

Webinar

ULI Dallas-Fort Worth: PropTech

Date: May 06, 2021

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00:00:00 --> 00:00:03: So good morning everyone or good afternoon and maybe even 00:00:03 --> 00:00:07: if you could evenings wherever you're tuning in from. 00:00:07 --> 00:00:11: I'm Steve months, I'm part of the programs Committee for 00:00:11 --> 00:00:12: ULI Dallas Fort Worth. 00:00:12 --> 00:00:15: I want to welcome everybody for joining us this morning, 00:00:15 --> 00:00:20: especially our speakers. When we were putting this program together, 00:00:20 --> 00:00:24: we decided we wanted. The smartest, 00:00:24 --> 00:00:30: brightest, most experienced. People in the world that they could 00:00:30 --> 00:00:30: find. 00:00:30 --> 00:00:32: Unfortunately, they all had prior commitments, 00:00:32 --> 00:00:35: so anyway, the plan in the bottom line is Brad, 00:00:35 --> 00:00:38: Charlie Bar and you guys were planning A and we 00:00:39 --> 00:00:40: didn't have a Plan B. 00:00:40 --> 00:00:43: So if one of you guys said no, 00:00:43 --> 00:00:45: we wouldn't be having this program this morning, so I not only want to thank you for being 00:00:45 --> 00:00:48: 00:00:48 --> 00:00:49: here, 00:00:49 --> 00:00:51: but I truly appreciate you being here. Gonna skip the intros in the interest of time 'cause 00:00:51 --> 00:00:54: 00:00:55 --> 00:00:56: we got a lot to cover. 00:00:56 --> 00:00:59: For more info on Brad or 5th Wall, 00:00:59 --> 00:01:01: go to 5th wall.com. Charlie, 00:01:01 --> 00:01:05: go to heinz.com for Byron and PwC. 00:01:05 --> 00:01:07: Go to pwc.com. And Brad, 00:01:07 --> 00:01:10: I don't know if it's a coincidence or intentional,

newsletter so there I don't mind.

but about 30 minutes ago I got my 5th Wall

00:01:16 --> 00:01:19: So there's a plug for those few joining us. 00:01:19 --> 00:01:22: You're interested in proptech, you really want to get the 00:01:22 --> 00:01:23: 5th Wall Newsletter. 00:01:23 --> 00:01:25: It's one of the best newsletters I get so. 00:01:27 --> 00:01:28: When this is over, 00:01:28 --> 00:01:30: those of you know me, 00:01:30 --> 00:01:32: I'd like to hear from you what you liked about 00:01:32 --> 00:01:33: what to do next, 00:01:33 --> 00:01:37: as we anticipate more. More events focused on proptech. 00:01:37 --> 00:01:40: The various disciplines of it we have the chat disabled 00:01:40 --> 00:01:41: for our program this morning, 00:01:41 --> 00:01:45: and there's no Q&A. So just sit back and enjoy 00:01:45 --> 00:01:48: the program and to get that started I'm going to 00:01:49 --> 00:01:51: turn it over to my friend. 00:01:51 --> 00:01:53: And partner in crime putting this event together. 00:01:53 --> 00:01:55: Mr Byron Carlock PC take it away. 00:01:55 --> 00:01:57: Thank you Steven. What 00:01:57 --> 00:02:00: a pleasure it is to be back with our friends 00:02:00 --> 00:02:02: at ULI in Texas today. 00:02:02 --> 00:02:05: I'm grateful to be a part of this but I 00:02:05 --> 00:02:08: have to tell you what I'm really grateful for. 00:02:08 --> 00:02:11: Is the two panelists we have today in an area 00:02:11 --> 00:02:14: that is just a big question mark for so many 00:02:14 --> 00:02:18: leaders in our industry right now because it's so big. 00:02:18 --> 00:02:21: It's growing so fast. But yet it's quite confusing. 00:02:21 --> 00:02:24: For those of you that have looked into areas of 00:02:24 --> 00:02:24: Proptech, 00:02:24 --> 00:02:26: I think the first question we want to ask today 00:02:27 --> 00:02:30: after we get our panelists introduce themselves is what is 00:02:30 --> 00:02:30: it? 00:02:30 --> 00:02:32: How do we get our arms around it? 00:02:32 --> 00:02:33: How do we use it? 00:02:33 --> 00:02:36: What is practical? Which companies are going to make it? 00:02:36 --> 00:02:39: How do we know if they're going to make it? 00:02:39 --> 00:02:41: How do we know if we're going to be a 00:02:41 --> 00:02:43: pilot with the right company? 00:02:43 --> 00:02:45: With the right technique, is it going to do for 00:02:45 --> 00:02:48: us what is promised and proptech is a bit elusive. 00:02:48 --> 00:02:50: Books are being written about it. 00:02:50 --> 00:02:52: Pilots are going on in many buildings with many owners 00:02:53 --> 00:02:53: with.

I can take a hint.

00:01:15 --> 00:01:16:

00:02:53> 00:03:00:	Many different facets of of activities ranging from sensor movement
00:03:00> 00:03:02:	to utility management too.
00:03:02> 00:03:06:	Measuring how many cars are in the parking lot with
00:03:06> 00:03:08:	the load is in your building and security there,
00:03:08> 00:03:12:	just it runs the gamut and so we're going to
00:03:12> 00:03:15:	learn today about what Prop tech is and how we
00:03:15> 00:03:18:	can best use it to make our business and our
00:03:18> 00:03:21:	industry better. With that, I'd first like to ask Brad
00:03:21> 00:03:24:	from 5th Wall to introduce himself and then I'll ask
00:03:24> 00:03:26:	Charlie to introduce himself.
00:03:26> 00:03:30:	Then my first question will go to Brad.
00:03:30> 00:03:30:	Brad,
00:03:30> 00:03:32:	thanks bye and thank you.
00:03:32> 00:03:35:	I appreciate being here today and great talking with everyone.
00:03:35> 00:03:37:	My name is Brad Bradley.
00:03:37> 00:03:40:	I'm the co-founder and managing partner at 5th Wall.
00:03:40> 00:03:43:	We are the world's largest venture capital fund focused exclusively
00:03:43> 00:03:44:	on investing.
00:03:44> 00:03:47:	But I sort of broadly defined as built world technology.
00:03:47> 00:03:50:	We do so in partnership with some of the largest
00:03:50> 00:03:52:	real estate owner,
00:03:52> 00:03:55:	operator developers, investors globally. We have about 70 plus strategic
00:03:55> 00:03:58:	corporates invested in our in our various funds across 15
00:03:58> 00:03:59:	different countries.
00:03:59> 00:04:01:	We've been in business since.
00:04:01> 00:04:04:	2017 and we currently manage it a little over 2
00:04:04> 00:04:07:	two and two and a half billion dollars.
00:04:07> 00:04:09:	My background, much like the fund,
00:04:09> 00:04:12:	I think, really draws on both real estate and technology
00:04:12> 00:04:12:	expertise.
00:04:12> 00:04:15:	I started my career at UBS doing real estate investment
00:04:15> 00:04:16:	banking,
00:04:16> 00:04:19:	then moved on to the private equity side for both
00:04:19> 00:04:21:	Tishman Speyer and then eventually,
00:04:21> 00:04:24:	Starwood Capital I left started in 2010 to pursue what
00:04:24> 00:04:27:	I thought was a pretty interesting opportunity in the distressed
00:04:27> 00:04:31:	single family housing space and work with a handful of
00:04:31> 00:04:33:	cofounders too. Convince Blackstone to seed Fund,

00:04:33> 00:04:35: 00:04:35> 00:04:40:	a company focused on acquiring, redeveloping and managing single family homes across the
	US company,
00:04:40> 00:04:44:	now known today's Invitation Homes which we took public in
00:04:44> 00:04:44:	2017.
00:04:44> 00:04:49:	After that wouldn't founded fit well with Brendan.
00:04:49> 00:04:51:	We just here today. It's sort of the intersection of
00:04:51> 00:04:53:	real estate in tech and all the opportunity that it
00:04:53> 00:04:53:	creates.
00:04:55> 00:04:58:	Thank you Brad and CC with Hines.
00:04:58> 00:05:00:	Please share with us
00:05:00> 00:05:05:	your story, sure so. Name is Charlie.
00:05:05> 00:05:08:	Kunz are in our innovation team at Heinz and been
00:05:08> 00:05:11:	with the firm for about 14 years.
00:05:11> 00:05:15:	And started with my first ten out in the Bay
00:05:15> 00:05:16:	Area,
00:05:16> 00:05:21:	doing acquisitions and development throughout the Bay Area and about
00:05:21> 00:05:23:	four and a half years ago.
00:05:23> 00:05:27:	It's almost five soon. Was asked if if I wanted
00:05:28> 00:05:32:	to start a team really focusing on frankly how much
00:05:33> 00:05:36:	the industry was changing and it wasn't.
00:05:36> 00:05:40:	Really, prop text specific, but it is certainly become a
00:05:40> 00:05:42:	big a big part of the role,
00:05:42> 00:05:46:	and so we've been. Incubating new services and making investments
00:05:46> 00:05:50:	and kind of deploying information and capital kind of through
00:05:50> 00:05:53:	our innovation team for a handful of years now.
00:05:53> 00:05:55:	And before Hines I was in,
00:05:55> 00:05:58:	it was in finance for awhile at Black Rock and
00:05:58> 00:06:02:	Credit Suisse and then really I started my career building
00:06:02> 00:06:02:	homes.
00:06:02> 00:06:05:	Was a was a home builder then got to finance
00:06:06> 00:06:06:	it.
00:06:06> 00:06:09:	Kind of blew those two things together by getting into
00:06:09> 00:06:12:	real estate at Heinz and then he represents.
00:06:12> 00:06:16:	Thank you Charlie, and for those of you that I'm
00:06:17> 00:06:18:	Byron Carlock,
00:06:18> 00:06:22:	I lead the real estate practice for PwC across our
00:06:22> 00:06:24:	lines of service of assurance,
00:06:24> 00:06:29:	tax and consulting. Began my career in dirt with the
00:06:29> 00:06:34:	Crow family in Trammell Crow Company and then Crow Capital

