

# Webinar

## Best Practices in Building Maintenance: ULI Asia Pacific Member Leaders

### Address COVID-19

Date: March 11, 2020

00:00:00 --> 00:00:05: Even officials. Next, I'd like to go over some housekeeping  
 00:00:05 --> 00:00:07: matters first.  
 00:00:07 --> 00:00:12: This webinar is being conducted with simultaneous  
 translation in Korean.  
 00:00:12 --> 00:00:16: And your CEO. Second, you will be able to post  
 00:00:16 --> 00:00:21: questions to the speakers by clicking on the question icon  
 00:00:21 --> 00:00:25: at the bottom of the screen and again for those  
 00:00:25 --> 00:00:26: of you joining from Korea,  
 00:00:27 --> 00:00:29: you're welcome to submit questions in Korean.  
 00:00:31 --> 00:00:32: I'm gonna tell him to shut  
 00:00:32 --> 00:00:33: Anita.  
 00:00:34 --> 00:00:38: The Web and RI like to introduce the discussion leaders  
 00:00:38 --> 00:00:40: of the web and are today.  
 00:00:40 --> 00:00:43: So first we have Louis Chang who is the founder  
 00:00:43 --> 00:00:45: and president of Pure Living,  
 00:00:45 --> 00:00:51: a company based in Shanghai that offers expert advise on  
 00:00:51 --> 00:00:53: indoor air quality.  
 00:00:53 --> 00:00:58: Second, we have Mr. Raymond Chow who is executive  
 director  
 00:00:58 --> 00:01:03: of Hongkong Land Limited and he's also the chair of  
 00:01:03 --> 00:01:04: ULI Hong Kong SAR.  
 00:01:04 --> 00:01:07: And 3rd, we have Mr Lawrence Schoen who is the  
 00:01:08 --> 00:01:11: president and principal engineer of Shawn Engineering,  
 00:01:11 --> 00:01:16: is based in Maryland in the US.  
 00:01:16 --> 00:01:17: OK Ray, please go.  
 00:01:23 --> 00:01:24: Good morning, good morning  
 00:01:24 --> 00:01:28: everyone and thank you Ken for having me this morning.  
 00:01:28 --> 00:01:32: Today I'm going to really give.  
 00:01:32 --> 00:01:37: Hopefully everyone some real life experience of what we

have  
00:01:37 --> 00:01:40: been doing in the portfolios that do we manage?  
00:01:40 --> 00:01:46: Perhaps I give some context to people we have in  
00:01:46 --> 00:01:47: Hong Kong.  
00:01:47 --> 00:01:49: 5,000,000 square feet of office and retail space,  
00:01:49 --> 00:01:52: right? In the heart of Central Hong Kong.  
00:01:52 --> 00:01:56: We are considered a long time long term investor.  
00:01:56 --> 00:01:57: When we say long term,  
00:01:57 --> 00:02:00: we're looking at assets and managing assets for the long  
00:02:00 --> 00:02:01: term,  
00:02:01 --> 00:02:03: and that we're thinking generational.  
00:02:03 --> 00:02:05: Um, just to give you the scale of what we  
00:02:06 --> 00:02:06: do.  
00:02:06 --> 00:02:09: We have about 30 billion US dollars of assets sitting  
00:02:09 --> 00:02:12: in Hong Kong with a revenue stream of but one  
00:02:12 --> 00:02:14: 1 billion US dollars every year.  
00:02:14 --> 00:02:17: So every single day I collect 2 1/2 million US  
00:02:17 --> 00:02:20: dollars from how I collect those is based upon.  
00:02:20 --> 00:02:26: I've got to roughly about 606 hundred multinational office  
clients  
00:02:26 --> 00:02:31: and about 200 retail clients who expect the top best  
00:02:31 --> 00:02:33: in class management services.  
00:02:33 --> 00:02:38: To help them manage their assets and manage the office  
00:02:38 --> 00:02:40: in a daily basis.  
00:02:40 --> 00:02:42: Now what I'm going to do is really just give  
00:02:42 --> 00:02:46: you some life experiences of what we've been doing.  
00:02:46 --> 00:02:49: My discussion will be on the softer side and terms  
00:02:49 --> 00:02:52: of how we manage the assets at during this crisis  
00:02:53 --> 00:02:56: that we're facing it with this coronavirus crisis.  
00:02:56 --> 00:03:00: So, um. If just suck,  
00:03:01 --> 00:03:02: So what we do  
00:03:03 --> 00:03:06: as a general principle we we provide,  
00:03:06 --> 00:03:09: we believe health and safety for staff and customers is  
00:03:09 --> 00:03:11: kind of paramount.  
00:03:11 --> 00:03:15: Number one in terms of our dealings in the in  
00:03:15 --> 00:03:18: the in the day-to-day asset management.  
00:03:18 --> 00:03:23: During this crisis. We also believe that we are an  
00:03:23 --> 00:03:28: educator and a communicator and would provide education  
to two.  
00:03:28 --> 00:03:32: Clients and we try to give a almost like a  
00:03:32 --> 00:03:38: psychologist give the our clientele a a sense of calmness.  
00:03:38 --> 00:03:42: Hopefully when they come to the assets that we are

00:03:42 --> 00:03:48: providing a limiting the potential of a contraction of the  
00:03:48 --> 00:03:49: virus.  
00:03:49 --> 00:03:50: When they enter our buildings.  
00:03:50 --> 00:03:54: And also we're trying to facilitate the anything they require  
00:03:54 --> 00:03:57: and help them through this very difficult time.  
00:03:57 --> 00:04:00: So what we do is we just say for looking  
00:04:00 --> 00:04:01: this slide now.  
00:04:01 --> 00:04:04: We're going to. We provide staffing service providers safety  
which  
00:04:04 --> 00:04:06: are grounded and somewhat detailed.  
00:04:06 --> 00:04:09: And then we we put some precautionary measures in and  
00:04:10 --> 00:04:13: I'll go through the details of that regular update.  
00:04:13 --> 00:04:15: Customer service is really quite the most important  
00:04:15 --> 00:04:20: piece. I haven't been able to have him take improvement.  
00:04:20 --> 00:04:24: You could agree on. Set A it is not enough  
00:04:24 --> 00:04:26: positive particle.  
00:04:28 --> 00:04:31: So um staffing service providers safety.  
00:04:31 --> 00:04:35: So this as a provider party number one obviously we  
00:04:35 --> 00:04:38: got take care of our clients and our staff.  
00:04:38 --> 00:04:42: So before everyone comes into the office is all our  
00:04:42 --> 00:04:46: building management has to take a data temperature check.  
00:04:46 --> 00:04:50: They must wear surgical mask when entering the hunkele  
and  
00:04:50 --> 00:04:52: our portfolio so so any any workers or any of  
00:04:52 --> 00:04:56: our staff when they went into the portfolio they have  
00:04:56 --> 00:04:58: to wear a mask and and also.  
00:04:58 --> 00:05:00: Sure that they got temperature taken.  
00:05:00 --> 00:05:04: They also need to declare what they've been and maybe  
00:05:04 --> 00:05:05: self quarantine themselves.  
00:05:05 --> 00:05:09: Um and and especially around Hong Kong.  
00:05:09 --> 00:05:11: Now there's many main regions around us that has a  
00:05:11 --> 00:05:12: lot of details.  
00:05:12 --> 00:05:15: So we we basically take a very very aggressive stance  
00:05:15 --> 00:05:17: in terms of people entering the building.  
00:05:17 --> 00:05:19: As you can see in this in this picture here  
00:05:19 --> 00:05:22: at the lobby of Exchange Square where the stock exchanges  
00:05:22 --> 00:05:25: had we have thermal scanners and we also have individuals  
00:05:25 --> 00:05:30: with small thermometer eutectic temperatures of people.  
00:05:30 --> 00:05:35: High touch areas like toilets listen escalators.  
00:05:35 --> 00:05:37: We basically are disinfecting this.  
00:05:37 --> 00:05:42: These errors substantially more, which basically means that  
we are  
00:05:42 --> 00:05:45: have disinfectants and cleaners.

