this city. We sometimes get the
15 information much later, but we were at the beginning
16 of this Internet Master Plan, so I just want to start
17 with that. That doesn't mean, you know, as a New
18 Yorker, I don't have some criticisms, but I do
19 believe the Internet Master Plan is transformative,
20 especially for those New Yorkers who had been
21 mitigated or left behind on the digital divide, and I
22 have changed my language, Chair, from digital divide
23 to digital inequality. That's what really happening
24 here, and I think the City Council ought to take that
25 on, cause that's a very big issue here in our

2 particular city. The two things I just wanted to
3 testify around is one, I think the Internet Master
4 Plan should be a living document. It should not be
5 stopped here, it should not just have been like, hey
6 we built it, this is it. I think the Master Plan
7 should be something that will grow over time cause
8 things change so much in technology and so, I'm
9 pleading to the Council to keep that document alive,
10 and I know that the CTO's office would embrace that.
11 So, I'm really hoping that's something we could all,
12 you know, work with. The other part of that is when
13 you keep it alive like that, you start to understand
14 that there's more to it than just, you know, the RFP.
15 There's a whole lot of area that we're looking at in
16 the future. We talked about 2040 or 2045. We are
17 looking at a city that's going to transform
18 infrastructure-wise as well as connectivity, and all
19 of those things that come with it that can create
20 additional inequities. So, it's important to keep
21 extremely alive so that we don't continue to repeat
22 as John Paul Farmer mentioned, the same issues that
23 we've had in the past. I will try to conclude with a
24 couple of suggestions. So, one of them would be, we
25 talked about in the Internet Master Plan about

2 applications, some of the new applications that will
3 come from this better infrastructure, better speeds,
4 you know, low latencies, all these things are coming
5 with this infrastructure. The question becomes when
6 we talk about the ushering of new applications and
7 things of that nature that will run on these
8 networks, is it inclusive? That's an important piece
9 because there's a lot of people in Upper Manhattan
10 that are falling behind a little bit in STEM
11 applications and all these type of things to be the
12 makers of some of these applications, so we want to
13 makes sure that we're spreading this out across the
14 entire footprint of our city that all populations are
15 getting access to developing applications that run on
16 these networks, and lastly, and I have a whole lot
17 that I'm going to submit as testimony, but I know
18 that I'm limited in time, but I see the last piece
19 for me is that even though there's going to be all of
20 these submissions, I think one of the Internet Master
21 Plan's things that could grow also is just creating
22 some standards. We hard about Queen's Bridge on this
23 call. Well, one of the issues that Queen's Bridge
24 had was there wasn't enough standards on pulling
25 conduit or pulling fiber, so what happened, some of

2 the material wasn't stronger enough to keep what?
3 Rats from eating right through it, so we have to be
4 careful in what we deploy and making sure that we
5 are, and I hate to be, you know, talking about rats,
6 Chair Holden, but I had to say it, and so at the end
7 of the day, we ought to think about standards on
8 fiber, on conduit, and on some other things that we
9 have infrastructure that serves every properly.
10 Thank you again for this, I'm happy to continue to
11 have these discussions. Thank you so much.

12 CHAIR HOLDEN: Irene, do you want to
13 unmute yourself?

14 COMMITTEE COUNSEL IRENE BYHOVSKY: I
15 apologize. Mr. Banks, I just want to thank you and I
16 want to turn back to Chair Holden for any questions
17 that he may have.

18 CHAIR HOLDEN: Thank you, Clayton, and
19 thank for all you do for New York City and I'm glad
20 you like the proposal, the Internet Master Plan. If
21 it delivers everything they say they're going to
22 deliver, that would be wonderful, but I do appreciate
23 that you said it's a living document. It should be,
24 and that's very, very appropriate, and John Paul
25 Farmer is listening to this, so, and that's the good

2 thing about his office, he stays on the call. He
3 stays on the hearings, and he listens at every
4 hearing, all the advocates and that's what I
5 recognize about him. That means he cares. We've
6 seen most of the city agencies don't stay on. His
7 does, so, he like's, you know, he listens to people.
8 So, in your area, how many internet service providers
9 do you have to choose from?