00:06:34> 00:06:35:	markets and.
00:06:35> 00:06:38:	Crow Holdings and came to the firm came to PwC
00:06:38> 00:06:40:	about 10 years ago to do this,
00:06:40> 00:06:43:	and it's always a pleasure when I'm asked to moderate
00:06:43> 00:06:46:	these things because it's always fun to see how our
00:06:46> 00:06:47:	industry changes and is changing.
00:06:47> 00:06:50:	But Brad, I'd like to start with you.
00:06:50> 00:06:53:	Just giving us an explanation of what is proptech for
00:06:53> 00:06:55:	the layman that doesn't know what prop tech is.
00:06:55> 00:06:58:	And then we're going to talk a little bit about
00:06:58> 00:07:00:	some of the major proptech areas.
00:07:00> 00:07:03:	And then Charlie, I'd like for you to jump in
00:07:03> 00:07:06:	after that and talk about how you're using.
00:07:06> 00:07:08:	Check as an owner manager.
00:07:08> 00:07:08:	Bread.
00:07:09> 00:07:12:	Yeah thanks so. I'm kind of going to given an
00:07:12> 00:07:15:	answer which is not what you're looking for,
00:07:15> 00:07:17:	but I think it's an important way to frame the
00:07:17> 00:07:18:	discussion,
00:07:18> 00:07:20:	because it's going to challenge your perception of how you
00:07:20> 00:07:23:	should think about real estate and and and the value
00:07:23> 00:07:24:	that's associated with it,
00:07:24> 00:07:27:	and the reason why I don't like to actually refer
00:07:27> 00:07:28:	to it as prop tech.
00:07:28> 00:07:30:	Is it 'cause I think it's actually limiting in the
00:07:30> 00:07:32:	sense that when you use Prop tech,
00:07:32> 00:07:35:	I think you can make the conclusion that is essentially
00:07:35> 00:07:37:	how do you use technology to better monetize the four
00:07:37> 00:07:40:	walls that that you put forth as a real
00:07:40> 00:07:43:	estate owner landlord? We are actually looking to branch out
00:07:43> 00:07:47:	beyond those four walls and that's why we refer to
00:07:47> 00:07:49:	it as built world technology.
00:07:49> 00:07:50:	So increasingly in this environment,
00:07:50> 00:07:54:	the value of your buildings is being influenced not by
00:07:54> 00:07:55:	what happened,
00:07:55> 00:07:58:	not just by what happens in the four walls,
00:07:58> 00:08:01:	but also what's happening around it and the opportunities,
00:08:01> 00:08:04:	but also disruptions that are affecting that value are
00.00.04 > 00.00.05	becoming
00:08:04> 00:08:05:	increasingly complex.
00:08:05> 00:08:07:	And it's not just e-commerce,
00:08:07> 00:08:09:	it's not just technology and digital innovation,

00:08:09> 00:08:12:	now it's pandemics. It's it's consumer sentiment.
00:08:12> 00:08:15:	It's all these, its climate and carbon influence.
00:08:15> 00:08:17:	It's all these things that you've just traditionally.
00:08:17> 00:08:21:	Maybe maybe you were aware of that weren't really core
00:08:21> 00:08:22:	parts of a business.
00:08:22> 00:08:25:	Making decisioning that are now becoming crucial to preparing for
00:08:26> 00:08:29:	and navigating a post pandemic world where almost every single
00:08:29> 00:08:32:	asset class is going to be affected in some form
00:08:32> 00:08:35:	or fashion. So I think we the evolution of proptech,
00:08:35> 00:08:39:	really reflects the evolution of 5th Wall to a certain
00:08:39> 00:08:41:	extent and that in 2017 when we launched.
00:08:41> 00:08:44:	The question that we were answering for folks was CEO's
00:08:44> 00:08:46:	whose board were pestering about tech.
00:08:46> 00:08:49:	Hey, what are you guys doing about technology?
00:08:49> 00:08:51:	The easy answer was we invested in football check as
00:08:52> 00:08:53:	people got moved up.
00:08:53> 00:08:55:	The innovation curve. That answer became more nuanced.
00:08:55> 00:08:58:	It was, hey, we're actually using this technology to create
00:08:58> 00:09:01:	efficiencies and generate revenue in ways that we weren't doing
00:09:01> 00:09:01:	before.
00:09:01> 00:09:04:	Check and then where we are today is completely different.
00:09:04> 00:09:07:	In the pandemic accelerated in ways that I,
00:09:07> 00:09:09:	I think, would have probably taken a few more years
00:09:09> 00:09:11:	to happen organically,
00:09:11> 00:09:14:	which is. Are LP's and the ones that are leveraging
00:09:14> 00:09:17:	technology to the fullest extent are changing the course of
00:09:17> 00:09:21:	their business in ways that are wildly transformative.
00:09:21> 00:09:24:	Better translating to enterprise value creation in ways that we
00:09:24> 00:09:25:	didn't think possible,
00:09:25> 00:09:28:	and that's really the future of proptech is it's less
00:09:29> 00:09:31:	about technology and real estate,
00:09:31> 00:09:34:	and it's about the combination of those two things to
00:09:34> 00:09:36:	create a more perfect union.
00:09:36> 00:09:39:	That's going to allow you as a as an organization
00:09:39> 00:09:40:	to identify diligence,
00:09:40> 00:09:43:	underwrite, invest, manage, and sell assets.
00:09:43> 00:09:46:	More effectively navigating the future of how all these externalities
00:09:46> 00:09:49:	are going to affect you or your real estate portfolio
00:09:49> 00:09:52:	in a way that's gonna allow you to make better,

00:09:52> 00:09:55:	more informed and hopefully more impactful decisions for your shareholders.
00:09:55> 00:09:58:	So it is really about the two two of the
00:09:58> 00:10:01:	largest industries on Earth colliding and and and the
00:10:01> 00:10:03:	real estate industry.
00:10:03> 00:10:06:	Moving up the innovation curve in the next 10 to
00:10:06> 00:10:09:	15 years and finding ways to take advantage of that.
00:10:09> 00:10:13:	Organizationally, which is why football should have built a platform
00:10:13> 00:10:14:	the way that we did so.
00:10:14> 00:10:16:	That's sort of a broad definition,
00:10:16> 00:10:19:	but we can obviously dive into the nuances of hey,
00:10:19> 00:10:22:	let's start to talk about specific categories,
00:10:22> 00:10:22:	applications, etc etc.
00:10:23> 00:10:27:	That's that's a. That's a great start and I I'd
00:10:27> 00:10:30:	like to frame a context real quickly that you know
00:10:30> 00:10:31:	we've all,
00:10:31> 00:10:34:	in real estate and at times even been frustrated about
00:10:34> 00:10:38:	the amount of money we have to invest in technology
00:10:38> 00:10:40:	just to say stay current and relevant.
00:10:40> 00:10:43:	And now we're looking at an industry that has emerged
00:10:43> 00:10:46:	literally from next to nothing six years ago to 6
00:10:46> 00:10:50:	billion five years ago and \$30 billion went into proptech
00:10:50> 00:10:54:	activities in 2020 and MIT Real Estate Center is tracking.
00:10:54> 00:10:56:	Over 2300 different companies in the space trying to do
00:10:56> 00:11:00:	what Brad just said about automating and processing and making
00:11:00> 00:11:02:	our lives easier across the lifecycle of real estate.
00:11:02> 00:11:04:	And it makes you wonder,
00:11:04> 00:11:05:	how do we use it?
00:11:05> 00:11:08:	Charlie, tell us how you got involved and how you
00:11:08> 00:11:11:	are using it and putting it into practice at one
00:11:11> 00:11:14:	of the world's largest owners of real estate agent Charlie
00:11:14> 00:11:16:	before before you answer that,
00:11:16> 00:11:18:	can I just? I want to challenge with binding to
00:11:18> 00:11:21:	say 'cause I think it's an important framing,
00:11:21> 00:11:24:	but I actually think it's the opposite is that.
00:11:24> 00:11:27:	We are the real estate industry isn't spending nearly enough
00:11:27> 00:11:28:	on technology,
00:11:28> 00:11:32:	just based on the research that we've done over the
00:11:32> 00:11:33:	past five years.
00:11:33> 00:11:37:	The average mature industry spends close to 6 to 8%
00:11:37> 00:11:40:	and sometimes even greater than 10 of industry revenue on

00:11:43 --> 00:11:45: Real estate spends significantly less than 1%. 00:11:45 --> 00:11:47: That is a massive issue, 00:11:47 --> 00:11:49: but it's also humidity. Yeah, 00:11:49 --> 00:11:52: and I would just say that like, 00:11:52 --> 00:11:53: 30. Yeah, I just say, 00:11:53 --> 00:11:56: sorry just. I think that like if we can really 00:11:56 --> 00:11:58: sort of put it in the context, 00:11:58 --> 00:12:00: the real scene introduced sat out on 30 years of 00:12:00 --> 00:12:01: innovation, 00:12:01 --> 00:12:03: which is actually interesting and good in the sense that, 00:12:03 --> 00:12:05: like alright guys, so you don't know you you didn't 00:12:05 --> 00:12:07: do all these step function change, 00:12:07 --> 00:12:08: you didn't spend all this money, 00:12:08 --> 00:12:11: that's all. I'm fine. Now you can catapult to actually 00:12:11 --> 00:12:13: being using the latest and greatest stuff in a way 00:12:13 --> 00:12:15: that I think is going to reduce the cost of 00:12:15 --> 00:12:17: doing so and increase the efficiency. 00:12:17 --> 00:12:19: But it's like getting up that learning curve. 00:12:19 --> 00:12:21: But Charlie is going to talk through but also challenge 00:12:21 --> 00:12:22: the group to say guys, 00:12:22 --> 00:12:25: that \$30 billion that we just referenced that still. 00:12:25 --> 00:12:27: Too small, too in the sense of this is we're 00:12:27 --> 00:12:29: talking about a multi trillion dollar global industry. 00:12:29 --> 00:12:32: \$30 billion is a drop in the bucket. 00:12:32 --> 00:12:33: But even where we are today, 00:12:33 --> 00:12:36: that \$30 billion that is free R&D for our industry. 00:12:36 --> 00:12:38: That's three R&D for everybody on this phone. 00:12:38 --> 00:12:40: All you need to do is tap into it. 00:12:40 --> 00:12:42: Those CEOs, those products, those technologies, 00:12:42 --> 00:12:44: they all want to talk to you. 00:12:44 --> 00:12:46: They all want to work for you and they will 00:12:46 --> 00:12:49: spend time and resources listening to you and potentially even 00:12:49 --> 00:12:50: solving your specific needs. 00:12:50 --> 00:12:53: So what did what 5th will really sort of latched 00:12:53 --> 00:12:53: onto? 00:12:53 --> 00:12:56: Was like how do we create the connective tissue? 00:12:56 --> 00:12:58: They just put these two industries together. 00:12:58 --> 00:13:00: You could you don't. You don't have to actually spend 00:13:00 --> 00:13:01: balance sheet capital. 00:13:01 --> 00:13:04: You can actually leverage all these PC money that's being

R&B for their for their companies.