00:05:45 --> 00:05:50: We've actually heard, uh, probably about 2020 to 25 new  
00:05:50 --> 00:05:54: cleaners and for our portfolio,  
00:05:54 --> 00:05:57: which all they do is just disinfect the high touch  
00:05:57 --> 00:05:57: areas.  
00:05:57 --> 00:06:01: That's all they do. We also put carpet and entrances.  
00:06:01 --> 00:06:04: Into the buildings and one of the key things  
00:06:04 --> 00:06:08: is to really test kind of keep the communication level  
00:06:08 --> 00:06:11: is very very high with our clients and that's work  
00:06:11 --> 00:06:15: through WhatsApp and that's also through through circulars  
that we  
00:06:15 --> 00:06:16: provide with them.  
00:06:16 --> 00:06:20: Um? Some of the areas that we do is that  
00:06:20 --> 00:06:25: we all the all the buildings actually in the main  
00:06:25 --> 00:06:28: entrances we basically have.  
00:06:28 --> 00:06:31: Has a, uh, a placement of these areas so no  
00:06:31 --> 00:06:35: one can really enter the building without actually going  
through  
00:06:35 --> 00:06:36: a thermal check,  
00:06:36 --> 00:06:39: so this is the kind of 1st priority for people  
00:06:39 --> 00:06:42: when they come into the assets into are built into  
00:06:42 --> 00:06:42: our buildings.  
00:06:42 --> 00:06:45: A lot of our clients have asked for us to  
00:06:45 --> 00:06:50: help them with this and we basically increased the cleaning  
00:06:50 --> 00:06:53: and we basically increased two times the fresh air flow  
00:06:53 --> 00:06:56: into our buildings. Also, we believe that we need to  
00:06:57 --> 00:06:58: get the air circulating.  
00:06:58 --> 00:07:01: Quite aggressively, and also in order to air coming in,  
00:07:01 --> 00:07:03: but also air going out exhaust.  
00:07:03 --> 00:07:07: We've also increased. That's really kind of increase the  
circulation  
00:07:07 --> 00:07:08: of the of the of the airflow.  
00:07:11 --> 00:07:12: Do you like to help me?  
00:07:12 --> 00:07:14: I can't move this sliding right now.  
00:07:18 --> 00:07:21: Yeah, I think this is the most important piece of  
00:07:21 --> 00:07:22: what we do.  
00:07:22 --> 00:07:25: We need to give regular updates and customer service to  
00:07:25 --> 00:07:26: our clients.  
00:07:26 --> 00:07:31: We regularly give guidelines and also when the  
government  
00:07:31 --> 00:07:33: puts guidelines in place we give.  
00:07:33 --> 00:07:38: We basically reinforce that through WhatsApp or through our  
circulars  
00:07:38 --> 00:07:41: to see what the latest updates are to give people.

00:07:41 --> 00:07:44: Uh, understanding of where things are like and also we  
00:07:44 --> 00:07:48: also consistently talk to our clients because everyone is in  
00:07:48 --> 00:07:49: very,  
00:07:49 --> 00:07:52: very, very concerned mode right now and we try to  
00:07:52 --> 00:07:56: minors Manager clients by giving them open communication.  
00:07:56 --> 00:07:59: So if a client did have a case in one  
00:07:59 --> 00:08:00: of their officers,  
00:08:00 --> 00:08:03: we would basically tell every single client in the whole  
00:08:03 --> 00:08:06: building that there was a confirmed case and they keep  
00:08:06 --> 00:08:08: and they really should be on top of the social  
00:08:08 --> 00:08:11: media is one or two cases we had before the  
00:08:11 --> 00:08:12: social media was spinning.  
00:08:12 --> 00:08:15: A lot of unfortunate information that was not true,  
00:08:15 --> 00:08:17: so getting on top of these social media part and  
00:08:17 --> 00:08:20: communicated with our clients is at your key and critical.  
00:08:23 --> 00:08:25: Can you start next time please?  
00:08:25 --> 00:08:28: Um, so we did have a unfortunate case that we  
00:08:28 --> 00:08:32: there was a unfortunate case that will happen in one  
00:08:32 --> 00:08:35: of our office for Zayn one of the retail units  
00:08:35 --> 00:08:39: were by uh staff was of what they get almost  
00:08:39 --> 00:08:40: confirmed.  
00:08:40 --> 00:08:43: So what we did very quickly was that we update  
00:08:43 --> 00:08:47: all internal staff of the confirmed case that's internally for  
00:08:47 --> 00:08:49: us and also for the clients.  
00:08:49 --> 00:08:54: We updated all our building management offices team and  
then  
00:08:54 --> 00:08:55: we basically immediately.  
00:08:55 --> 00:08:58: Vacate that floor so we work with the client to  
00:08:58 --> 00:09:00: vacate that floor and we do a general,  
00:09:00 --> 00:09:01: clean and disinfect the whole floor.  
00:09:01 --> 00:09:04: We also conduct and clean and disinfect all the ventilation  
00:09:05 --> 00:09:06: system and air Handling units found.  
00:09:06 --> 00:09:10: Call an all the various other systems to ensure that  
00:09:10 --> 00:09:14: ensure that it is told to the safe before the  
00:09:14 --> 00:09:16: decision then is made them.  
00:09:16 --> 00:09:18: Do we bring back the office back into into the  
00:09:18 --> 00:09:20: market so this is a lot of things that have  
00:09:20 --> 00:09:23: happened that we do that and at the same time  
00:09:23 --> 00:09:25: we do tell all the clients on this on the  
00:09:25 --> 00:09:26: whole.  
00:09:26 --> 00:09:30: Building that this is happening so there's no no concerns.  
00:09:30 --> 00:09:33: And then if people need to mix decisions on what

00:09:33 --> 00:09:35: they want to do then they can do so.

00:09:35 --> 00:09:36: Can you go for next time please?

00:09:38 --> 00:09:41: Also, I wonder with things we do is we have

00:09:41 --> 00:09:44: a response committee which is a which is at the

00:09:44 --> 00:09:46: highest level at board level.

00:09:46 --> 00:09:49: This is a really frustrating for strategy if there are

00:09:49 --> 00:09:51: any key issues or major change in in in the

00:09:51 --> 00:09:53: viruses of positioning.

00:09:53 --> 00:09:56: We have a committee at at the board level that

00:09:56 --> 00:10:00: gets together for making quick decisions to a operational committee

00:10:00 --> 00:10:04: that is our hit squad that goes into and ensure

00:10:04 --> 00:10:07: that the disinfectant and managed the situation as properly.

00:10:07 --> 00:10:09: We also ensure that our staff.

00:10:09 --> 00:10:12: Is is very safe, so we have now split officers.

00:10:12 --> 00:10:14: We have office one office in one building,

00:10:14 --> 00:10:18: half the half our operations is in another building.

00:10:18 --> 00:10:21: To assure that we saw that one building or one

00:10:21 --> 00:10:25: one team gets ill that the other team kind of

00:10:25 --> 00:10:29: gets a still functional in our daily operations are are

00:10:29 --> 00:10:33: intact. Can you start one more please?

00:10:33 --> 00:10:36: And then we also just not doing what we're doing,

00:10:36 --> 00:10:37: and there's many, many things we could do,

00:10:37 --> 00:10:40: and I could take a take a few days later

00:10:40 --> 00:10:42: as some what time is running out,

00:10:42 --> 00:10:44: but we are looking in the future now.