10 CLAYTON BANKS: It really is a duopoly.
11 You know, it's Verizon and Spectrum and even both of
12 those don't go everywhere. So, it keeps the price
13 high in a lot of ways. We appreciate the fact that
14 they're providers, but I do think the Internet Master
15 Plan will help even those big, big companies realize
16 that this is no longer to be leaving people behind.
17 It's just impossible. Right, it's just not even an
18 issue anymore. You have to have broadband. So, I'm
19 hoping and do talk with a lot of the incumbents and
20 the providers in our community. I talk to them about
21 thinking about new ways of delivering broadband that
22 they can bring the price dramatically down without
23 all of the subsidies and games that go on with this
24 stuff where when we talk about \$15 that I heard on
25 this call, you got to also ask what does come with

2 the \$15? Do they get the kind of speed that I get in
3 my household? You know, that, those are other things
4 you have to consider when you talk about these
5 subsidies, so I think it's important for us to bring
6 in competition, but also work with guys and say,
7 listen, you know, why do you have to bundle it up,
8 what don't you make a broadband only play? There are
9 all types of things that a lot of people could do.

10 CHAIR HOLDEN: Oh, so, truth in
11 advertising. Are they delivering the speeds they say
12 they're going to deliver and that's what I think
13 we're not checking that because we've done test in
14 our office even, and we're not getting what we're
15 paying for, and I think many households are not
16 getting it? In fact, I was on a call with teachers
17 in my District who all said they were having problems
18 with speed and freezing, obviously screens with the
19 students, but even within the school itself, it
20 wasn't just the students at home, it was in the
21 school itself, they were having issues, so that's
22 what we need to, you know, that was in the details
23 here, so we need, if we're getting these speeds they
24 say we're getting, and with only two companies, you
25 know, involved in the neighborhood, that's not good.

2 It's never a good recipe. So, thank you Clayton,
3 thanks again, and I'll turn it back over to Committee
4 Counsel.

5 COMMITTEE COUNSEL IRENE BYHOVSKY: Thank
6 you, Chair. Thank you, Mr. Banks, again, and now I
7 will be calling on Caroline Magee to testify.

8 SGT. BRADLEY: The time begins.

9 CAROLINA MAGEE: Hello. My name is
10 Caroline Magee, and I'm on the Legal Team at the
11 Surveillance Technology Oversight Project, also known
12 as STOP. Before I begin, I did want to take a moment
13 to thank Chair Holden and the other Council Members
14 on the Committee for the opportunity to testify
15 today. The reason I'm here, the Internet Master Plan
16 is an ambitious, forward-thinking commitment that I
17 and many other New Yorkers appreciate from the city.
18 However, it does fail on privacy protection for the
19 New Yorkers it reports to help. The report itself
20 claims privacy is one of the principals of the entire
21 project but claim rings hollow compared to the actual
22 programming offered. The city's plan points to
23 consumer education through library privacy week, and
24 the training of library staff to answer questions is
25 among their solutions, but consumer education is the

2 false flag of internet security because it is often
3 created as a solution to insecurity when it is
4 actually a solution to liability, and to do it right,
5 requires enormous resource investment by the city. A
6 potential example of the most useful piece of
7 consumer education that the city is talking about
8 would be a specific guide about the data collection
9 potentially taking place with the names of every
10 private entity involved at every level included.
11 Importantly, this guide could not be in so-called
12 legal use, and would need to be in multiple
13 languages. Even with real, accessible, and
14 meaningful consumer education, that would not be
15 enough. New Yorkers also need Legislative protection
16 only available from the people on this Council. Is
17 the reality of the country we live in that any data
18 collected by an entity is just waiting to be tapped
19 by law enforcement and then there's an inevitability
20 not a possibility that any kind of public broadband
21 would result in some data collection. This
22 collection of data will only serve to further put New
23 Yorkers of color and undocumented members of the
24 community at risk of police overreach and abuse.
25 Legislation could address this and make it so that

