

# 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 matters first.

00:00:05 --> 00:00:07:

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 questions to the speakers by clicking on the question icon at the bottom of the screen and again for those of you joining from Korea,

00:00:16 --> 00:00:21: you're welcome to submit questions in Korean.

00:00:21 --> 00:00:25: I'm gonna tell him to shut

00:00:25 --> 00:00:26: Anita.

00:00:27 --> 00:00:29: The Web and RI like to introduce the discussion leaders of the web and are today.

00:00:31 --> 00:00:32: So first we have Louis Chang who is the founder and president of Pure Living,

00:00:32 --> 00:00:33: a company based in Shanghai that offers expert advise on indoor air quality.

00:00:34 --> 00:00:38: Second, we have Mr. Raymond Chow who is executive director of Hongkong Land Limited and he's also the chair of ULI Hong Kong SAR.

00:00:38 --> 00:00:40: And 3rd, we have Mr Lawrence Schoen who is the president and principal engineer of Shawn Engineering, is based in Maryland in the US.

00:00:40 --> 00:00:43: OK Ray, please go.

00:00:43 --> 00:00:45: Good morning, good morning everyone and thank you Ken for having me this morning.

00:00:45 --> 00:00:51: Today I'm going to really give.

00:00:51 --> 00:00:53: Hopefully everyone some real life experience of what we

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00:01:32 --> 00:01:37:

00:01:37 --> 00:01:40: have  
00:01:40 --> 00:01:46: been doing in the portfolios that do we manage?  
00:01:46 --> 00:01:47: Perhaps I give some context to people we have in  
00:01:47 --> 00:01:49: Hong Kong.  
00:01:49 --> 00:01:52: 5,000,000 square feet of office and retail space,  
00:01:52 --> 00:01:56: right? In the heart of Central Hong Kong.  
00:01:56 --> 00:01:57: We are considered a long time long term investor.  
00:01:57 --> 00:02:00: When we say long term,  
00:02:00 --> 00:02:01: we're looking at assets and managing assets for the long  
00:02:01 --> 00:02:03: term,  
00:02:03 --> 00:02:05: and that we're thinking generational.  
00:02:06 --> 00:02:06: Um, just to give you the scale of what we  
00:02:06 --> 00:02:09: do.  
00:02:09 --> 00:02:12: We have about 30 billion US dollars of assets sitting  
00:02:12 --> 00:02:14: in Hong Kong with a revenue stream of but one  
00:02:14 --> 00:02:17: 1 billion US dollars every year.  
00:02:17 --> 00:02:20: So every single day I collect 2 1/2 million US  
00:02:20 --> 00:02:26: dollars from how I collect those is based upon.  
00:02:26 --> 00:02:31: I've got to roughly about 606 hundred multinational office  
00:02:31 --> 00:02:33: clients  
00:02:33 --> 00:02:38: and about 200 retail clients who expect the top best  
00:02:38 --> 00:02:40: in class management services.  
00:02:40 --> 00:02:42: To help them manage their assets and manage the office  
00:02:42 --> 00:02:46: in a daily basis.  
00:02:46 --> 00:02:49: Now what I'm going to do is really just give  
00:02:49 --> 00:02:52: you some life experiences of what we've been doing.  
00:02:52 --> 00:02:56: My discussion will be on the softer side and terms  
00:02:56 --> 00:03:00: of how we manage the assets at during this crisis  
00:03:00 --> 00:03:02: that we're facing it with this coronavirus crisis.  
00:03:02 --> 00:03:06: So, um. If just suck,  
00:03:06 --> 00:03:09: So what we do  
00:03:09 --> 00:03:11: as a general principle we we provide,  
00:03:11 --> 00:03:15: we believe health and safety for staff and customers is  
00:03:15 --> 00:03:18: kind of paramount.  
00:03:18 --> 00:03:23: Number one in terms of our dealings in the in  
00:03:23 --> 00:03:28: the in the day-to-day asset management.  
00:03:28 --> 00:03:32: During this crisis. We also believe that we are an  
00:03:32 --> 00:03:38: educator and a communicator and would provide education  
00:03:38 --> 00:03:42: to two.  
00:03:42 --> 00:03:46: Clients and we try to give a almost like a  
00:03:46 --> 00:03:50: psychologist give the our clientele a a sense of calmness.  
00:03:50 --> 00:03:54: 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 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

00:25:33 --> 00:25:34: health

00:25:34 --> 00:25:36: and safety issues.

00:25:36 --> 00:25:39: We focus a lot on indoor air,

00:25:39 --> 00:25:42: so today I'm going to be talking of course is

00:25:42 --> 00:25:48: all the modalities that Larry talked about.

00:25:48 --> 00:25:53: Touch, individual defense, identification of source cleaning.

00:25:53 --> 00:25:56: Today I'm going to. Focus a little bit more on

00:25:56 --> 00:26:01: the potential sort of routes of.

00:26:01 --> 00:26:06: Transmission, which has been identified as May or may not.

00:26:06 --> 00:26:08: He, um, a primer. It's not a primary source of

00:26:08 --> 00:26:12: transmission,

00:26:12 --> 00:26:15: but we know that the generation of aerosols means it's

00:26:15 --> 00:26:18: something that a lot of both of our tenants of

00:26:18 --> 00:26:22: public and building owners are concerned about.

00:26:22 --> 00:26:25: Basically, how do we run our HVAC so some of

00:26:25 --> 00:26:30: what Larry talked about just now?

00:26:30 --> 00:26:32: He's allowed droplets. So one thing to understand is as

00:26:32 --> 00:26:36: viruses leave our bodies.

00:26:36 --> 00:26:38: They are on droplets. That's a larger size here.

00:26:38 --> 00:26:41: The virus itself is tiny.

00:26:41 --> 00:26:46: It's all the way over on the left side.

00:26:46 --> 00:26:48: But what happens is when the droplets leave our bodies,

00:26:48 --> 00:26:51: they are impacted by humidity.

00:26:51 --> 00:26:55: The dryer is the way the air moves.

00:26:55 --> 00:26:57: It tends to reduce the size from very very large,

00:26:57 --> 00:27:01: like runs down to about.

00:27:01 --> 00:27:03: The research shows us count about one or two microns,

00:27:03 --> 00:27:09: which means it can then.

00:27:09 --> 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 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 coronaviruses 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 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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