00:10:44 --> 00:10:48: Unfortunately, we believe after stars and now coronavirus that they

00:10:48 --> 00:10:51: probably virus issue is here to stay or that there

00:10:51 --> 00:10:54: is going to be a continuous outbreak of these unfortunate

00:10:54 --> 00:10:58: situation. So we are now looking at various future alternatives

00:10:58 --> 00:11:01: to actually to put into the portfolio in terms of

00:11:01 --> 00:11:03: maintenance to self sanitizing.

00:11:03 --> 00:11:07: One handles whereby whereby each note each handle actually sells

00:11:07 --> 00:11:10: sanitized and there was a technology out there right now

00:11:10 --> 00:11:11: getting getting looked at.

00:11:11 --> 00:11:16: They were putting out to to basically escalators clean themselves

00:11:16 --> 00:11:16: to very high,

00:11:16 --> 00:11:20: efficient, efficient HP air filters,

00:11:20 --> 00:11:22: which I think are my other steam speakers will be

00:11:22 --> 00:11:24: talking about in the in a few minutes,

00:11:24 --> 00:11:27: so I think I'm going to close it from there.  
00:11:27 --> 00:11:30: It's really just a very quick snapshot of what we  
00:11:30 --> 00:11:30: doing this.  
00:11:30 --> 00:11:32: There's a lot of other things with you,  
00:11:32 --> 00:11:35: but I thought. Because of time constraints,  
00:11:35 --> 00:11:38: I just give you a quick snapshot of what we  
00:11:38 --> 00:11:40: are and then and then I'm very happy to take  
00:11:40 --> 00:11:41: a Q&A when  
00:11:41 --> 00:11:42: the time comes,  
00:11:42 --> 00:11:45: right? Thank you Ray Larry,  
00:11:45 --> 00:11:46: please go ahead.  
00:11:47 --> 00:11:49: OK, I will need help with advancing the slides.  
00:11:49 --> 00:11:51: I don't see that arrow so.  
00:11:54 --> 00:11:58: Um, I will focus on the HV AC systems because  
00:11:58 --> 00:12:00: that's my background.  
00:12:00 --> 00:12:07: Next slide, please and. Essentially,  
00:12:07 --> 00:12:11: keeping buildings healthy. Saving Energy is a good thing,  
00:12:11 --> 00:12:16: but keeping buildings healthy and comfortable and so people  
00:12:16 --> 00:12:20: can  
00:12:16 --> 00:12:20: be productive is the main reason that we have buildings.  
00:12:20 --> 00:12:24: That's been the focus of my activities for the last  
00:12:25 --> 00:12:26: 30 or 40 years.  
00:12:26 --> 00:12:31: Next slide, please. So the first thing I'd like to  
00:12:31 --> 00:12:35: make clear is that there is a limited amount that  
00:12:35 --> 00:12:38: the HV AC system can do.  
00:12:38 --> 00:12:44: Um and. So there are multiple modes of transmission.  
00:12:45 --> 00:12:46: TV  
00:12:46 --> 00:12:48: comma weising need that your girls soccer.  
00:12:50 --> 00:12:55: Rain in. Don't talk to get going here,  
00:12:55 --> 00:13:00: so Tom Petty, John. Where is Hampton new top talkers  
00:13:00 --> 00:13:00: in Calgary  
00:13:00 --> 00:13:04: door? Taxi system  
00:13:04 --> 00:13:06: and they eat again in each  
00:13:06 --> 00:13:08: can travel perhaps one to two meters,  
00:13:08 --> 00:13:11: and we can only affect that a little bit,  
00:13:11 --> 00:13:15: and then the aerosole, which behaves like a gas and  
00:13:15 --> 00:13:17: spreads throughout the air.  
00:13:17 --> 00:13:23: Next slide, please. So in many diseases we don't really  
00:13:23 --> 00:13:29: know the primary mode of transmission and it can take  
00:13:29 --> 00:13:32: years for researchers to study.  
00:13:32 --> 00:13:36: I new disease outbreak until we know which the primary  
00:13:36 --> 00:13:37: modes are.

00:13:37 --> 00:13:42: There is some discussion among experts about how much transmission

00:13:42 --> 00:13:47: of COVID-19 can be by the Airbound route airborne route,

00:13:47 --> 00:13:49: and we really don't know yet.

00:13:49 --> 00:13:53: So the practical solution. Is to use what is called

00:13:53 --> 00:13:55: in hospitals.

00:13:55 --> 00:14:01: Infection control bundles use of multiple modalities simultaneously.

00:14:01 --> 00:14:04: So on the next slide.

00:14:04 --> 00:14:08: How you'll see the very basics of what a building

00:14:08 --> 00:14:11: operations team should do,

00:14:11 --> 00:14:13: and this has nothing to do with HV AC.

00:14:13 --> 00:14:17: But I thought it was helpful to show this and

00:14:17 --> 00:14:22: of course as Ray just described his company is doing

00:14:22 --> 00:14:23: much of this.

00:14:23 --> 00:14:28: I call your attention to the 4th bullet down,

00:14:28 --> 00:14:30: allow or encourage work from home.

00:14:30 --> 00:14:34: And so that has the benefit not only of having

00:14:35 --> 00:14:36: social distancing,

00:14:36 --> 00:14:39: but also if we keep the ventilation rate in the

00:14:39 --> 00:14:40: building up,

00:14:40 --> 00:14:43: you effectively get more ventilation per person,

00:14:43 --> 00:14:46: so therefore you dilute all the contaminants,

00:14:46 --> 00:14:50: including those that are infectious.

00:14:50 --> 00:14:53: So the real message here is cover the basics.

00:14:53 --> 00:14:57: First use the HV AC system to help.

00:14:57 --> 00:15:01: So next slide please. There's a lot on this slide,

00:15:01 --> 00:15:04: so let me. I don't have the benefit of a

00:15:04 --> 00:15:05: pointer,

00:15:05 --> 00:15:07: so if I can take your eye to the very

00:15:07 --> 00:15:10: right side of the screen where you see sort of

00:15:10 --> 00:15:13: the person on the right side of the bed,

00:15:13 --> 00:15:17: Now this slide is clearly made for a hospital environment,

00:15:17 --> 00:15:21: but the principles apply. If the person on the right

00:15:21 --> 00:15:25: hand side of the slide sneezes or coughs or even

00:15:25 --> 00:15:26: speaks,

00:15:26 --> 00:15:30: there are particles of various sizes that come out of

00:15:30 --> 00:15:32: their mouth and nose,

00:15:32 --> 00:15:36: and the large ones. If you follow a little bit

00:15:36 --> 00:15:40: to the left and you look to the bottom underneath

00:15:40 --> 00:15:42: where it says bed,

00:15:42 --> 00:15:45: most of those large ones settle in one to two

00:15:45 --> 00:15:46: meters.