2 the NYPD and other law enforcement bodies must obtain
3 a warrant for the information from internet
4 providers. The information collected about us on the
5 internet is some of the most intimate and New Yorkers
6 need novel legislation that will prevent government
7 access to the data collected on them. This will
8 prevent some of the more egregious harms practically
9 guaranteed to occurred when private actors are
10 permitted to collect this information. More
11 egregious yet is how the city also promises that it
12 has improved its internal governments in recent years
13 by creating the Mayor's Office of Information
14 Privacy. This office offers quarterly reports on
15 data breeches from within the New York City
16 government, and while that's important, it is equally
17 important to put it into perspective. This is the
18 absolute least the city could do. These reports are
19 just an admission of data already misplaced. Its not
20 a bad thing, but to consider privacy taking care of
21 because this office exists would be a bad mistake.
22 My final criticism comes from 10,000 feet up. This
23 plan frame privacy as a race against elite black cat
24 hackers who type quickly on bright-screen computer in
25 dimly lit rooms and that's not what privacy is.

2 Privacy has to be from everyone including law
3 enforcement, and until the city acknowledges that and
4 takes the appropriate steps to honor the commitment
5 that they have made in the plan with meaningful
6 privacy protections, New Yorkers will remain in
7 danger of having their privacy breach at the expense
8 of internet access. Thank you.

9 COMMITTEE COUNSEL IRENE BYHOVSKY: Thank
10 you very much for your testimony. Chair Holden, do
11 you have any questions to the panelist?

12 CHAIR HOLDEN: Well, thank you Caroline
13 and we don't even know, and I think you're probably
14 more of an expert than I am on this, we don't even
15 know whose sharing our information, what companies,
16 we're so blind on this, and I don't know if, you
17 know, if technology is always one step ahead of us,
18 even with Legislation, so if you have any ideas on
19 Legislation, I'd like to communicate with you on this
20 because we do, if we can prevent the invasion of
21 privacy every time we log onto a site, obviously, we
22 need to try to obviously, you know, legislate.
23 Should there, you know, be New York City digital
24 privacy laws that you know, do we have some now at
25 all that you agree with?

2 CAROLINA MAGEE: I don't think there's
3 nearly enough at this point. I think sort of a prime
4 example of where the ball's been dropped on that is
5 the user policy for the Link NYC Kiosks, which I
6 heard you ask about earlier, Chair. The user policy
7 is sort of inscrutable and people don't know what
8 they're signing off, and they have to use the WIFI,
9 they need it as everyone in this meeting has
10 acknowledged, the internet is a necessity, and
11 there's nothing protecting New Yorkers from Link NYC
12 when you are, what is that saying, if you're not
13 paying for the product, your are the product, and I
14 really worry about that for New Yorkers. My
15 organization would love to be in further contact with
16 you about Legislation to that effect.

17 CHAIR HOLDEN: Yes, let's have a meeting
18 soon on this because we do, we do care about this and
19 we all have been violated, I think at one time or
20 another somehow, by these, they're selling our
21 information and we know that, and every time we use,
22 even a credit card, they have information on us.
23 They know what we bought, they know where we bought
24 this, they know what we tend to buy, and how it's
25 being sold, and how much money they're making, but

2 this an issue, again with John Paul Farmer's office,
3 the CTO's office and DOIT, maybe we can prevent a lot
4 of it. I don't know if it will prevent all of it,
5 but this has to be a big conversation, a big part of
6 the Internet Master Plan, and I thank you for bringing
7 this up, Caroline, thank you.

8 COMMITTEE COUNSEL IRENE BYHOVSKY: Thank
9 you, Chair Holden, and thank you Ms. Magee for your
10 testimony. Our next panelist will be Greta Byrum.