00:11:40 --> 00:11:43:

00:13:04> 00:13:04:	spent.
00:13:04> 00:13:07:	It's just about having the organizational capabilities to
	engage with
00:13:07> 00:13:08:	it and do so effectively.
00:13:08> 00:13:10:	So wanted to put that out now.
00:13:10> 00:13:11:	Very well said the
00:13:11> 00:13:13:	point. The point I was trying to make real quickly
00:13:13> 00:13:14:	was in real estate.
00:13:14> 00:13:17:	We've complained year after year as our technology officers have
00:13:17> 00:13:18:	come asking for their budgets.
00:13:18> 00:13:20:	And wow, that's too much money.
00:13:20> 00:13:22:	That's too much money and you're exactly right.
00:13:22> 00:13:25:	It's not enough money and the we're seeing a bifurcation
00:13:25> 00:13:26:	in the traditional.
00:13:26> 00:13:29:	Brick and mortar landlords not spending enough versus where the
00:13:29> 00:13:30:	industry is going,
00:13:30> 00:13:32:	requiring more. So that's very well said.
00:13:32> 00:13:35:	We said in the emerging trends two years ago that
00:13:35> 00:13:38:	real estate was a analog business trying to find its
00:13:38> 00:13:40:	way into a new digital world.
00:13:40> 00:13:41:	And that's really, really true.
00:13:41> 00:13:43:	And we've underspent, I'm sorry Charlie,
00:13:43> 00:13:44:	go ahead.
00:13:46> 00:13:48:	Sorry, I didn't mean to interrupt you there.
00:13:48> 00:13:50:	Byron apologies, I just wanted you know,
00:13:50> 00:13:53:	draft a little bit off of.
00:13:53> 00:13:57:	Brad's comments in that I think that you know there's
00:13:57> 00:14:00:	been a combination of events over the last handful of
00:14:00> 00:14:01:	years long before.
00:14:01> 00:14:04:	The COVID-19 pandemic in that.
00:14:04> 00:14:07:	I think for a long time the industry felt like
00:14:07> 00:14:09:	it didn't need to change.
00:14:09> 00:14:10:	It didn't need to innovate.
00:14:10> 00:14:13:	There was always a focus on an improved product and
00:14:13> 00:14:14:	service,
00:14:14> 00:14:16:	but I think with particularly with you know,
00:14:16> 00:14:20:	new entrants who came into our industry that provides services
00:14:20> 00:14:22:	that Oh no real estate that became more and more
00:14:22> 00:14:25:	important and whether they succeeded at larger.
00:14:25> 00:14:27:	Whether they you know burned up,

00:14:27> 00:14:28:	there was just a really,
00:14:28> 00:14:32:	I think, big realization that the that the industry needed
00:14:32> 00:14:35:	to be paying more attention to the customer.
00:14:35> 00:14:37:	To the end user and if we were to do
00:14:37> 00:14:37:	that,
00:14:37> 00:14:41:	we had to be. Trying much harder in utilizing much
00:14:41> 00:14:44:	better tools to provide what our customers need in that
00:14:44> 00:14:48:	everything else they are experiencing in their daily lives is
00:14:48> 00:14:52:	much further along than. Their home or in their office,
00:14:52> 00:14:55:	and so I think there were a lot of combining
00:14:55> 00:14:58:	factors and kind of larger themes that have allowed for
00:14:58> 00:15:02:	the utilization of technology to try to address bigger
	influences
00:15:02> 00:15:04:	and and just as broad set,
00:15:04> 00:15:06:	Brad said that the volume of capital,
00:15:06> 00:15:10:	particularly when you compare it to the volume of capital
00:15:10> 00:15:13:	spent in other industries with whether you look at his
00:15:13> 00:15:16:	VC dollars or RND or what have you is just
00:15:16> 00:15:20:	miniscule still. So it's it's just an interesting reality that
00:15:20> 00:15:22:	I also I tend to agree that it's still very
00:15:23> 00:15:23:	early.
00:15:23> 00:15:26:	Uhm? In so Byron usually talk a little bit about
00:15:26> 00:15:29:	how I ended up in this role and what we're
00:15:29> 00:15:31:	working on is that the question how
00:15:31> 00:15:35:	you did and how your how your discerning how you're
00:15:35> 00:15:36:	choosing what works.
00:15:36> 00:15:39:	You shared with me a great story before about how
00:15:40> 00:15:40:	Mr.
00:15:40> 00:15:42:	Hines is always focused on innovation and was in the
00:15:43> 00:15:46:	first meeting discussing this before he died and how you
00:15:46> 00:15:48:	have embraced that and taking it forward.
00:15:48> 00:15:50:	I just love to hear how an owner looks at
00:15:50> 00:15:53:	at these applications that decides what to use and how
00:15:54> 00:15:56:	it's helping you and what you're going
00:15:56> 00:15:57:	to do next, sure, so.
00:15:59> 00:16:03:	I think it really started out in the Bay Area
00:16:03> 00:16:07:	where I was working on projects there for technology
	companies.
00:16:07> 00:16:11:	Whether it was Google or VMware Campus or Salesforce
	Tower,
00:16:11> 00:16:15:	there was a lot of work in partnership with really
00:16:15> 00:16:17:	innovative companies.
00:16:17> 00:16:20:	There was also some opportunities in the way that we

00:16:22 --> 00:16:25: whether it's how you contract with the GC. 00:16:25 --> 00:16:30: Or how you provide better services and technology in your 00:16:30 --> 00:16:32: building or what have you that. 00:16:32 --> 00:16:35: It wasn't just Charlie, it was really the entire Bay 00:16:35 --> 00:16:38: Area team and leadership was really leaning hard into that, 00:16:38 --> 00:16:41: and I had the opportunity to have a front row 00:16:41 --> 00:16:44: seat and work on some great projects there, 00:16:44 --> 00:16:45: and I think that experience. 00:16:47 --> 00:16:50: Was it was a meaningful one for who this person 00:16:51 --> 00:16:52: should be in this role? 00:16:52 --> 00:16:57: And when the firm decided to launch an innovation team? 00:16:57 --> 00:17:00: There was a very deliberate decision made to have it 00:17:00 --> 00:17:04: start with someone who knows Heinzen was within the firm. 00:17:04 --> 00:17:06: Someone who speaks the language. 00:17:06 --> 00:17:08: Someone who's done development and acquisitions, 00:17:08 --> 00:17:10: someone who can. You know, 00:17:10 --> 00:17:12: really. Look at a lot of these tools as something 00:17:12 --> 00:17:13: that says, 00:17:13 --> 00:17:15: is this something I would want in my project right? 00:17:15 --> 00:17:17: Is this something I would be willing to pay for 00:17:17 --> 00:17:20: myself before you really dive too deep into it and 00:17:20 --> 00:17:23: try to advocate for it and push across the firm? 00:17:23 --> 00:17:25: And when the when they when the group fired up 00:17:25 --> 00:17:27: they were really, 00:17:27 --> 00:17:29: you know, three big. Items at hand. 00:17:29 --> 00:17:31: One was that the volume of technology coming into real 00:17:31 --> 00:17:33: estate was increasing dramatically. 00:17:33 --> 00:17:35: This was, you know, four or five years ago already. 00:17:35 --> 00:17:37: That was something that they had. 00:17:37 --> 00:17:41: We're identifying and felt like we need to have more 00:17:41 --> 00:17:43: resources for the second was that. 00:17:43 --> 00:17:46: As I mentioned before, there were new entrants in the 00:17:46 --> 00:17:49: industry that had a lot of influence and own no 00:17:49 --> 00:17:50: real estate. 00:17:50 --> 00:17:53: and we're coming at our industry in a completely different 00:17:53 --> 00:17:55: way and we didn't know how to. 00:17:55 --> 00:17:57: We were still deciding how to partner with them, 00:17:57 --> 00:17:59: how to not partner with them. what those decisions needed to be as it relates to 00:17:59 --> 00:18:02: 00:18:02 --> 00:18:04: new ways of thinking about real estate, 00:18:04 --> 00:18:07: and the third was that we were seeing that the

were building our buildings,

00:16:20 --> 00:16:22:

00:18:07> 00:18:10:	way that people wanted to live and work was changing,
00:18:10> 00:18:13:	and this was 2016. 2017 is in terms of having
00:18:13> 00:18:14:	a shiny new.
00:18:14> 00:18:17:	Office tower that is fetching lower rents than a four
00:18:17> 00:18:17:	story,
00:18:17> 00:18:19:	you know, brick building next door.
00:18:19> 00:18:21:	Why is that? What is it that we need to
00:18:21> 00:18:23:	be kind of better understanding?
00:18:23> 00:18:26:	So we wanted to take a step back and look
00:18:26> 00:18:28:	at all of those themes and.
00:18:32> 00:18:35:	So one of the things we did was decide to
00:18:35> 00:18:38:	utilize our capital as a way to get up the
00:18:38> 00:18:39:	learning curve,
00:18:39> 00:18:41:	and so we did invest with 5th Wall in fund
00:18:41> 00:18:44:	one and it was tremendously helpful for us to just
00:18:44> 00:18:48:	kind of understand the landscape of a lot of these
00:18:48> 00:18:50:	technology. Companies were out that were out there.
00:18:50> 00:18:55:	It also very quickly. Was a realization that there were.
00:18:59> 00:19:01:	There were so many more companies than you could ever
00:19:01> 00:19:03:	really decide to pay attention to,
00:19:03> 00:19:05:	and we need to be very clear on exactly what
00:19:05> 00:19:08:	our own priorities were and how we were going to
00:19:08> 00:19:09:	get through this.
00:19:09> 00:19:11:	And so our team decided to focus on what we
00:19:11> 00:19:14:	thought was that critical theme and something that our firm
00:19:14> 00:19:15:	always thought about,
00:19:15> 00:19:18:	which is trying to provide the best service that we
00:19:18> 00:19:19:	can for our customers.
00:19:19> 00:19:21:	And so our North Star for our innovation team has
00:19:21> 00:19:24:	been improving the experience and the service level for those
00:19:25> 00:19:26:	people who are in our buildings.
00:19:26> 00:19:30:	And so we have. Really honed in on the types
00:19:30> 00:19:34:	of tools that allow for that to happen.
00:19:34> 00:19:37:	We have a corporate analytics team that focuses heavily on
00:19:37> 00:19:38:	building and portfolio level data.
00:19:38> 00:19:41:	We have a business technology group that really looks at
00:19:41> 00:19:44:	the systems and processes that we have in place as
00:19:44> 00:19:48:	an organization to make sure that we're operating as effectively
00:19:48> 00:19:51:	as we can. So it's allowed us to really look
00:19:51> 00:19:54:	further out and focus on the end customer and try
00:19:54> 00:19:57:	to put them in the middle of all of our