00:15:46 --> 00:15:49: And of course I would like to credit you,  
00:15:49 --> 00:15:52: go leave from Hong Kong University for this slide.  
00:15:52 --> 00:15:55: That's why he spelled meters using the Hong Kong way,  
00:15:55 --> 00:15:58: not not how I would spell it.  
00:15:58 --> 00:16:01: And then what happens is some of those droplets can  
00:16:01 --> 00:16:04: be can evaporate the water around them.  
00:16:04 --> 00:16:07: They become droplet nuclei. So if you look up a  
00:16:07 --> 00:16:08: little bit,  
00:16:08 --> 00:16:13: you'll see this phrase droplets evaporated to become droplet  
nuclei.  
00:16:13 --> 00:16:18: Those are the ones that can then spread throughout the  
00:16:18 --> 00:16:20: building system.  
00:16:20 --> 00:16:23: And I will allow you to study the rest of  
00:16:23 --> 00:16:27: this offline and move to the next slide.  
00:16:27 --> 00:16:29: But the point is that we don't really know.  
00:16:29 --> 00:16:33: As I said before, if the urban born route is  
00:16:33 --> 00:16:35: significant for COVID-19,  
00:16:35 --> 00:16:41: nevertheless using the principle of multiple bundles,  
00:16:41 --> 00:16:46: multiple infection control bundles, it does make sense to take  
00:16:46 --> 00:16:49: actions on the HV AC system,  
00:16:49 --> 00:16:53: and that's what these bullets will direct our attention to.  
00:16:53 --> 00:16:57: Number one, increase the outdoor air ventilation.  
00:16:57 --> 00:16:58: As much as you can,  
00:16:58 --> 00:17:00: as much as your systems will allow,  
00:17:00 --> 00:17:03: different systems have different capabilities.  
00:17:03 --> 00:17:07: If you're in a building that has only operable windows  
00:17:07 --> 00:17:09: as the outdoor air ventilation,  
00:17:09 --> 00:17:11: then I suggest opening those,  
00:17:11 --> 00:17:15: but the exception is if the outdoors is highly polluted  
00:17:15 --> 00:17:19: with particulates as we do have in some of our  
00:17:19 --> 00:17:20: major cities,  
00:17:20 --> 00:17:22: then I would not do that,  
00:17:22 --> 00:17:26: particularly on a day that has a high pollution levels  
00:17:26 --> 00:17:28: some buildings.  
00:17:28 --> 00:17:33: Use carbon dioxide to reduce the ventilation to save energy.  
00:17:33 --> 00:17:35: If you don't have a lot of people in the  
00:17:35 --> 00:17:36: building,  
00:17:36 --> 00:17:39: that carbon dioxide level will be very low.  
00:17:39 --> 00:17:42: If you have that type of system in this situation,  
00:17:42 --> 00:17:48: I suggest disabling it. Saving energy is secondary right now  
00:17:48 --> 00:17:53: to saving the health of the people in the buildings.  
00:17:53 --> 00:17:56: The next thing is to improve the air filter ratings

00:17:56 --> 00:17:57: in ASHRAE.

00:17:57 --> 00:17:59: We use a Merv ratings.

00:17:59 --> 00:18:03: The EU uses rating. I would suggest at least Merv

00:18:04 --> 00:18:07: 9 or F5 if using the EU rating.

00:18:07 --> 00:18:11: I'm not familiar with with other rating systems,

00:18:11 --> 00:18:14: but I'm sure there are equivalencies for central systems.

00:18:14 --> 00:18:16: I would go even higher than that.

00:18:16 --> 00:18:21: Merv thirteen. F7. And once you get into those high

00:18:21 --> 00:18:23: effectiveness filters,

00:18:23 --> 00:18:28: it becomes very important for the maintenance people to place

00:18:28 --> 00:18:29: a seal.

00:18:29 --> 00:18:31: Around the edge of a filter.

00:18:31 --> 00:18:35: Otherwise air bypasses the filter and you really don't get

00:18:35 --> 00:18:37: the benefit of it.

00:18:37 --> 00:18:40: The next in order to enhance both the filtration and

00:18:40 --> 00:18:42: the amount of outside air,

00:18:42 --> 00:18:47: I suggest running systems for longer hours if possible.

00:18:47 --> 00:18:52: 24/7 continuously so that you get the dilution and you

00:18:52 --> 00:18:55: get the filtration for more hours.

00:18:55 --> 00:18:56: If your system next week.

00:18:56 --> 00:18:57: If you have the other next slide,

00:18:57 --> 00:19:00: but next bullet if your system has the ability to

00:19:00 --> 00:19:01: humidify,

00:19:01 --> 00:19:06: I would suggest keeping that humidity level above 40%

00:19:06 --> 00:19:08: again as a short term measure.

00:19:08 --> 00:19:12: Long term, there are some downsides to humidify,

00:19:12 --> 00:19:13: but in the short term,

00:19:13 --> 00:19:15: if you have the ability to do that.

00:19:15 --> 00:19:19: Lastly, if for some reason you can't use a lot

00:19:19 --> 00:19:23: of outside air or you don't have central systems,

00:19:23 --> 00:19:30: then instead then putting floorstanding even portable recirculating HEPA filters

00:19:30 --> 00:19:35: is beneficial that will that will reduce all of control

00:19:35 --> 00:19:37: of the contaminants,

00:19:37 --> 00:19:40: including those that are possibly infectious.

00:19:40 --> 00:19:44: And particularly if the outdoor air is dirty with PM

00:19:44 --> 00:19:45: 2.5,

00:19:45 --> 00:19:49: then that's when you don't necessarily want to bring in

00:19:49 --> 00:19:50: too much outdoor air,

00:19:50 --> 00:19:54: because that has other downsides and other health effects.

00:19:54 --> 00:19:59: Next slide, please. Things not to do.

00:19:59 --> 00:20:04: Please don't turn off the ventilation systems they they have  
00:20:04 --> 00:20:09: both the capability to filter and the capability to bring  
00:20:09 --> 00:20:11: in good outdoor air.  
00:20:11 --> 00:20:14: So the exception is. If I,  
00:20:14 --> 00:20:16: I wouldn't say turn off the ventilation system.  
00:20:16 --> 00:20:19: If the outdoor air is too dirty,  
00:20:19 --> 00:20:23: but I would say you might curtail the amount of  
00:20:23 --> 00:20:28: outside air and use it more as a recirculating system  
00:20:28 --> 00:20:32: if that with with the high filtration level that we  
00:20:32 --> 00:20:36: discussed earlier. In the winter time,  
00:20:36 --> 00:20:39: don't over Humidify that has other downsides,  
00:20:39 --> 00:20:41: so if you keep it above 40%,  
00:20:41 --> 00:20:45: that's pretty good. Turkey,  
00:20:45 --> 00:20:49: Turkey deposited onto Genesis worker.  
00:20:49 --> 00:20:52: Could you go to reduce alcohol?  
00:20:52 --> 00:20:55: Could you go to? And it was an  
00:20:55 --> 00:20:59: attendance should not be introduced into the indoor  
environment.  
00:20:59 --> 00:21:03: Electronic air cleaners are difficult to compare to the media  
00:21:03 --> 00:21:08: filters using those rating systems that I mentioned earlier.  
00:21:08 --> 00:21:11: So use those with caution.  
00:21:11 --> 00:21:18: Next slide, please. For high risk occupancy lips for high  
00:21:19 --> 00:21:21: risk occupancies,  
00:21:21 --> 00:21:24: this is this. Please leave that previous slide.  
00:21:24 --> 00:21:29: Yeah, the upper room specialized actions for high risk  
occupancy.  
00:21:29 --> 00:21:33: This this graphic shows you on the upper left you  
00:21:33 --> 00:21:36: see radiation by ultraviolet light.  
00:21:37 --> 00:21:39: People need to be protected.  
00:21:39 --> 00:21:43: Usually there's a shelf that's below that light fixture that  
00:21:43 --> 00:21:44: protects occupants.  
00:21:44 --> 00:21:47: But what this what you can see is each each  
00:21:47 --> 00:21:50: of us generates a thermal plume,  
00:21:50 --> 00:21:53: so our contaminants tend to go up to the ceiling,  
00:21:53 --> 00:21:58: and that's why the upper room ultraviolet irradiation can be  
00:21:58 --> 00:22:02: very effective for killing microorganisms.  
00:22:02 --> 00:22:04: These have to be installed.  
00:22:04 --> 00:22:07: It's not something you can just buy and put in.  
00:22:07 --> 00:22:09: You need power up there and just special fixture.  
00:22:09 --> 00:22:11: And you do need that shelf.  
00:22:11 --> 00:22:17: That perfect protects people. There are some other  
specialized.  
00:22:17 --> 00:22:19: Actions listed in the other bullets,