11 SGT. BRADLEY: Your time will begin.

12 GRETA BYRUM: Hi. Good afternoon and
13 thank you so much for having me. I'm really happy to
14 share my thoughts on how New York City's agencies and
15 departments as well as the City Council can measures
16 right now in order to achieve benefits and stated
17 goals of the Internet Master Plan, that is to create
18 quality, affordable, internet service for all New
19 Yorkers. I'd like to start by restating the
20 broadband principals articulated by the city, equity,
21 performance, affordability, privacy, and choice.
22 Based on my experiences listening to New Yorkers as a
23 researcher and a consultant in the development of the
24 Master Plan, I believe it's critical right now to lay
25 the groundwork to ensure that plan implementation

2 reaches its goals in alignment with these principals.
3 In particular, I believe we're at a critical juncture
4 to set the stage for phase four of the plan ensuring
5 that all New Yorkers benefit from connectivity. What
6 I mean is that we need an explicit strategy to ensure
7 that infrastructure built with the city's capital
8 funds is designed to serve those principals and
9 goals. The stated goals of the plan are allottable
10 the plan clearly lays out (inaudible) problems which
11 has not in the past two decades been solved by the
12 city's incumbent internet service providers. In
13 particular, without sufficient guide rails on
14 implementation and a process dedicated to ensuring
15 that the infrastructure follows the principals, we
16 won't achieve that goal. In particular, I believe
17 that the scoring criteria for perspective venders in
18 the current USB or RFP as we've been referring to it,
19 may not sufficiently prioritize community engagement
20 and support. Further, I believe that the process
21 around development and release of the universal
22 broadband solicitation has lacked sufficient
23 engagement and communication with key digital equity
24 and justice leaders. Without this engagement,
25 there's a lack of knowledge and understanding about

2 the plan and any programming and digital support
3 efforts which could enable the groundwork for phases
4 three and four. To address these shortcomings as
5 well as delays in the planned implementation, I
6 believe it's critical right now for the city to one,
7 ensure the development of an evaluation framework
8 based in the broadband principals to guide Master
9 Plan implementation through all four phases of the
10 plan, and number two, enter the allocation of
11 sufficient programmatic funds not just capital funds,
12 unlimited by the restrictions placed on the capital
13 funds to support the key organizations which will
14 provide their communities with engagement support and
15 critical information around digital equity. We know
16 from experience that incumbent driven subsidy
17 programs for low-cost service cannot on their own,
18 solve this problem. We've tried that approach for
19 far too long. Indeed, if you build it, they may not
20 come, especially if people don't know about it or if
21 service is too expensive, it's substandard or it
22 includes fatal flaws such as data caps, throttling
23 slow speeds, limits on types of uses that is blocking
24 particular uses, eligibility barriers, or time limits
25 on low-cost service options, along with escalating

2 cost. The incumbents will argue that to invest in
3 underlying infrastructure would create an overbuild
4 of that infrastructure, but actually we need that
5 underlying infrastructure in order to ensure that we
6 get to full implementation of phase four. New York
7 City has made the choice not to depend solely on
8 subsidy programs, which all too often become shaped
9 by special interests, but rather to build according
10 to the broadband principals. Let's not waste this
11 opportunity to make progress towards not just digital
12 equity, but full equity for all New Yorkers. Let's
13 put good money after good by fully resourcing and
14 guiding public and community efforts to close the
15 digital divide in line with the city's stated goals.

16 COMMITTEE COUNSEL IRENE BYHOVSKY: Thank
17 you, Ms. Byrum. Council Member Holden, do you have
18 any questions to this panelist?

19
20 CHAIR HOLDEN: Thank you, Greta for your
21 testimony. Do you, I mean, we have to worry about
22 certain things with these companies like you
23 mentioned. You kind of touched on a little bit of
24 this. If we put on too many restrictions for the
25 companies, they'll just not participate in New York
City. Do you worry about that all, that, then we

2 will have what you've been saying, what you just
3 said, we'll have less of an investment in certain
4 neighborhoods, cause we've seen that already?