00:19:57> 00:20:04:	decision making. What we've done is our team typically will.
00:20:04> 00:20:08:	Identify a theme or a vertical or a specific type
00:20:08> 00:20:11:	of tool that we want to have in our assets
00:20:11> 00:20:13:	and will pilot them.
00:20:13> 00:20:17:	Will work with 5th Wall.
00:20:17> 00:20:19:	And other partners of ours to try to get a
00:20:19> 00:20:23:	good view of exactly what these companies are capable of.
00:20:23> 00:20:26:	And really what we do is we we pilot early
00:20:26> 00:20:29:	and we then try to build new muscles within the
00:20:29> 00:20:30:	company.
00:20:30> 00:20:33:	So for instance, if we're looking at a new access
00:20:33> 00:20:34:	control system,
00:20:34> 00:20:38:	will be working really closely with our corporate operations and
00:20:38> 00:20:41:	engineering team in our in our pre construction team so
00:20:41> 00:20:44:	that they are up to speed on these kinds of
00:20:44> 00:20:47:	tools so that when we get to a place.
00:20:47> 00:20:48:	Two to four years later,
00:20:48> 00:20:50:	where this is much more commonplace,
00:20:50> 00:20:53:	those muscles already exists in those other groups such that
00:20:53> 00:20:56:	the innovation team isn't in charge of deploying those things
00:20:56> 00:20:56:	at scale.
00:20:56> 00:20:59:	Instead, it's a lot more about making sure that the
00:20:59> 00:21:02:	broader organization is seeing these things at the right time
00:21:02> 00:21:05:	and are involved in the piloting process and identifying which
00:21:05> 00:21:07:	ones are important and which ones matter.
00:21:07> 00:21:10:	And we have RND capital that allows us to pay
00:21:10> 00:21:13:	for some of these pilots such that it doesn't become
00:21:13> 00:21:15:	a burden for the individual asset,
00:21:15> 00:21:17:	so overtime if you were to look back on.
00:21:17> 00:21:19:	Things like tenant engagement, Axon,
00:21:19> 00:21:24:	touchless access control and IQ and occupancy sensors and good
00:21:24> 00:21:29:	visitor management programs mean those were things that we were
00:21:29> 00:21:31:	piloting 3-4 years ago.
00:21:31> 00:21:34:	That we were focusing on the tenant experience and it's
00:21:34> 00:21:36:	just interesting to see how critical those tools are now
00:21:36> 00:21:39:	in this pandemic environment and how people really need to
00:21:39> 00:21:41:	have those things. Looking forward.
00:21:41> 00:21:43:	And it wasn't that we had any idea.
00:21:43> 00:21:46:	Anything like this was going to happen so much as
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00:21:46> 00:21:49:	it just we had the ability to be looking a
00:21:49> 00:21:50:	bit further out.
00:21:50> 00:21:53:	Pilot and explore and have our colleagues across the firm
00:21:53> 00:21:56:	involved in that process while we project manage and identify
00:21:56> 00:21:58:	which ones we think are important to try and Charlie
00:21:58> 00:22:00:	as an evolution over the years,
00:22:00> 00:22:02:	as you've done that, Charlie have you?
00:22:02> 00:22:06:	Found that your tenants and your associates are embracing the
00:22:06> 00:22:08:	technology introduction and becoming more digital.
00:22:08> 00:22:10:	Or are they resisting it?
00:22:11> 00:22:13:	I would say so. Well,
00:22:13> 00:22:16:	let's do. Let's talk tenants and then investor partners and
00:22:16> 00:22:16:	then Hines.
00:22:16> 00:22:19:	So I would say that.
00:22:19> 00:22:22:	Tenants for the most part.
00:22:22> 00:22:25:	There's a spectrum, certainly, but I would say that oftentimes
00:22:25> 00:22:26:	the tenant,
00:22:26> 00:22:27:	our tenants are little bit.
00:22:29> 00:22:32:	Particularly tense, we like to partner with in these endeavors
00:22:32> 00:22:34:	are potentially further ahead than we are,
00:22:34> 00:22:37:	so we're working with. We have a lease with Microsoft
00:22:37> 00:22:40:	that where they own and that they've leased entire building
00:22:40> 00:22:42:	and we're working heavily with them on on some piloting
00:22:42> 00:22:46:	in that project. I think that there are.
00:22:46> 00:22:50:	A number of companies that are more than anything and
00:22:50> 00:22:54:	individuals in our multifamily assets that are excited to have
00:22:54> 00:22:57:	the ability to utilize some of these new tools.
00:22:57> 00:23:01:	The adoption. Is kind of all over the board I
00:23:01> 00:23:02:	would say,
00:23:02> 00:23:04:	but I think that it's it's very early.
00:23:04> 00:23:07:	I think there were a lot of conversations a couple
00:23:07> 00:23:08:	years ago about.
00:23:08> 00:23:11:	How important is it to really understand how your space
00:23:11> 00:23:14:	is being utilized and to have those kind of IoT
00:23:14> 00:23:15:	devices in your space?
00:23:15> 00:23:19:	And now that's something that most organizations and tenants that
00:23:19> 00:23:22:	we talked to are interested in having.
00:23:22> 00:23:24:	A landlord that understands how to use them,
00:23:24> 00:23:26:	whether they use them or not,
00:23:26> 00:23:29:	is another question, but the notion that we're on it

00:23:29 --> 00:23:32: and will have the services for them if they want 00:23:32 --> 00:23:35: it is really what is resonating with them. 00:23:35 --> 00:23:38: The usage is very spotty. 00:23:38 --> 00:23:41: Today I would say that from an investor perspective, 00:23:41 --> 00:23:43: there's a much smoother kind of spectrum. 00:23:43 --> 00:23:46: I would say that. It is, 00:23:46 --> 00:23:50: it is everything from being very wary to spend any 00:23:50 --> 00:23:54: money on it to a couple of investor partners of 00:23:54 --> 00:23:57: ours that are that we're having calls with on a 00:23:57 --> 00:24:01: weekly basis and are piloting some of these new initiatives 00:24:01 --> 00:24:02: with at scale. 00:24:02 --> 00:24:06: And they're more than happy to pay for the cost. 00:24:06 --> 00:24:08: So it on the investor side. 00:24:08 --> 00:24:11: I think that there's a spectrum that said, 00:24:11 --> 00:24:15: you know, if you just look at the very basic 00:24:15 --> 00:24:17: metric of how. 00:24:17 --> 00:24:20: LP the LP base is grown in the VC community 00:24:20 --> 00:24:24: that tells you plenty about investor partners where it's gone 00:24:24 --> 00:24:27: from half a dozen to there's over 100 plus real 00:24:27 --> 00:24:31: estate companies that are deploying capital into space now. 00:24:31 --> 00:24:35: So I think that. On the investor side of things, 00:24:35 --> 00:24:39: there is a spectrum, but it's there's more and more 00:24:39 --> 00:24:41: interest within Heinz. 00:24:41 --> 00:24:43: So we've always wanted to be innovative as a firm, 00:24:43 --> 00:24:44: and as I mentioned before. 00:24:44 --> 00:24:48: you know, Jerry Heinz. Feels like you know, 00:24:48 --> 00:24:50: innovation is really a state of mind more than it 00:24:50 --> 00:24:51: is particular thing. 00:24:51 --> 00:24:54: And he also said that this was in 2018 that 00:24:54 --> 00:24:57: he felt like the industry has changed more in the 00:24:57 --> 00:24:59: last five years and it had the 30 years before 00:24:59 --> 00:25:02: that. So there's a great deal of change going on 00:25:02 --> 00:25:03: in the firm. 00:25:03 --> 00:25:06: Is individuals across the company are excited to participate in 00:25:06 --> 00:25:06: it. 00:25:06 --> 00:25:09: but the challenge is that a lot of the things 00:25:09 --> 00:25:09: that we do, 00:25:09 --> 00:25:11: the ROI is not clear yet. 00:25:11 --> 00:25:14: That's part of the point of actually trying these things 00:25:14 --> 00:25:16: is to be able to in a safe environment. 00:25:16 --> 00:25:19: Test and see if these tools are useful and so. 00:25:19 --> 00:25:22: How do we figure out a way to do that

00:25:22> 00:25:25:	that empowers our people across the firm,
00:25:25> 00:25:30:	but also doesn't. Create any negative ramifications to them
	when
00:25:30> 00:25:34:	these things fail because they fail a lot,
00:25:34> 00:25:36:	and So what we've done to allow for our own
00:25:36> 00:25:40:	individuals within Hines to explore this is just find ways
00:25:40> 00:25:43:	to protect them from not meeting what their everyday priorities
00:25:43> 00:25:47:	are, whether it's providing them with extra bandwidth or whether
00:25:47> 00:25:50:	it's isolating some of our pilots into specific places and
00:25:50> 00:25:53:	spaces that we control like within our Flex Office program.
00:25:53> 00:25:56:	We do a lot of our pilots and our Flex
00:25:56> 00:26:00:	Office program because it doesn't impact if it doesn't workout.
00:26:00> 00:26:02:	Or long term tenants, and so.
00:26:02> 00:26:04:	Our employees are excited about it.
00:26:04> 00:26:07:	The the challenge has been.
00:26:07> 00:26:09:	The costs weren't always originally,
00:26:09> 00:26:12:	you know, put into their budgets and into their projects.
00:26:12> 00:26:16:	So how do we? Empower them to be able to
00:26:16> 00:26:17:	explore,
00:26:17> 00:26:19:	and we do that by providing them with resources.
00:26:20> 00:26:25:	So I'm hearing. One thing that really impressed with hearing
00:26:25> 00:26:27:	is you've embraced an RND mindset.
00:26:27> 00:26:30:	Knowing that some of these answers still need to be
00:26:30> 00:26:31:	figured out,
00:26:31> 00:26:34:	and it's worth taking the risk on a pilot.
00:26:34> 00:26:37:	I also like the fact that your entree into this
00:26:37> 00:26:40:	was driven by some of your tech tenants that expected
00:26:40> 00:26:43:	you to be as digital in your mindset as they
00:26:43> 00:26:44:	are. But to that point,
00:26:44> 00:26:47:	Brad, if you were to recommend to this audience and
00:26:47> 00:26:50:	remember this is this is an audience of.
00:26:50> 00:26:54:	Of owners, managers and folks that are serving the real
00:26:54> 00:26:55:	estate industry.
00:26:55> 00:26:59:	What are the top five to seven applications that every
00:26:59> 00:27:03:	owner ought to have embedded in their operations today?
00:27:05> 00:27:09:	That's a tough one. Why that answer is so hard
00:27:09> 00:27:14:	is what makes engaging in the industry difficult in the
00:27:15> 00:27:19:	sense that everyone is at a different stage of the
00:27:19> 00:27:24:	innovation cycle. Therefore, recommending blanket
	technology solutions isn't as effective,

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00:27:24> 00:27:28: 00:27:28> 00:27:32:	so it's really catered to the specific needs,
	strategic priorities and specific assets of any individual.
00:27:32> 00:27:36:	But from a theme and sort of subject matter expertise
00:27:36> 00:27:38:	perspective I mean.
00:27:38> 00:27:40:	Data analytics is always a big category.
00:27:40> 00:27:43:	It's one where I think more money spent the wrong
00:27:43> 00:27:46:	way and where there isn't a real appreciation for the
00:27:46> 00:27:51:	organizational change that's required in order to leverage data effectively.
00:27:51> 00:27:53:	But that's always a big category.
00:27:53> 00:27:57:	There's operational efficiencies, and that can take many shapes and
00:27:57> 00:27:57:	forms.
00:27:57> 00:28:01:	Most most real estate landlords are focused on revenue generation
00:28:01> 00:28:03:	as opposed to operating expense reduction,
00:28:03> 00:28:07:	which, depending on sort of where you are is.
00:28:07> 00:28:09:	It is probably easier to get,
00:28:09> 00:28:12:	you know. Something approved to spend money on if it's
00:28:12> 00:28:14:	going to generate revenue,
00:28:14> 00:28:16:	but there's tons of technologies,
00:28:16> 00:28:19:	especially on the software side that can deliver on that
00:28:20> 00:28:20:	promise.
00:28:20> 00:28:24:	There's increased focus on new business creation that can either
00:28:24> 00:28:28:	come as add-ons to existing survey existing business lines that
00:28:28> 00:28:31:	now need to provide products and services to customers 'cause
00:28:31> 00:28:35:	now they expect it in ways they just didn't before.
00:28:35> 00:28:39:	And in many instances landlords using that to potentially even
00:28:39> 00:28:40:	supplement loss of revenue.
00:28:40> 00:28:44:	Depending on you know what leasing expectations are going to
00:28:44> 00:28:46:	be are going to be moving forward,
00:28:46> 00:28:50:	so building a broader suite of engagement capabilities to monetize
00:28:50> 00:28:53:	your space differently is becoming increasingly interesting.
00:28:53> 00:28:56:	There's optical prop ghosts in the sense that,
00:28:56> 00:28:59:	increasingly so we're seeing real estate allocations coming further downstream.
00:28:59> 00:29:03:	To access these these operating companies that have a different
00:29:03> 00:29:05:	approach to monetizing real estate,