00:22:19 --> 00:22:22: but I am running out of time so I will  
00:22:22 --> 00:22:25: move to the next slide which is just.  
00:22:25 --> 00:22:27: This is intended for a residence,  
00:22:27 --> 00:22:31: but if you look in what's called the bedrooms here  
00:22:31 --> 00:22:35: and imagine that that was a one person office.  
00:22:35 --> 00:22:39: Portable air cleaner size for the room would be a  
00:22:39 --> 00:22:42: good add on to your basic HV AC system.  
00:22:44 --> 00:22:48: So the next slide. Will be,  
00:22:48 --> 00:22:52: I believe, our summary, the HV AC system really is  
00:22:52 --> 00:22:53: the icing on the cake.  
00:22:53 --> 00:22:58: The basic cakes is to take those direct contact infection  
00:22:58 --> 00:23:02: control measures that I listed earlier and that Ray very  
00:23:03 --> 00:23:05: thoroughly thoroughly covered.  
00:23:05 --> 00:23:09: Run your systems longer, keep them running,  
00:23:09 --> 00:23:12: improve the filtration either at the central system,  
00:23:12 --> 00:23:18: the local system or at a recirculating system.  
00:23:18 --> 00:23:20: And use outside air more of it.  
00:23:20 --> 00:23:24: If it's clean, keep the humidity level up to above  
00:23:24 --> 00:23:25: 40%.  
00:23:25 --> 00:23:27: If your system has the capability.  
00:23:27 --> 00:23:32: Not all buildings do. There are enhanced techniques for high  
00:23:32 --> 00:23:36: risk occupancies and if we don't get a chance to  
00:23:36 --> 00:23:37: answer your questions,  
00:23:37 --> 00:23:41: I'm open to receiving questions online.  
00:23:41 --> 00:23:41: Thank you.  
00:23:42 --> 00:23:44: But thank you very much,  
00:23:44 --> 00:23:48: Larry. I should have mentioned that Larry is a fellow  
00:23:48 --> 00:23:51: at ASHRAE which is American Society of heating,  
00:23:51 --> 00:23:54: refrigeration and air conditioning engineers.  
00:23:54 --> 00:24:00: So it's a very influential industry organization and he's a  
00:24:00 --> 00:24:04: very prominent member of that organization  
00:24:04 --> 00:24:07: now. Thank you Lewis and it's an international organization  
00:24:07 --> 00:24:07: by  
00:24:07 --> 00:24:10: the way,  
00:24:07 --> 00:24:10: with 50,000 members not not restricted to the US,  
00:24:10 --> 00:24:12: right? Thank you. Thank you,  
00:24:12 --> 00:24:15: Larry and. Sir Speaker is Louis Chang,  
00:24:15 --> 00:24:17: who is a UI member based in Shanghai.  
00:24:17 --> 00:24:21: He is the founder and president of Pure Living.  
00:24:21 --> 00:24:21: Louis.  
00:24:25 --> 00:24:29: Thanks Ken, I'm just make sure I have audio.  
00:24:29 --> 00:24:29: Can you hear me?

00:24:31 --> 00:24:32: Yes, we hear you.

00:24:33 --> 00:24:37: OK. Thanks, thanks everybody, it's great to be able to

00:24:38 --> 00:24:42: share a little bit and it's good that Raymond shared

00:24:42 --> 00:24:47: how companies are executing Larry introduce a lot of the

00:24:47 --> 00:24:50: research and theory I'm somewhere in between.

00:24:50 --> 00:24:56: We advise our clients on essentially how to bridge theory

00:24:56 --> 00:25:02: of around aerosols and having managing risk along with the

00:25:02 --> 00:25:06: realities of what building owners have to.

00:25:06 --> 00:25:10: So let me see if I can advance on this.

00:25:19 --> 00:25:24: OK, there we go. Just as context.

00:25:24 --> 00:25:26: Pure living is a consultancy.

00:25:26 --> 00:25:29: So essentially we work with schools,

00:25:29 --> 00:25:33: building owners offices essentially to help them around the health

00:25:33 --> 00:25:34: and safety issues.

00:25:34 --> 00:25:36: We focus a lot on indoor air,

00:25:36 --> 00:25:39: so today I'm going to be talking of course is

00:25:39 --> 00:25:42: all the modalities that Larry talked about.

00:25:42 --> 00:25:48: Touch, individual defense, identification of source cleaning.

00:25:48 --> 00:25:53: Today I'm going to. Focus a little bit more on

00:25:53 --> 00:25:56: the potential sort of routes of.

00:25:56 --> 00:26:01: Transmission, which has been identified as May or may not.

00:26:01 --> 00:26:06: He, um, a primer. It's not a primary source of

00:26:06 --> 00:26:08: transmission,

00:26:08 --> 00:26:12: but we know that the generation of aerosols means it's

00:26:12 --> 00:26:15: something that a lot of both of our tenants of

00:26:15 --> 00:26:18: public and building owners are concerned about.

00:26:18 --> 00:26:22: Basically, how do we run our HVAC so some of

00:26:22 --> 00:26:25: what Larry talked about just now?

00:26:25 --> 00:26:30: He's allowed droplets. So one thing to understand is as

00:26:30 --> 00:26:32: viruses leave our bodies.

00:26:32 --> 00:26:36: They are on droplets. That's a larger size here.

00:26:36 --> 00:26:38: The virus itself is tiny.

00:26:38 --> 00:26:41: It's all the way over on the left side.

00:26:41 --> 00:26:46: But what happens is when the droplets leave our bodies,

00:26:46 --> 00:26:48: they are impacted by humidity.

00:26:48 --> 00:26:51: The dryer is the way the air moves.

00:26:51 --> 00:26:55: It tends to reduce the size from very very large,

00:26:55 --> 00:26:57: like runs down to about.

00:26:57 --> 00:27:01: The research shows us count about one or two microns,

00:27:01 --> 00:27:03: which means it can then.

00:27:03 --> 00:27:09: Float around. You can see here from 'cause the primary

00:27:09 --> 00:27:14: mode of transmission would be direct,  
00:27:14 --> 00:27:16: which is why you want to keep the social distance.  
00:27:16 --> 00:27:20: But you can see that there's also smaller.  
00:27:20 --> 00:27:23: Chocolates here in that fine mist is what can travel  
00:27:23 --> 00:27:26: further and that's really what we're looking at.  
00:27:26 --> 00:27:30: What can we do to the H back to make  
00:27:30 --> 00:27:36: it more effective in being a secondary barrier against any  
00:27:36 --> 00:27:40: sort of transmission of these documents?  
00:27:40 --> 00:27:44: So in general, right now there's a lot of regulations,  
00:27:44 --> 00:27:50: government regulations, some of these also apply to schools  
and  
00:27:50 --> 00:27:51: healthcare.  
00:27:51 --> 00:27:53: Each of those is specialized.  
00:27:53 --> 00:27:58: Sometimes we see. Policies that don't agree with each other  
00:27:58 --> 00:28:01: and that's what causes pause the confusion.  
00:28:01 --> 00:28:05: One of the biggest things I hear is that people  
00:28:05 --> 00:28:09: are turning off their air condition altogether.  
00:28:09 --> 00:28:11: And this is not a good thing,  
00:28:11 --> 00:28:14: so here are some of the general principles of what  
00:28:14 --> 00:28:16: we want to try and do.  
00:28:16 --> 00:28:18: Going to go into a little bit more of the  
00:28:18 --> 00:28:19: detail here.  
00:28:19 --> 00:28:23: So what we're seeing is the reality is people are  
00:28:23 --> 00:28:28: often erring on the side of being conservative and turning  
00:28:28 --> 00:28:31: off their systems altogether.  
00:28:31 --> 00:28:34: This results in people being very cold,  
00:28:34 --> 00:28:39: in which case we cannot return back to normal.  
00:28:39 --> 00:28:44: A normal working life and it can't be productive.  
00:28:44 --> 00:28:49: Obviously if you're freezing also then that.  
00:28:49 --> 00:29:00: You know? Ben oh hey,  
00:29:00 --> 00:29:05: Louise. Also, as part of bringing in the air,  
00:29:05 --> 00:29:09: but you don't recirculate, you have higher energy costs,  
00:29:09 --> 00:29:13: so I think the goal that we're trying to do  
00:29:13 --> 00:29:17: is to have your building JCH fact that it was  
00:29:17 --> 00:29:18: designed.  
00:29:24 --> 00:29:28: Hi Luis, we are having problem hearing you for some  
00:29:28 --> 00:29:29: reason.  
00:29:30 --> 00:29:39: OK. Next slide, please. And one more slide.  
00:29:41 --> 00:29:47: OK. Um 4 for HVAC.  
00:29:47 --> 00:29:53: As Larry mentioned, there's we want to have high efficiency  
00:29:53 --> 00:29:54: filtration.  
00:29:54 --> 00:29:58: Fortunately, a lot of buildings in China already have high