5
6 GRETA BYRUM: I believe that if we
7 formally and explicitly guide our investments
8 according to the principals, what we would be doing
9 is creating better quality of service and that there
10 are plenty of smaller ISPs which are entering the
11 market which could easily offer better service than
12 what the incumbents are offering.

13 CHAIR HOLDEN: So, we might scare off the
14 bigger guys, we we'll still have good service, and
15 that's what we're hoping for, right?

16 GRETA BYRUM: That's what we're hoping
17 for.

18
19 CHAIR HOLDEN: Okay, because we hear that
20 argument that if you put too many restrictions, you
21 scare away any competition and then we're stuck with
22 what we have now, one or two providers in most of the
23 Districts that need it most, need coverage and don't
24 get it, so ... (crosstalk).

2 GRETA BYRUM: And I think that's slippery
3 slope because I think that once you start shaping
4 your service offerings to fit special interest, it's
5 just a slippery slope and you start to see things
6 like limitations on particular kinds of uses. For
7 example, limiting bandwidth so that students may not
8 have enough capacity to attend Zoom online or Zoom-
9 based school.

10 CHAIR HOLDEN: Correct, thank you. Good
11 point, so yes, I'd like to work with you, you know,
12 your office also because there's a lot of great ideas
13 out there and we appreciate, you know, the feed back
14 cause the Internet Master Plan is critical for New
15 York City's future and as most of you and Clayton
16 said it also, and it's very important that we get
17 this right, but that it is a living document that
18 Clayton said before. I thank you for your testimony.
19 Okay, back to ... (crosstalk).

20
21 COMMITTEE COUNSEL IRENE BYHOVSKY: Thank
22 you ... (crosstalk).

23 CHAIR HOLDEN: Okay.

24
25 COMMITTEE COUNSEL IRENE BYHOVSKY:
Thanks. Thanks, Chair Holden, and I want to thank

2 all of you again for your testimonies and if we have
3 inadvertently missed anyone who has registered to
4 testify today and has yet to be called, please raise
5 your Zoom hand function now, and I do not see anyone
6 asking to testify or asking any questions, and now I
7 will turn over to Chair Holden again for any closing
8 remarks and to adjourn the hearing.

9
10 CHAIR HOLDEN: Thank you Irene and thank
11 you all. The ideas we got today and certainly the
12 ideas we'll get tomorrow will hopefully make it a
13 much better city, and we're seeing the problems now
14 and I've had problem for a long time with providers.
15 I had three different providers in my house alone and
16 wasn't really happen with any of them because we were
17 promised this and got that, and again, there are many
18 problems in the city that hopefully we can try to
19 address and I think that the fact that John Paul
20 Farmer mentioned a lot of them today and the Internet
21 Master Plan is a good document and what we're just
22 trying to do is learn more about it, try to improve
23 it, and that's why we need the advocates, that's why
24 we need all of you that testified today to continue
25 to testify and continue to bring up issues and we'll
try to provide more information, but we have a good

2 start with today's hearing. We'll do more hearings on
3 this, obviously in the future as well get the RFPs in
4 and get proposals, but it needs to be tweaked and we
5 need oversight on it, and we need all the feedbacks
6 from the community, and in the past, that hasn't
7 happened. We all know it. The companies just walked
8 right in, did what they wanted, and we were at their
9 mercy. So, now hopefully with the new technology
10 obviously, startups coming up, and what Greta
11 mentioned, that we're going to get smaller companies
12 coming in, that might be terrific, and certainly
13 we'll have more control as our private information is
14 not somewhere in the hands of companies that just see
15 the bottom line as service. So, thank you so much
16 and I want to thank our Committee Counsel, Irene
17 Byhovsky and Charles Camden for their wonderful work
18 on this, and thank you again John Paul Farmer for
19 staying the length of the hearing. I appreciate it.
20 This hearing is adjourned. Thank you.

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C E R T I F I C A T E

World Wide Dictation certifies that the foregoing transcript is a true and accurate record of the proceedings. We further certify that there is no relation to any of the parties to this action by blood or marriage, and that there is interest in the outcome of this matter.



Date June 15, 2021