00:29:05> 00:29:08:	you know, sort of data becomes ubiquitous and more more
00:29:08> 00:29:10:	capital looks for real estate.
00:29:10> 00:29:13:	Yield it's harder to find great deals and a lot
00:29:13> 00:29:16:	of firms need to become more vertically and operationally
	focused
00:29:16> 00:29:19:	in order to deliver the same yield profile that they
00:29:19> 00:29:22:	promised investors for a long time and a lot of
00:29:22> 00:29:23:	these opcodes offer an ability,
00:29:23> 00:29:26:	a unique ability to sort of monetize real estate differently.
00:29:26> 00:29:29:	Invitation Homes is a perfect example of that.
00:29:29> 00:29:31:	During the depths of the last recession,
00:29:31> 00:29:33:	you know when when we uncovered this opportunity in single
00:29:33> 00:29:34:	family rentals,
00:29:34> 00:29:37:	you know the first thing we did was went to
00:29:37> 00:29:40:	Atlanta to a Super Tuesday where they were selling thousands
00:29:40> 00:29:40:	of.
00:29:40> 00:29:43:	Foreclosed homes and when we did the underwriting we were
00:29:43> 00:29:44:	buying it.
00:29:44> 00:29:45:	You know, 30% gross yields.
00:29:45> 00:29:47:	Where else could you get that?
00:29:47> 00:29:50:	But the only problem was that when you pitch that
00:29:50> 00:29:52:	to any real estate investor they said guys.
00:29:52> 00:29:55:	How am I going to buy hundreds of 1,000,000 or
00:29:55> 00:29:58:	billions of dollars of homes sixty \$800,000 at a time
00:29:58> 00:30:01:	and the answer that question didn't stand from real estate
00:30:01> 00:30:04:	analysis in the sense of course there was there was
00:30:04> 00:30:07:	asset dissipation that came from technology in the sense that
00:30:07> 00:30:10:	we're going to use technology just to be able to
00:30:10> 00:30:13:	aggregate rehab and ultimately manage and scale this business.
00:30:13> 00:30:15:	But that was foreign, so using these properties to help
00:30:15> 00:30:18:	answer some of those questions for you and provide you
00:30:18> 00:30:21:	know tech enabled operations to monetize real estate differently is
00:30:21> 00:30:22:	proving to be interesting as well.
00:30:22> 00:30:24:	There's so many more different,
00:30:24> 00:30:26:	there's so many other categories that are that are worth
00:30:26> 00:30:27:	discussing there,
00:30:27> 00:30:30:	
	but those are some main ones that we've we've worked
00:30:30> 00:30:30:	but those are some main ones that we've we've worked with,

```
00:30:32 --> 00:30:34:
                          And Charlie, would you agree with that?
00:30:34 --> 00:30:36:
                          I mean, sounds like we've got as I watch as
00:30:36 --> 00:30:37:
                          I watch owners today,
00:30:37 --> 00:30:40:
                          they're struggling with how to choose from the menu.
00:30:40 --> 00:30:41:
                          You've got some to use.
00:30:41 --> 00:30:43:
                          Your Salesforce tower example Charlie,
00:30:43 --> 00:30:45:
                          that would say it's the most innovative building in America
00:30:45 --> 00:30:46:
                          right now.
00:30:46 --> 00:30:49:
                          I was in a meeting with Mark benefit not long
00:30:49 --> 00:30:50:
                          ago and he I said,
00:30:50 --> 00:30:51:
                          what do you think? I mean,
00:30:51 --> 00:30:54:
                          people say this is the most advanced office building in
00:30:54 --> 00:30:54:
                          America.
00:30:54 --> 00:30:56:
                          He said well, if we did it today,
00:30:56 --> 00:30:59:
                          I think we turn it on its side because we
00:30:59 --> 00:31:01:
                          we we didn't realize how much we needed to inspire
00:31:01 --> 00:31:04:
                          collaboration in the building and everyone's.
00:31:04 --> 00:31:06:
                          In a cylinder going to the sky and they really
00:31:06 --> 00:31:09:
                          need to be on the ground talking to each other.
00:31:09 --> 00:31:12:
                          And I thought that was interesting and that's how quickly
00:31:12 --> 00:31:12:
                          we're changing,
00:31:12 --> 00:31:15:
                          but inside the building water that basic applications that make
00:31:15 --> 00:31:16:
                          it better.
00:31:16 --> 00:31:18:
                          And what are the applications that are Jetson like futuristic
00:31:18 --> 00:31:21:
                          that are representing the next generation of what's to come?
00:31:22 --> 00:31:24:
                          Yeah, the nice thing about.
00:31:27 --> 00:31:32:
                          A lot of the. Technology specific things we're talking about
00:31:32 --> 00:31:33:
                          today.
00:31:33 --> 00:31:36:
                          Applications that are possible they don't.
00:31:36 --> 00:31:39:
                          Dramatically changed the way you think about the core and
00:31:40 --> 00:31:41:
                          shell of your building.
00:31:41 --> 00:31:44:
                          Or the way that you want a constructor to design
00:31:44 --> 00:31:44:
                          it,
00:31:44 --> 00:31:46:
                          really. In any substantial way,
00:31:46 --> 00:31:50:
                          there needs to, you need to make sure that you
00:31:50 --> 00:31:51:
                          basically have.
00:31:51 --> 00:31:54:
                          A strong enough digital infrastructure to allow you to add
00:31:54 --> 00:31:56:
                          and remove tools as you see fit.
00:31:56 --> 00:32:00:
                          So all all of the items that we've talked about.
00:32:00 --> 00:32:03:
                          None of those things really assume.
00:32:03 --> 00:32:06:
                          Any changes of significance in the way the buildings are
00:32:06 --> 00:32:07:
                          designed or built?
```

00:32:07> 00:32:11:	I think the. The challenges and this is where our
00:32:11> 00:32:14:	team is spending a lot of time right now.
00:32:14> 00:32:16:	As you know, we were looking around at all these
00:32:17> 00:32:18:	kind of endpoint solutions.
00:32:18> 00:32:22:	All these specific. Tools we could use,
00:32:23> 00:32:27:	right? You know, we we should have.
00:32:27> 00:32:31:	A better XYZ kind of service in our building.
00:32:31> 00:32:33:	And as we went through all those pilots,
00:32:33> 00:32:37:	what what we've come to realize overtime is that regardless
00:32:37> 00:32:38:	of what the tool is.
00:32:38> 00:32:42:	There's a really painful integration process and it takes months
00:32:42> 00:32:44:	and that I think is a big reason why a
00:32:44> 00:32:47:	lot of people throw their arms up in the air
00:32:47> 00:32:50:	when they're trying some of the stuff is that it's
00:32:50> 00:32:53:	like a 3 plus month process and it doesn't quite
00:32:53> 00:32:54:	come out like you want,
00:32:54> 00:32:57:	and there are some expectations that aren't met and all
00:32:57> 00:32:58:	that stuff,
00:32:58> 00:33:01:	and I think that. Where this is really heading and
00:33:01> 00:33:05:	I think this will impact the way that we design
00:33:05> 00:33:06:	and build buildings,
00:33:06> 00:33:09:	but not from like a.
00:33:09> 00:33:11:	From a brick and mortar perspective,
00:33:11> 00:33:15:	it's just becomes a more thoughtful component of the design
00:33:15> 00:33:15:	process.
00:33:15> 00:33:19:	Is is making sure that you are.
00:33:19> 00:33:22:	Thinking through how all of these systems are going to
00:33:22> 00:33:25:	speak to one another and thinking about how they all
00:33:25> 00:33:26:	integrate and setting up.
00:33:26> 00:33:29:	Some infrastructure in your building that allows you to add
00:33:29> 00:33:30:	and remove,
00:33:30> 00:33:32:	you know tools as they evolved because the volume of
00:33:32> 00:33:35:	capital coming into the space right now is is substantial.
00:33:35> 00:33:38:	The number of startups is only going to increase their
00:33:38> 00:33:41:	ability to create a great product is only going to
00:33:41> 00:33:41:	increase.
00:33:41> 00:33:44:	So the only way that real estate owners are gonna
00:33:44> 00:33:46:	be able to keep up with that without losing their
00:33:46> 00:33:50:	minds about going through this painful integration process time and
00:33:50> 00:33:53:	time again is to actually figure out a way to

00:33:53 --> 00:33:54: create. 00:33:54 --> 00:33:56: A relatively standardized is the wrong word, 00:33:56 --> 00:33:59: but an infrastructure that allows you to add, 00:33:59 --> 00:34:02: remove these tools and extract information more easily and 00:34:02 --> 00:34:06: that is that is that how we is that how 00:34:06 --> 00:34:07: we prevent. 00:34:07 --> 00:34:10: Feeling like we're investing in an 8 track player today, 00:34:10 --> 00:34:14: but by the time we finish it's a cassette or 00:34:14 --> 00:34:16: CD player and we've missed. 00:34:16 --> 00:34:19: We've we've invested in the wrong technology. 00:34:19 --> 00:34:23: You're saying, there are technologies today that you can invest 00:34:23 --> 00:34:26: in that are interactive and substitutable an allow you to 00:34:26 --> 00:34:30: stay on top of the latest and greatest without flushing 00:34:30 --> 00:34:33: money. Time and time again is that is that what 00:34:33 --> 00:34:34: I heard you 00:34:34 --> 00:34:35: just say? I think it's more. 00:34:37 --> 00:34:39: Yeah, I think the point here is right. 00:34:39 --> 00:34:41: It's like you don't just wake up one day and 00:34:41 --> 00:34:42: decide to run a marathon, 00:34:42 --> 00:34:44: right? You have to train for it, 00:34:44 --> 00:34:46: and I think that's lost on a lot of folks 00:34:46 --> 00:34:49: in the sense of like I think they do. 00:34:49 --> 00:34:50: View it like you phrased it Byron. 00:34:50 --> 00:34:52: He said. What are the Jackson like? 00:34:52 --> 00:34:55: Things like? Forget about that like you're not even close 00:34:55 --> 00:34:57: to being able to access the next Gen or or 00:34:57 --> 00:34:58: like where the world's going. 00:34:58 --> 00:35:00: Let's focus on like solving some of these like these 00:35:00 --> 00:35:01: these things, 00:35:01 --> 00:35:03: these operational deficiencies that are staring you right in the 00:35:03 --> 00:35:04: face. 00:35:04 --> 00:35:06: And like the best example that I'll go back to 00:35:06 --> 00:35:07: the analytics. 00:35:07 --> 00:35:09: So we get this all the time. 00:35:09 --> 00:35:10: Someone will come to me, 00:35:10 --> 00:35:12: a real estate lender call man. 00:35:12 --> 00:35:15: How can I use machine learning and AI to better 00:35:15 --> 00:35:15: analyze data? 00:35:15 --> 00:35:18: I'm like do you First off to even know what 00:35:18 --> 00:35:19: those two words mean? 00:35:19 --> 00:35:22: And 2nd off? Do you even know where your data