00:29:59 --> 00:29:59: efficiency,

00:29:59 --> 00:30:04: which means that they capture the droplets of moisture that

00:30:04 --> 00:30:06: have the viruses.

00:30:06 --> 00:30:12: However, they sit on the on the filter and.

00:30:12 --> 00:30:16: It doesn't actually inactivate them,

00:30:16 --> 00:30:23: that's why. Please. So the UV UV light is in

00:30:24 --> 00:30:32: the right wavelength in the right contact time.

00:30:32 --> 00:30:37: Is used can be very effective.

00:30:37 --> 00:30:41: Cost effective system. Put the key thing here is that

00:30:41 --> 00:30:43: it doesn't shine in online.

00:30:51 --> 00:30:54: It doesn't. Doesn't shine in a shine.

00:30:54 --> 00:31:02: Shine shines on the viruses that are trapped in the

00:31:02 --> 00:31:04: back please.

00:31:09 --> 00:31:12: There are other options, so when you bring it,

00:31:12 --> 00:31:16: the goal of HVAC, aside from its basic ventilation,

00:31:16 --> 00:31:22: heating, cooling in this sort of defense against any airborne

00:31:22 --> 00:31:26: viruses or pathogens is to be able to kill or

00:31:26 --> 00:31:31: inactivate viruses that can also be done by coming through

00:31:31 --> 00:31:35: an electrical field. These are different technologies that can be

00:31:35 --> 00:31:35: used.

00:31:35 --> 00:31:40: Ionization, electrostatic, precipitation or IFD.

00:31:40 --> 00:31:42: All of these are essentially the same.

00:31:42 --> 00:31:47: They create a strong electric field for which the air

00:31:47 --> 00:31:49: flow passes through,

00:31:49 --> 00:31:54: and then those viruses, which are actually quite fragile

00:31:54 --> 00:31:57: are deactivated. The next slide,

00:31:57 --> 00:32:04: please. So this is just an example.

00:32:04 --> 00:32:06: One of the questions we get asked frequently is,

00:32:06 --> 00:32:10: is this worth it? How much is it going to

00:32:10 --> 00:32:10: cost?

00:32:10 --> 00:32:14: So we just use some examples of some representative

00:32:14 --> 00:32:18: market

00:32:14 --> 00:32:18: cost to give you a sense of what's the installation

00:32:18 --> 00:32:18: cost,

00:32:18 --> 00:32:22: what's the ongoing costs, but traditional media filters.

00:32:22 --> 00:32:26: Remember. Again they capture the virus and most of the

00:32:26 --> 00:32:27: times that's sufficient,

00:32:27 --> 00:32:32: but usually you're going to want to pair a media

00:32:32 --> 00:32:33: filter with.

00:32:33 --> 00:32:37: UV light, I can say that many of your buildings

00:32:37 --> 00:32:38: because of Asia.

00:32:38 --> 00:32:44: Will have will already have these media filters so all

00:32:44 --> 00:32:49: you need to do is add UV light once you're  
00:32:49 --> 00:32:51: in a recirculating mode.  
00:32:51 --> 00:32:55: For ESP and bipolar ionization,  
00:32:55 --> 00:33:00: these are both technologies where the installation cost is is  
00:33:00 --> 00:33:01: fairly high,  
00:33:01 --> 00:33:05: but the ongoing OpEx is fairly low.  
00:33:08 --> 00:33:12: Next slide, please. So last thing I think I want  
00:33:12 --> 00:33:17: to talk about is around ensuring that these different  
technologies  
00:33:17 --> 00:33:21: that are implemented actually work and how do you know  
00:33:22 --> 00:33:25: whether your continue to do well in the future?  
00:33:25 --> 00:33:31: Next slide, please. So verification is really three types of  
00:33:31 --> 00:33:33: verification that you can do.  
00:33:33 --> 00:33:36: Number one is live monitoring.  
00:33:36 --> 00:33:40: Air quality monitors that many building owners I know in  
00:33:40 --> 00:33:43: China is actually leading the world in terms of building  
00:33:43 --> 00:33:44: monitors.  
00:33:44 --> 00:33:47: Hong Kong land for instance we actually have monitors and  
00:33:47 --> 00:33:47: one  
00:33:47 --> 00:33:49: of Hong Kong lands  
00:33:49 --> 00:33:53: centers in Beijing. These monitors can be put in the  
00:33:53 --> 00:33:56: ambient space or in the duct,  
00:33:56 --> 00:33:59: and if your filtration is working well.  
00:33:59 --> 00:34:02: It will tell you actually whether you have any leakage,  
00:34:02 --> 00:34:05: whether your systems are not working well.  
00:34:05 --> 00:34:11: Basically, if you've caught the particles you've caught the  
virus.  
00:34:11 --> 00:34:13: The second thing would be systems disinfection,  
00:34:13 --> 00:34:19: so being able to. Measure the quality of your cleaning.  
00:34:19 --> 00:34:21: If you clean your doorknobs,  
00:34:21 --> 00:34:23: even clean your elevator buttons,  
00:34:23 --> 00:34:26: you can actually do a live ATP count so there's  
00:34:26 --> 00:34:29: a ATP real time meter that allows you to see  
00:34:29 --> 00:34:32: how well is your cleaning staff working.  
00:34:32 --> 00:34:35: I know some of the developers and building owners uses  
00:34:35 --> 00:34:37: the last one is you can culture.  
00:34:37 --> 00:34:42: They basically take a swab of your return air and  
00:34:42 --> 00:34:45: be able to see whether or not the.  
00:34:45 --> 00:34:50: You are getting live bacteria as a proxy for the  
00:34:51 --> 00:34:51: virus.  
00:34:51 --> 00:34:57: Last slide, please. OK last thing is just this ties  
00:34:57 --> 00:34:58: back in.