00:35:22> 00:35:23:	on your assets are today?
00:35:23> 00:35:25:	How it's how, it's how,
00:35:25> 00:35:27:	how they are extracted, how they're stored,
00:35:27> 00:35:29:	how they're structured, how they're used today,
00:35:29> 00:35:31:	and that's what needs to be happen.
00:35:31> 00:35:33:	First is that guys understand what it means to to
00:35:33> 00:35:37:	create a knowledge structure and organize your data and spend
00:35:37> 00:35:38:	the money to do so.
00:35:38> 00:35:41:	But then build the. The organizational capabilities to leverage that
00:35:41> 00:35:42:	once you get it,
00:35:42> 00:35:44:	the first question I asked when someone says,
00:35:44> 00:35:46:	hey, what can? How can I use AI?
00:35:46> 00:35:49:	It's like alright, let's just say I structured all your
00:35:49> 00:35:51:	data and I gave it to you right now.
00:35:51> 00:35:52:	What questions would you ask it?
00:35:52> 00:35:54:	And they they. It's funny they they start to
00:35:54> 00:35:57:	to ask questions that are self reinforcing in the sense
00:35:57> 00:36:00:	they just they they simply reinforce their own biases and
00:36:00> 00:36:02:	how they've operated their, their their portfolio historically,
00:36:02> 00:36:04:	which is the completely wrong way to do it in
00:36:04> 00:36:07:	the sense of the guy is the whole reason why
00:36:07> 00:36:09:	you spend all this money to create a sophisticated,
00:36:09> 00:36:11:	accessible data lake of information.
00:36:11> 00:36:14:	Is asking questions that you've never asked it before to
00:36:14> 00:36:17:	challenge preconceived notions of what it means to lease and
00:36:17> 00:36:18:	to into purchase,
00:36:18> 00:36:21:	and to sell and start to like really think through?
00:36:21> 00:36:24:	How can I think about My Portfolio construction differently?
00:36:24> 00:36:27:	Leveraging all this information that's never been in my fingertips
00:36:27> 00:36:28:	before,
00:36:28> 00:36:31:	but again, that's a process that takes potentially months,
00:36:31> 00:36:32:	if not maybe even years,
00:36:32> 00:36:34:	to find the right people,
00:36:34> 00:36:36:	the right structure, the right systems,
00:36:36> 00:36:39:	and the right, the right operating capabilities to do all
00:36:39> 00:36:40:	those things simultaneously.
00:36:40> 00:36:43:	'cause there's so many instances and buy a new Linux
00:36:43> 00:36:44:	before.
00:36:44> 00:36:46:	I just spent \$2,000,000 in a data lake and nobody

00:36:46> 00:36:49:	used it and that's what the data lakes swap now
00:36:49> 00:36:49:	like.
00:36:49> 00:36:51:	Of course it is because nobody is keeping the data
00:36:52> 00:36:52:	clean,
00:36:52> 00:36:54:	but nobody thought that they had to actually hire people
00:36:54> 00:36:56:	and train train existing folks to be like,
00:36:56> 00:36:59:	hey, this is how you manage data and use it
00:36:59> 00:37:00:	and keep it clean.
00:37:00> 00:37:03:	They just assume that there's some magic silver bullet that
00:37:03> 00:37:05:	the BC kisses could provide that will just like allow
00:37:06> 00:37:07:	them to do all this cool stuff.
00:37:07> 00:37:09:	It's not it, you have to.
00:37:09> 00:37:11:	You have to have the discipline of what Charlie is
00:37:11> 00:37:12:	referring to of.
00:37:12> 00:37:14:	Like we were going to spend.
00:37:14> 00:37:17:	Years and dollars and resources and time to change organizational
00:37:17> 00:37:20:	culture and capabilities to leverage is ecosystem where we can
00:37:20> 00:37:22:	start to plug and play and then eventually start going
00:37:22> 00:37:25:	moon shotty where you're taking advantage of that.
00:37:25> 00:37:27:	You're you're, you're a first mover.
00:37:27> 00:37:29:	You're not even a fast follow or you're not a
00:37:29> 00:37:30:	herd mentality.
00:37:30> 00:37:33:	Which real estate suffers from so filling those muscle groups.
00:37:33> 00:37:34:	Let's digest some of
00:37:34> 00:37:37:	these concepts because I think that we're really laying a
00:37:37> 00:37:40:	foundation for really rethinking the way we integrate technology in
00:37:40> 00:37:41:	real estate.
00:37:41> 00:37:44:	And I've heard I just heard you say.
00:37:44> 00:37:46:	Brad and I heard you say Charlie,
00:37:46> 00:37:48:	don't be afraid to experiment.
00:37:48> 00:37:51:	Embed this change in everyones mind and know that it's
00:37:51> 00:37:51:	a journey,
00:37:51> 00:37:54:	not a Sprint, and you have to experiment and you
00:37:54> 00:37:56:	will waste some money.
00:37:56> 00:37:58:	You will flush the money and then you'll find some
00:37:58> 00:38:00:	solutions that work.
00:38:00> 00:38:01:	And oh, by the way,
00:38:01> 00:38:04:	technology is also moving us in a way that makes
00:38:04> 00:38:07:	it easier cloud based solutions or a little more fungible
00:38:07> 00:38:09:	than some of the other solutions.

00:38:09> 00:38:12:	And you can. You can Shuck and jive and move
00:38:12> 00:38:15:	around a little more quickly than having something that's.
00:38:15> 00:38:19:	Parked in a data center on a hard drive.
00:38:19> 00:38:22:	If you're if you're in the cloud,
00:38:22> 00:38:26:	but also creating a digital mindset among your tenants and
00:38:26> 00:38:30:	your own employees so that these discussions become conversational and
00:38:30> 00:38:31:	not intimidating.
00:38:31> 00:38:35:	As a firm, we have a an app that we're
00:38:35> 00:38:40:	rolling out to clients to help their employees become more
00:38:40> 00:38:40:	digital,
00:38:40> 00:38:45:	and it's it's becoming comfortable with what we call digital
00:38:45> 00:38:47:	burst during the day.
00:38:47> 00:38:49:	Constant learning, constant trial, and it's not.
00:38:49> 00:38:51:	It's not that expensive to put it on the apps
00:38:51> 00:38:54:	of your employees so that you are helping your helping
00:38:54> 00:38:57:	drive them to a more digital mindset because we all
00:38:57> 00:38:59:	have to do that. Charlie,
00:38:59> 00:39:01:	you were about to say something a moment ago,
00:39:01> 00:39:03:	we interrupted. Please. No, it's it's alright.
00:39:03> 00:39:03:	1
00:39:03> 00:39:08:	think I think that's right there and I think.
00:39:08> 00:39:12:	To. Go back to the idea of kind of looking
00:39:12> 00:39:14:	for that earth moving.
00:39:14> 00:39:17:	Something that we all need to leap onto the way
00:39:17> 00:39:20:	that we talk about it is that there's kind of
00:39:20> 00:39:21:	incremental innovation.
00:39:21> 00:39:26:	And there's transformational innovation and the incremental
	ones being a
00:39:26> 00:39:28:	lot of the topics that and a lot of the
00:39:28> 00:39:30:	startups that are out there today.
00:39:30> 00:39:34:	Just providing you with a better way to do something
00:39:34> 00:39:35:	or to track something,
00:39:35> 00:39:39:	and that is actually. A really safe way to build
00:39:39> 00:39:43:	some of these new muscle groups and to pilot,
00:39:43> 00:39:46:	and you know you're talking about,
00:39:46> 00:39:48:	it's not. It's not nothing,
00:39:48> 00:39:52:	but there are ways to to explore and to try
00:39:52> 00:39:55:	some of these new things that are.
00:39:55> 00:39:59:	10 to 20 to \$50,000 a pop.
00:39:59> 00:40:03:	And. You know there there are and there are ways
00:40:03> 00:40:06:	to be able to try to wrap your head around

00:40:07> 00:40:11:	what's going on out there and what matters by really
00:40:11> 00:40:14:	just kind of focusing on the incremental pieces and then
00:40:14> 00:40:16:	the more you understand the incremental pieces,
00:40:16> 00:40:20:	the more you can kind of see the landscape today
00:40:20> 00:40:22:	and then the more you might have.
00:40:22> 00:40:25:	A better perspective for your own organization as to which
00:40:25> 00:40:26:	bigger picture,
00:40:26> 00:40:29:	more transformation o'll concepts we need to be paying attention
00:40:30> 00:40:30:	to also.
00:40:30> 00:40:33:	But there's this whole kind of swirling that's going around
00:40:33> 00:40:36:	right now of all these new ideas of incremental innovation
00:40:37> 00:40:39:	that's getting kind of put into the same category of
00:40:39> 00:40:41:	transformation, and which ones matter.
00:40:41> 00:40:44:	They all actually matter. It's just you know,
00:40:44> 00:40:47:	when are they going to happen and how can we
00:40:47> 00:40:48:	create?
00:40:48> 00:40:51:	A bit of a. Of a machine today to allow
00:40:51> 00:40:53:	you to explore.
00:40:53> 00:40:56:	Right now, things in a cost effective way to get
00:40:56> 00:41:00:	the firm more comfortable with that exploration and thus
	educating
00:41:00> 00:41:01:	you to figure out.
00:41:01> 00:41:04:	What moon shots you want to
00:41:04> 00:41:07:	take? OK, so give us a give and I want
00:41:07> 00:41:10:	each of you to give us some practical,
00:41:10> 00:41:14:	useful tools that help operations and save money and then
00:41:14> 00:41:18:	some useful tools that are moving you toward the moon
00:41:18> 00:41:26:	shots. I mean, yeah, these are tough questions.
00:41:26> 00:41:29:	I mean, there's some. There's some obvious ones have already
00:41:29> 00:41:29:	been proven right.
00:41:29> 00:41:32:	BTS is now pretty ubiquitous across commercial real estate.
00:41:32> 00:41:34:	It's a pretty simple and elegant software.
00:41:34> 00:41:37:	Product is essentially replaced a bunch of the work I
00:41:37> 00:41:39:	used to do as an analyst when I was at
00:41:39> 00:41:40:	Starwood Intention Spire.
00:41:40> 00:41:43:	I used to build these really elegant stacking plans in
00:41:43> 00:41:45:	Excel that I was super proud of,
00:41:45> 00:41:47:	but it would yeah I I'd be up all night
00:41:48> 00:41:50:	
	doing it for what reason to show my,
00:41:50> 00:41:53:	doing it for what reason to show my, you know MD for five minutes so you can make
00:41:50> 00:41:53: 00:41:53> 00:41:54:	

00:41:54> 00:41:56:	There was stale because you know,
00:41:56> 00:41:58:	the market had already shifted,
00:41:58> 00:42:01:	so you know there's some really obvious one.
00:42:01> 00:42:03:	Software adoptions, like BTS in Procor,
00:42:03> 00:42:06:	they could just re reinvigorate your business.
00:42:06> 00:42:09:	You reduce the need for potentially some headcount and just
00:42:09> 00:42:13:	make decisions faster with more information and more
	confidence than
00:42:13> 00:42:15:	than you have historically.
00:42:15> 00:42:18:	So I think those are some pretty obvious ones,
00:42:18> 00:42:20:	which is the ground no?
00:42:20> 00:42:21:	But
00:42:21> 00:42:24:	then if you link VTS to a paperless.
00:42:24> 00:42:29:	Leasing document that then it is signed with DocuSign and
00:42:29> 00:42:33:	then moved into the owner's rent roll and then into
00:42:33> 00:42:37:	the general Ledger and you don't have to have it
00:42:37> 00:42:42:	handled by 15 people before it gets logged into the
00:42:42> 00:42:43:	accounting system.
00:42:43> 00:42:46:	I mean, those are those are available no brainer and
00:42:46> 00:42:47:	not that expensive,
00:42:47> 00:42:49:	right? Yeah,
00:42:49> 00:42:51:	no of course not. Yeah,
00:42:51> 00:42:53:	stitching those things together are relatively straightforward.
00:42:53> 00:42:56:	Again, for an organization that has the wherewithal to do
00:42:56> 00:42:57:	so for the.
00:42:57> 00:42:58:	For those starting from scratch,
00:42:58> 00:43:00:	that might be operationally challenging,
00:43:00> 00:43:02:	but the tools to your point exists and and and
00:43:02> 00:43:04:	can be leveraged effectively.
00:43:04> 00:43:07:	And keep in mind, BTS recognizes that same value
	proposition
00:43:07> 00:43:10:	and their building in you know integrated in their system
00:43:10> 00:43:11:	and their new marketplace product,
00:43:11> 00:43:14:	'cause they understand that. Listen to the end goal here,
00:43:14> 00:43:17:	right is not just to have instant access to your
00:43:17> 00:43:18:	leasing information,
00:43:18> 00:43:21:	but it's actually leverage that data both from your captive.
00:43:21> 00:43:25:	Portfolio but then in anonymized data that's been extracted in
00:43:25> 00:43:28:	real time from the portfolio that surrounds your building,
00:43:28> 00:43:30:	to then engage with the tenant,
00:43:30> 00:43:33:	have them view their space remotely and potentially even
00.40.00	digitally
00:43:33> 00:43:35:	and or digitally enabled in person,

00:43:35> 00:43:39:	and then give them the ability to sort of transact
00:43:39> 00:43:42:	on the spot to monetize that you know that buying
00:43:42> 00:43:46:	desire if and when it occurs so that you can
00:43:46> 00:43:49:	have a much more effective and cost effective funneling
	process
00:43:49> 00:43:51:	and transact more often at better pricing.
00:43:51> 00:43:53:	All that information when combined.
00:43:53> 00:43:56:	And rendered available instantly is just creates Better Business processes
00:43:56> 00:43:58:	and Better Business outcomes.
00:43:58> 00:44:01:	And firms like BTS are very well positioned to deliver
00:44:01> 00:44:02:	on that on that.
00:44:02> 00:44:05:	On that future promise where it's actually integrated under one
00:44:05> 00:44:05:	system.
00:44:05> 00:44:08:	So you don't have 30 tabs open,
00:44:08> 00:44:10:	manage in your your, your your assets.
00:44:11> 00:44:14:	And Charlie, when you go to the CFO's office with
00:44:14> 00:44:16:	a return on investment,
00:44:16> 00:44:19:	what are the top three tech enabled activities that you
00:44:19> 00:44:20:	can show?
00:44:22> 00:44:25:	Show the Investment Committee or show your finance department and
00:44:25> 00:44:28:	smile and say we may have spent this much here.
00:44:28> 00:44:29:	But look at what
00:44:29> 00:44:29:	we
00:44:29> 00:44:31:	got here. Yeah, you know,
00:44:31> 00:44:36:	it's that. There's a couple different ways to look at
00:44:36> 00:44:36:	that.
00:44:36> 00:44:39:	One one is the money we're spending on R&D and
00:44:39> 00:44:41:	the other is the capital.
00:44:41> 00:44:45:	We're actually investing in these companies and the capital that
00:44:45> 00:44:48:	we're investing in these companies has actually returned.
00:44:48> 00:44:52:	Very well, on average it's returning,
00:44:52> 00:44:56:	you know. Better than a real estate is even as
00:44:56> 00:44:58:	a kind of real estate developer.
00:44:58> 00:45:01:	No? I mean in a real estate developer,
00:45:01> 00:45:03:	even in kind of a promoted position where when you
00:45:03> 00:45:05:	outperform do particularly well.
00:45:05> 00:45:08:	Those even in that context and even in working with
00:45:08> 00:45:08:	Brad,
00:45:08> 00:45:10:	where were being promoted upon that,

00:45:10 --> 00:45:14: that's effective. Financial returns today. 00:45:14 --> 00:45:18: So that's one that on the R&D side you know 00:45:18 --> 00:45:18: we have. 00:45:18 --> 00:45:20: let's use a really concrete example, 00:45:20 --> 00:45:24: let's use. The question out there right now of how 00:45:24 --> 00:45:28: can we make our buildings better and safer in a 00:45:28 --> 00:45:30: COVID environment? 00:45:30 --> 00:45:33: But things that will also be useful after? 00:45:33 --> 00:45:36: Like how do we know robot over spending on something 00:45:37 --> 00:45:40: and that we need to extract it and we need 00:45:40 --> 00:45:43: to change it and that's kind of how we're examining 00:45:43 --> 00:45:46: a lot of our work right now. 00:45:46 --> 00:45:50: And those are things that will improve the. 00:45:50 --> 00:45:56: Dependability the efficiency of the building and the experience of 00:45:56 --> 00:45:57: our end users. 00:45:57 --> 00:46:00: right? So those are things like. 00:46:02 --> 00:46:05: You know we keep talking about a building app, 00:46:05 --> 00:46:07: but the building app itself is really kind of a 00:46:07 --> 00:46:07: wrapper. 00:46:07 --> 00:46:09: It's a mechanism to provide information and service. 00:46:09 --> 00:46:11: It's really about what is underneath. 00:46:11 --> 00:46:13: All of that. Can you book rooms? 00:46:13 --> 00:46:15: Can you? Do you have access to the quality of 00:46:15 --> 00:46:16: air in your space? 00:46:16 --> 00:46:19: Do you have? Do you have access to visitor management? 00:46:19 --> 00:46:24: Can you? Engage with the retail kind of surrounding you. 00:46:24 --> 00:46:27: Those kinds of things that are really important now in 00:46:27 --> 00:46:28: helping people understand. 00:46:28 --> 00:46:30: OK, how long if I want to go to my 00:46:30 --> 00:46:33: office building right now and I don't want to stand 00:46:33 --> 00:46:36: in a line I'm worried about being in a crowded 00:46:36 --> 00:46:37: lobby or crowded elevator. You know, 00:46:37 --> 00:46:40: we have information that's available to them that says, 00:46:40 --> 00:46:42: you know right now. If you were to try to 00:46:42 --> 00:46:45: go to the officers about a seven minute wait time, 00:46:45 --> 00:46:47: or there's only been 20 people in the lobby in 00:46:47 --> 00:46:49: the last 20 minutes, 00:46:49 --> 00:46:52: and some of those little pieces are not going to 00:46:52 --> 00:46:52: be as. 00:46:52 --> 00:46:53: Effective in the long run, 00:46:53 --> 00:46:55: but if you're thinking about it in the context of

00:46:55> 00:46:57:	just improving the service and the efficiency in your building,
00:46:57> 00:46:59:	those are the things that are going to last,
00:46:59> 00:47:02:	and so those are the areas that that we're honing
00:47:02> 00:47:03:	in on today.
00:47:03> 00:47:03:	Yeah,
00:47:03> 00:47:05:	I'll even put an exclamation point on that,
00:47:05> 00:47:07:	and the only reason why I can share this is
00:47:07> 00:47:09:	'cause it's been publicly reported.
00:47:09> 00:47:12:	But I'd encourage everyone to look at Lenoir's post earnings
00:47:12> 00:47:13:	call from last quarter,
00:47:13> 00:47:16:	where the chairman Stuart Miller talked about there.
00:47:16> 00:47:18:	He spent the majority of the call talking about their
00:47:18> 00:47:21:	investments in technology as it relates to improving their business.
00:47:21> 00:47:24:	Most of those technology adoption and investments were done through
00:47:24> 00:47:24:	fifth,
00:47:24> 00:47:26:	while their financial position in those companies,
00:47:26> 00:47:29:	both through our fund, an SPV's where they where they
00:47:29> 00:47:30:	invested an.
00:47:30> 00:47:31:	Again, that's an important distinction here.
00:47:31> 00:47:34:	When you do start to move up the innovation curve.
00:47:34> 00:47:36:	Don't just become grated adopting,
00:47:36> 00:47:38:	but think about investing as well because you're going to
00:47:38> 00:47:41:	play kingmaker to the circus tent with some of these
00:47:41> 00:47:42:	companies,
00:47:42> 00:47:45:	so participating the financial upside that you ultimately create is
00:47:45> 00:47:46:	is usually a good idea.
00:47:46> 00:47:49:	Leonard's financial position based on the use cases of an
00:47:49> 00:47:52:	adoption of seven or seven or nine of those companies
00:47:52> 00:47:54:	is marked it over a billion dollars,
00:47:54> 00:47:56:	so you can. You can credibly say in this scenario
00:47:56> 00:47:59:	that we paid lenara billion dollars to innovate their business
00:47:59> 00:48:00:	and their share price.
00:48:00> 00:48:03:	Now is is starting to be affected by the perception
00:48:03> 00:48:05:	from the public markets.
00:48:05> 00:48:07:	As it used them not as just a pure home
00:48:07> 00:48:08:	manufacturer,
00:48:08> 00:48:10:	which is that what they've always been,
00:48:10> 00:48:12:	but it was a residential living provider that that's allowing
00:48:13> 00:48:15:	them to expand their capabilities not just in home
	manufacturing,

00:48:15> 00:48:19:	not just in multifamily but now in single family rental
00:48:19> 00:48:21:	in a whole host of other arenas that I think,
00:48:21> 00:48:24:	are proving that, hey, this is that we're doing things
00:48:24> 00:48:24:	differently,
00:48:24> 00:48:27:	and we're living in technology to give us that competitive
00:48:27> 00:48:27:	edge.
00:48:27> 00:48:30:	So I think that's a great example of this.
00:48:30> 00:48:33:	That's the end goal is to get there where you're
00:48:33> 00:48:34:	in the driver seat,
00:48:34> 00:48:36:	and your shareholders are rewarding you for it.
00:48:36> 00:48:39:	For those investments that that that drive not just bottom
00:48:39> 00:48:42:	line Noid impact would start to create significant
00:48:42> 00:48:43:	enterprise value very well said,
00:48:43> 00:48:47:	which draws me to a question of relevance versus irrelevance.
00:48:47> 00:48:48:	Go ahead, Charlie.
00:48:49> 00:48:52:	I was just going to.
00:48:52> 00:48:55:	Clarify one thing really quick and that is as Brad's
00:48:55> 00:48:57:	talking about deploying capital into the space.
00:48:57> 00:49:01:	You know, I just wanted to comment as an owner.
00:49:01> 00:49:04:	You know we've always thought about this deployment as
	needing
00:49:04> 00:49:07:	to have a balance of financial and strategic outcomes,
00:49:07> 00:49:10:	and we found that deploying our capital has been a
00:49:10> 00:49:11:	great.
00:49:11> 00:49:14:	You need to clear what you believe in financial.
00:49:14> 00:49:17:	You know, we have our own hurdles as to what
00:49:17> 00:49:21:	we want to make sure our capital is out there
00:49:21> 00:49:22:	doing in returning.
00:49:22> 00:49:25:	And if you can believe that you can clear that
00:49:25> 00:49:29:	threshold and there's a strategic opportunity that will allow
00:49:29> 00:49:32:	you to more deeply engage with that company and create a
00:49:32> 00:49:35:	to more deeply engage with that company and create a
00:49:35> 00:49:36:	product that's going to be more useful to your own
	organization.
00:49:36> 00:49:38:	There's a ton of value there,
00:49:38> 00:49:42:	and so for us it's been very strategic and communicative.
00:49:42> 00:49:46:	You know mechanism that we've used to try to improve
00:49:46> 00:49:47:	our real estate.
00:49:47> 00:49:51:	It's not really something for us that is.
00:49:51> 00:49:54:	We're getting in the technology investment business.
00:49:54> 00:49:56:	That's that's who we are now,
00:49:56> 00:49:58:	but that's not it at all.