00:34:58 --> 00:35:01: I think a lot of times are focuses on perception,  
00:35:01 --> 00:35:07: managing perception, communications monitoring is good  
because it essentially allows  
00:35:07 --> 00:35:10: you management to be able to tell if you're doing  
00:35:10 --> 00:35:11: a good job or not.  
00:35:11 --> 00:35:14: And it also allows you to have something tangible that  
00:35:14 --> 00:35:17: you can share with your tenants and occupants to give  
00:35:17 --> 00:35:19: him that confidence and Peace  
00:35:19 --> 00:35:21: of Mind. All  
00:35:21 --> 00:35:25: of these steps that we're doing as the last takeaway  
00:35:25 --> 00:35:29: is that it's not something you can't wait this out.  
00:35:29 --> 00:35:33: All of the steps that we're doing are useful for  
00:35:33 --> 00:35:35: flu season every single year,  
00:35:35 --> 00:35:35: so it's  
00:35:36 --> 00:35:37: none of this is throw away.  
00:35:37 --> 00:35:40: So with that, I'll I'll turn it back over to  
00:35:40 --> 00:35:41: Ken for  
00:35:41 --> 00:35:44: questions. OK, thank you, Luis.  
00:35:44 --> 00:35:46: Now we have about 6 questions,  
00:35:46 --> 00:35:47: and I think there are two types.  
00:35:47 --> 00:35:51: One is more business oriented with which I think is  
00:35:51 --> 00:35:52: better.  
00:35:52 --> 00:35:55: For array to answer and and the other type is  
00:35:55 --> 00:35:56: about HVAC,  
00:35:56 --> 00:36:00: so Ray first for you we have questions about retail  
00:36:00 --> 00:36:04: tenants suffering from significant drop of revenue.  
00:36:04 --> 00:36:08: How do you work with them to keep him?  
00:36:08 --> 00:36:11: I guess stay in your in your buildings and then  
00:36:11 --> 00:36:12: keep EM,  
00:36:12 --> 00:36:13: I guess happy.  
00:36:16 --> 00:36:17: Yeah, that's a good question.  
00:36:17 --> 00:36:22: I mean, unfortunately, Hong Kong is going through.  
00:36:22 --> 00:36:23: Over the last nine months,  
00:36:23 --> 00:36:27: going through a very big political crisis,  
00:36:27 --> 00:36:28: when people on the streets.  
00:36:28 --> 00:36:31: Collins causing a disturbance and we saw at the end  
00:36:31 --> 00:36:34: of this year end of last year that things are  
00:36:34 --> 00:36:35: picking up unfortunate.  
00:36:35 --> 00:36:38: This coronavirus really hit really hard and actually the sales  
00:36:38 --> 00:36:39: figures are very very weak.  
00:36:39 --> 00:36:40: Just give you some insight.  
00:36:40 --> 00:36:44: What you know sales are down anywhere from 70 to

00:36:44 --> 00:36:45: 90%

00:36:45 --> 00:36:48: in February with the height of the coronavirus on top

00:36:48 --> 00:36:49: line top line.

00:36:49 --> 00:36:51: So it's very very. It's very,

00:36:51 --> 00:36:54: very unfortunate. Um, to answer that question,

00:36:54 --> 00:36:57: we obviously with all the measures we're doing to ensure

00:36:57 --> 00:37:00: that you know we can bring more people into the

00:37:00 --> 00:37:01: into the retail centers,

00:37:01 --> 00:37:02: but it is a very,

00:37:02 --> 00:37:07: very unfortunate situation. Obviously, one thing that we we are

00:37:07 --> 00:37:10: working with the clients is to help them on rent

00:37:10 --> 00:37:11: relief.

00:37:11 --> 00:37:14: For February we we see that as as something as

00:37:14 --> 00:37:18: a partnership approach with our clients.

00:37:18 --> 00:37:21: Because if you have somebody to 90%

00:37:21 --> 00:37:24: revenue drop. On in February,

00:37:24 --> 00:37:27: you know, and this coronavirus is totally unexpected.

00:37:27 --> 00:37:29: You know attitude for us if you take a long

00:37:29 --> 00:37:30: term view.

00:37:30 --> 00:37:33: And I say that when I first started my presentation

00:37:33 --> 00:37:35: that were long term investor that you do need to

00:37:35 --> 00:37:38: work in partnership with your clients to ensure that they

00:37:38 --> 00:37:41: work. So that that's just a financial relief on

00:37:41 --> 00:37:43: the on the business side.

00:37:43 --> 00:37:45: For retail we do. We are doing a lot of

00:37:45 --> 00:37:48: other promotional activities besides rent relief.

00:37:48 --> 00:37:53: We are helping putting kind of.

00:37:53 --> 00:37:57: Trying to help people with with with coupons like Uncle

00:37:57 --> 00:38:01: and so called coupons to try to help drive sales

00:38:01 --> 00:38:02: for them.

00:38:02 --> 00:38:04: But it is a very difficult situation at home and

00:38:04 --> 00:38:07: with this parameters people do not want to leave the

00:38:07 --> 00:38:10: offices or leave their homes and you know so we

00:38:10 --> 00:38:13: we try to we try to bring the business to

00:38:13 --> 00:38:17: them now and working with our retailers to perhaps able

00:38:17 --> 00:38:20: to give more online activities to to them to do

00:38:21 --> 00:38:23: better, to do byproducts and bring them home but.

00:38:23 --> 00:38:26: It is very difficult right now and like I said,

00:38:26 --> 00:38:28: I think the whole business retail business model is is

00:38:28 --> 00:38:31: going to going through a very very fundamental shift right

00:38:31 --> 00:38:32: now,

00:38:32 --> 00:38:35: specially when people get comfortable much more comfortable for not

00:38:35 --> 00:38:36: shopping and etc etc.

00:38:36 --> 00:38:38: So I think it's it's.

00:38:38 --> 00:38:38: It's still wait to be seen,

00:38:38 --> 00:38:40: but just those are kind of the key measures that

00:38:40 --> 00:38:41: were doing.

00:38:41 --> 00:38:43: Helping on the top line and also help you on

00:38:43 --> 00:38:45: the bottom line is trying to work with the partnership

00:38:45 --> 00:38:46: only through.

00:38:47 --> 00:38:49: OK, thanks Ray. We have another question for you,

00:38:49 --> 00:38:53: it's about you mentioned in your talk the need for

00:38:53 --> 00:38:57: open communication with your tenants and visitors.

00:38:57 --> 00:39:00: Have you had a situation where you got information about

00:39:00 --> 00:39:04: someone being infecting your building from the media 1st and

00:39:04 --> 00:39:07: then having to approach that tenant later?

00:39:08 --> 00:39:11: We have not yet, but we have the indirectly have

00:39:11 --> 00:39:14: when one of the first cases was in Hong Kong

00:39:14 --> 00:39:17: was the was a family who had a dinner together.

00:39:17 --> 00:39:19: And and they went to him,

00:39:19 --> 00:39:22: got infected and I was on the news first.

00:39:22 --> 00:39:25: But what we found out one of the affected individuals

00:39:26 --> 00:39:29: was actually a worker in one of our retail restaurants.

00:39:29 --> 00:39:32: And so that that that that went through.

00:39:32 --> 00:39:34: Obviously that came through the social media first,

00:39:34 --> 00:39:37: but we didn't track it to the two or one

00:39:37 --> 00:39:40: of our tenanted restaurants until much later,

00:39:40 --> 00:39:41: but that. But then it went very quickly.

00:39:41 --> 00:39:43: After that, there were no one.

00:39:43 --> 00:39:45: I think this whole dynamics is no ones really hiding

00:39:45 --> 00:39:46: anything,

00:39:46 --> 00:39:47: but no ones trying to hide.

00:39:47 --> 00:39:49: So people are quite open about it,

00:39:49 --> 00:39:52: so as soon as they found out the restaurant found

00:39:52 --> 00:39:55: out that that was one of the individuals they needed,

00:39:55 --> 00:39:58: contacted us, and then we set our our our standard

00:39:58 --> 00:39:59: operating procedures in place.

00:39:59 --> 00:40:01: We would close down the restaurant,

00:40:01 --> 00:40:04: we we, we got everyone out the restaurant tours a

00:40:05 --> 00:40:07: quarantine all their stuff for 14 days.

00:40:07 --> 00:40:09: We went in and we cleaned.