00:49:58 --> 00:50:00: It's it's that we're using it as a way 00:50:00 --> 00:50:04: to more deeply partner with some of these companies and 00:50:04 --> 00:50:04: learn. 00:50:04 --> 00:50:08: And the. The the actual returns thus far have actually 00:50:08 --> 00:50:12: exceeded our expectations and that was really what I was 00:50:12 --> 00:50:13: trying to get at. 00:50:13 --> 00:50:14: And there were, you know, 00:50:14 --> 00:50:17: we're still having this debate within our own organization as 00:50:17 --> 00:50:20: to how much capital should we be putting in here 00:50:20 --> 00:50:20: and how you know. 00:50:20 --> 00:50:23: How do we really want to be managing this over 00:50:23 --> 00:50:24: the long run? 00:50:24 --> 00:50:26: And I don't think that that debate ever goes away. 00:50:26 --> 00:50:29: I think it's just something that you're continually kind of 00:50:29 --> 00:50:30: pressure testing one another on. 00:50:31 --> 00:50:35: Good point, good point. I worry that underspending leads to 00:50:35 --> 00:50:39: irrelevance and I'd love to hear your thoughts on this 00:50:39 --> 00:50:43: because I think we we are all struggling with the 00:50:43 --> 00:50:45: future of how space is used. 00:50:45 --> 00:50:48: We're watching buildings that have certain features, 00:50:48 --> 00:50:51: be attractive and certain buildings that don't fall into irrelevance. 00:50:51 --> 00:50:56: What is your view toward technology in the determination of 00:50:56 --> 00:50:58: which buildings? 00:50:58 --> 00:51:01: Are relevant and those that are irrelevant and how much 00:51:01 --> 00:51:05: of our inventory and existing stock has to be basically 00:51:05 --> 00:51:06: demolished and rebuilt. 00:51:06 --> 00:51:08: Because of that irrelevance. 00:51:09 --> 00:51:14: I think that. You know one of the. 00:51:14 --> 00:51:17: One of the worst things you can. 00:51:17 --> 00:51:19: You know, do as a as a as a real 00:51:19 --> 00:51:22: estate or as as anyone out there in the 00:51:22 --> 00:51:26: world within the environment is to not find a way 00:51:26 --> 00:51:27: to reuse what already exists. 00:51:27 --> 00:51:29: Make it as effective as it can be, 00:51:29 --> 00:51:33: and I actually think that word a really interesting moment 00:51:33 --> 00:51:35: in time where you look back at. 00:51:35 --> 00:51:39: Assets that were considered trophy and core 30 years ago 00:51:39 --> 00:51:39: or more, 00:51:39 --> 00:51:42: and there's a lot of questions as to whether they're 00:51:42 --> 00:51:43: still core. and I think that. There's not. 00:51:43 --> 00:51:46:

00:51:46> 00:51:49:	There's a lot that you need to be thinking through
00:51:49> 00:51:53:	on the ground floor playing and meditation and providing flexibility
00:51:53> 00:51:55:	and services to your tenants.
00:51:55> 00:51:57:	But I think that there are a lot of technology
00:51:57> 00:52:01:	advancements that are very feasable in older assets that
	actually
00:52:02> 00:52:05:	can pretty effectively bring them back up to the top
00:52:05> 00:52:09:	of the list again. So I'm actually optimistic that this.
00:52:09> 00:52:11:	The advancements that we're seeing are not going to make
00:52:11> 00:52:12:	older buildings obsolete.
00:52:12> 00:52:15:	It's actually going to allow them to continue to compete
00:52:15> 00:52:17:	so long as they can figure out a way to
00:52:17> 00:52:19:	be adopting these technologies in their buildings.
00:52:19> 00:52:20:	That's
00:52:20> 00:52:21:	encourage it, so it's not
00:52:21> 00:52:23:	a right there there. There are plenty of people that
00:52:23> 00:52:25:	have iPhone sevens that again.
00:52:25> 00:52:27:	As long as the operating system gets upgraded,
00:52:27> 00:52:29:	they still function like a new iPhone.
00:52:29> 00:52:31:	You just might not have the latest camera on it,
00:52:31> 00:52:33:	so it's really about that decision.
00:52:33> 00:52:35:	It's like this this with with if you can.
00:52:35> 00:52:38:	If you can move away from the physical amenity war
00:52:38> 00:52:39:	and start to.
00:52:39> 00:52:41:	Build capabilities around a digital one,
00:52:41> 00:52:43:	then you can this. This phone will remain won't won't
00:52:43> 00:52:46:	become obsolete and will remain relevant because you cannot create
00:52:46> 00:52:47:	its operating system.
00:52:47> 00:52:50:	And that's what buildings really need to represent in the
00:52:50> 00:52:50:	future.
00:52:50> 00:52:52:	Then that's what Charlie is striving for.
00:52:52> 00:52:55:	It's like the plug and play capability of being able
00:52:55> 00:52:58:	to adopt an upgrade and evolve as technology does.
00:52:58> 00:53:00:	There's nothing worse than walking to a hotel room,
00:53:00> 00:53:03:	and you know, the only thing that you can plug
00:53:03> 00:53:03:	into,
00:53:03> 00:53:06:	like play your phone, is like the whole Jack that
00:53:06> 00:53:08:	doesn't fit into the new one,
00:53:08> 00:53:11:	so. And even if that's a fancy Regis hotel room,
00:53:11> 00:53:13:	it still feels cheap. You're like,
00:53:13> 00:53:15:	well, this place is outdated and it's like,
	, ,

00:53:15> 00:53:17:	why am I paying all this money,
00:53:17> 00:53:20:	but just 'cause he can't plug in your phone to
00:53:20> 00:53:22:	a radio that you're probably never going to use,
00:53:22> 00:53:24:	but it's it's got that feeling.
00:53:24> 00:53:27:	So don't invest in invest in hardware that's malleable investing
00:53:27> 00:53:30:	software that's flexible and do so with an operating platform
00:53:30> 00:53:32:	that allows you to extract and change and evolve and
00:53:32> 00:53:34:	meet demand because you don't own office,
00:53:34> 00:53:36:	you don't own residential, you don't own industrial,
00:53:36> 00:53:39:	you just don't space. And it's your job to articulate
00:53:39> 00:53:40:	that space.
00:53:40> 00:53:42:	The consumer and those consumer needs are changing
	daily,
00:53:42> 00:53:45:	so it's building those capabilities is really what the future
00:53:45> 00:53:47:	of real estate is responsible for.
00:53:47> 00:53:48:	Well, said,
00:53:48> 00:53:50:	I'd like to quickly summarize with several things that really
00:53:50> 00:53:51:	resonated with me,
00:53:51> 00:53:56:	and number one is. We have underspent as an industry
00:53:56> 00:53:59:	an and proptech is our excuse in our reason an
00:53:59> 00:54:04:	our need and our justification to invest in all levels
00:54:04> 00:54:07:	of our systems and not be intimidated by it.
00:54:07> 00:54:11:	Number two, we have an opportunity to digitize ourselves as
00:54:11> 00:54:14:	well as our tenants to make the lives of our
00:54:14> 00:54:16:	tenants and our investors better.
00:54:16> 00:54:18:	Better ease of access, better communication,
00:54:18> 00:54:21:	better investor reporting, better, better customer experience.
00:54:21> 00:54:24:	#3 is we can't be afraid to.
00:54:24> 00:54:27:	Test spend money on R&D.
00:54:27> 00:54:31:	Admit failure when something doesn't work and turn around and
00:54:31> 00:54:32:	spend it on something else,
00:54:32> 00:54:35:	and I think that was a big lesson today and
00:54:35> 00:54:36:	then the 4th is.
00:54:36> 00:54:39:	It's not too late. Just as Brad was saying,
00:54:39> 00:54:41:	old space can be made relevant.
00:54:41> 00:54:43:	It's not too late to jump in and and
00:54:43> 00:54:47:	find your place at the table and to test some
00:54:47> 00:54:50:	of these technologies and enjoy the results and.
00:54:50> 00:54:53:	I can't thank you too enough for joining this conversation.
00:54:53> 00:54:55:	It's been amazingly enlightening and Steve,
00:54:55> 00:54:58:	I hope this accomplished for for you what you were

```
00:54:58 --> 00:54:59:
                          hoping to hear.
00:55:00 --> 00:55:02:
                          Yeah, it was overwhelming actually.
00:55:02 --> 00:55:04:
                          And there is so much more that I want to
00:55:04 --> 00:55:05:
                          cover,
00:55:05 --> 00:55:07:
                          so I hope we can do this again.
00:55:07 --> 00:55:10:
                          Brad, I got a brand new phone and I was
00:55:10 --> 00:55:13:
                          pissed that I had to get new cables coming in
00:55:13 --> 00:55:16:
                          so I got all these Chargers and they don't work.
00:55:16 --> 00:55:19:
                          The courts don't work with my new phone.
00:55:19 --> 00:55:21:
                          I'm going family. I gotta go buy new.
00:55:21 --> 00:55:24:
                          I don't exactly what you're talking about so listen there
00:55:24 --> 00:55:26:
                          are so many other areas.
00:55:26 --> 00:55:28:
                          For those listening, there's Proptech for retail.
00:55:28 --> 00:55:30:
                          There's proptech. Climate is a really big deal.
                          There is the investor. Component,
00:55:30 --> 00:55:32:
00:55:32 --> 00:55:34:
                          so listen. Those of you that know me.
00:55:34 --> 00:55:36:
                          I would love to hear from you and what you
00:55:36 --> 00:55:39:
                          else you would like to hear about this thing.
00:55:39 --> 00:55:41:
                          And if you like the program and we will get
00:55:41 --> 00:55:42:
                          to work on,
00:55:42 --> 00:55:43:
                          put the next one together.
00:55:43 --> 00:55:46:
                          And now I want to turn this over to our
00:55:46 --> 00:55:49:
                          Executive Director so Pam go ahead and close this out.
00:55:49 --> 00:55:52:
                          Thank you Steve and again I want to thank all
00:55:52 --> 00:55:55:
                          the speakers and an almost violent from moderating Anan.
00:55:55 --> 00:55:58:
                          Bringing things back to those hard questions that I know
00:55:58 --> 00:56:00:
                          Brad and Charlie said you were asking,
00:56:00 --> 00:56:03:
                          but that's what makes it all understandable to the rest
00:56:03 --> 00:56:05:
                          of us who don't spend our entire working days in
00:56:05 --> 00:56:06:
                          this.
00:56:06 --> 00:56:08:
                          In this particular environment. Thank you for participating.
00:56:08 --> 00:56:10:
                          Thank you all. Great discussion,
00:56:10 --> 00:56:11:
                          Brad, Charlie. Thank you all very much.
00:56:11 --> 00:56:12:
                          Byron,
00:56:12 --> 00:56:13:
                          excellent job, but thank you.
00:56:13 --> 00:56:13:
                          Thank
00:56:13 --> 00:56:15:
                          you already. Bye.
```

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