00:40:09 --> 00:40:12: We disinfected the whole premises and then then then the  
00:40:12 --> 00:40:16: premises are shut down for 40 days because of quarantine  
00:40:16 --> 00:40:18: and they just recently opened again,  
00:40:18 --> 00:40:21: probably about 2 weeks ago after the 14th for 5050  
00:40:21 --> 00:40:24: day quarantine they reopened and it's been in back to  
00:40:24 --> 00:40:25: back to business,  
00:40:25 --> 00:40:26: right? So  
00:40:26 --> 00:40:29: again, how many days would you?  
00:40:29 --> 00:40:32: Would you leave the space vacant before you let people  
00:40:32 --> 00:40:33: in after you do the.  
00:40:33 --> 00:40:34: This infection, well  
00:40:34 --> 00:40:36: you re depends like I said,  
00:40:36 --> 00:40:39: usually within within one day it is it.  
00:40:39 --> 00:40:41: You know. He's usually for offices.  
00:40:41 --> 00:40:43: We do one day and then basically should up the  
00:40:43 --> 00:40:46: areas if we do fully then everything was there with  
00:40:46 --> 00:40:50: the ventilation with all the disaffected in on that floor  
00:40:50 --> 00:40:53: should take you know literally took a few hours and  
00:40:53 --> 00:40:56: then and then usually the next day it can be  
00:40:56 --> 00:40:57: occupied.  
00:40:57 --> 00:41:00: But the issue is that the do the people do.  
00:41:00 --> 00:41:03: The operators want to do that because there is a  
00:41:03 --> 00:41:03: 14 day.  
00:41:03 --> 00:41:07: Quarantine kind of period or incubation period for this virus  
00:41:07 --> 00:41:08: as we speak.  
00:41:08 --> 00:41:10: So usually people that if they if they do give  
00:41:10 --> 00:41:12: a kid a dentist like a 14 day period,  
00:41:12 --> 00:41:15: usually on the on. Not because the the the the  
00:41:15 --> 00:41:18: the place not fit for operation is just the fact  
00:41:18 --> 00:41:20: that human beings are quarantined for 14  
00:41:20 --> 00:41:24: days right? OK thank you and and I think this  
00:41:24 --> 00:41:28: will be the last question and this is for Larry  
00:41:28 --> 00:41:33: and the question is so the the the participant has  
00:41:33 --> 00:41:36: a question about the air conditioning system in high rise  
00:41:36 --> 00:41:37: buildings right?  
00:41:37 --> 00:41:38: So especially in the mid.  
00:41:38 --> 00:41:44: Laventure but occupants cannot control the temperature  
00:41:44 --> 00:41:47: since most buildings  
00:41:47 --> 00:41:50: have central system that control the temperature,  
00:41:50 --> 00:41:54: not allowing individuals to temperature.  
00:41:54 --> 00:41:58: So your insights and opinions are on this situation.  
00:41:58 --> 00:41:59: Well,

00:41:59 --> 00:42:04: heads up that. It's unfortunately common that buildings are buildings

00:42:04 --> 00:42:07: with air conditioning or subcooled.

00:42:07 --> 00:42:11: And there are multiple explanations that have been given for it,

00:42:12 --> 00:42:12: and I I don't. I don't know what's in any

00:42:12 --> 00:42:15: particular building.

00:42:16 --> 00:42:17: It could be something from limitations in the control system

00:42:17 --> 00:42:22: that don't allow turn down when there's low occupancy.

00:42:22 --> 00:42:26: It could be building operations,

00:42:26 --> 00:42:28: personnel responding to the person with wearing the most clothing

00:42:28 --> 00:42:34: which could be top management.

00:42:34 --> 00:42:36: If there are multiple reasons,

00:42:36 --> 00:42:39: I'm aware that it creates comfort problems I'm not aware

00:42:39 --> 00:42:45: of it causing disease spread or flu.

00:42:46 --> 00:42:50: But it is unfortunately very common that buildings there subcooled,

00:42:50 --> 00:42:55: right?

00:42:55 --> 00:42:55: Maybe I could just jump in there.

00:42:56 --> 00:42:57: There. There is technology now which which many landlords,

00:42:57 --> 00:43:00: including us were implementing is that there is a temperature

00:43:00 --> 00:43:05: controls into certain zones even on the same floor.

00:43:05 --> 00:43:09: So not the whole building.

00:43:09 --> 00:43:10: So I could right now control control my room.

00:43:10 --> 00:43:14: I could bring it up to just say 25 degrees

00:43:14 --> 00:43:16: Centigrade and then outside is sitting at 22 or whatever

00:43:16 --> 00:43:20: it is.

00:43:20 --> 00:43:20: So there is technology now that is able to do

00:43:20 --> 00:43:24: that,

00:43:24 --> 00:43:24: so it's really just how the existing land or they

00:43:24 --> 00:43:27: went to implement that that that into their into their

00:43:27 --> 00:43:30: buildings.

00:43:30 --> 00:43:31: There is technology or they were implementing aurorae.

00:43:31 --> 00:43:33: Right great Luis. A quick question.

00:43:35 --> 00:43:40: What kind of common

00:43:41 --> 00:43:42: mistakes or misunderstandings two do people make or or

00:43:42 --> 00:43:46: have

00:43:46 --> 00:43:50: regarding the use of HVAC in the current environment?

00:43:52 --> 00:43:57: The main one is that people turn this systems all

00:43:57 --> 00:43:57: off,

00:43:57 --> 00:44:01: so building owners need to make sure they have at

00:44:01 --> 00:44:03: least the outdoor air on at 100%

00:44:03 --> 00:44:07: status several times. The other one is that I know  
00:44:07 --> 00:44:10: my own team in Beijing was in the building and  
00:44:10 --> 00:44:13: they were told to turn all air conditioning off,  
00:44:13 --> 00:44:18: including local air conditioning, fan coil units,  
00:44:18 --> 00:44:20: split units. Any of these.  
00:44:20 --> 00:44:22: I had a slide that that.  
00:44:22 --> 00:44:24: Unfortunately it didn't make it into the deck,  
00:44:24 --> 00:44:29: but it highlights the types of systems that can be  
00:44:29 --> 00:44:32: used without any re circulation.  
00:44:32 --> 00:44:35: These are ones that if you can think you enter  
00:44:35 --> 00:44:37: into a room you turn on,  
00:44:37 --> 00:44:40: you can change the temperature of the panel.  
00:44:40 --> 00:44:45: That probably OK because that means it's just running the  
00:44:45 --> 00:44:49: heating in your own room and those are OK to  
00:44:49 --> 00:44:49: use.  
00:44:49 --> 00:44:53: One of the takeaways is just that if building owners  
00:44:53 --> 00:44:56: are able to put in any of these systems,  
00:44:56 --> 00:45:00: either filtration, plus UV or electronic filters,  
00:45:00 --> 00:45:04: these deactivate viruses, if they are.  
00:45:04 --> 00:45:07: If they happen to be airborne and then you can  
00:45:08 --> 00:45:11: use your building HVAC efficiently the way there was.  
00:45:11 --> 00:45:15: It was supposed to be used for both ventilation and  
00:45:15 --> 00:45:16: heating.  
00:45:21 --> 00:45:21: Right,  
00:45:22 --> 00:45:25: OK, OK, well I think with that will end the  
00:45:26 --> 00:45:30: the web and R here I'd like to remind everyone  
00:45:30 --> 00:45:34: that we have more webinars coming up in the next  
00:45:34 --> 00:45:40: several weeks please. Try to attend those events if they  
00:45:40 --> 00:45:43: are relevant to your business.  
00:45:43 --> 00:45:46: With that, I'd like to thank the speakers,  
00:45:46 --> 00:45:51: Ray Lewis, Ann Larry. Thanks for joining an and offering  
00:45:51 --> 00:45:53: your gradients like thank you.  
00:45:55 --> 00:45:56: Thank you for having  
00:45:56 --> 00:46:09: me. Thanks everyone bye bye.

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