

Webinar

Broadband and Real Estate

Date: August 25, 2021

00:00:03> 00:00:06:	Welcome and thank you for joining today's webinar.
00:00:06> 00:00:09:	My name is Craig Lewis and I'll be moderating today's
00:00:09> 00:00:09:	session.
00:00:09> 00:00:13:	I'm the North American practice leader for planning landscape and
00:00:13> 00:00:16:	urban design at Callison RTKL Global architecture planning and design
00:00:16> 00:00:18:	practice that addresses the imperatives of resiliency,
00:00:18> 00:00:21:	well being and technology, and their influence in the built
00:00:22> 00:00:24:	environment through a human centric design approach.
00:00:24> 00:00:28:	And most of the chair of the Curtis Infrastructure Initiative,
00:00:28> 00:00:31:	Global Advisory Board, and have the pleasure to talk to
00:00:31> 00:00:33:	you to lead this discussion.
00:00:33> 00:00:36:	This very important topic. Today's webinar will feature three speakers,
00:00:36> 00:00:40:	will provide introductory remarks, a short moderated discussion by myself,
00:00:40> 00:00:44:	and will answer questions you all submit to the panelists.
00:00:44> 00:00:48:	The current infrastructure initiative was launched in October 2020 through
00:00:48> 00:00:50:	a generous donation from the state of Jim Curtis,
00:00:50> 00:00:54:	ULI Life trustee, who believes that infrastructure and land use
00:00:54> 00:00:56:	processes shape how we live,
00:00:56> 00:00:59:	how we work and how we move goods and services.
00:00:59> 00:01:02:	This understanding of the link connecting real estate development,
00:01:02> 00:01:04:	land use and infrastructure investment.
00:01:04> 00:01:07:	Drives the focus of the initiative on building capacity in
00:01:08> 00:01:11:	communities across the United States and the globe to create
00:01:11> 00:01:15:	more equitable and resilient infrastructure investments that

	enhance long term
00:01:15> 00:01:19:	community value. This requires building a movement of which you
00:01:19> 00:01:22:	are all participants that grows the table and creates new
00:01:22> 00:01:25:	ones through global and strategic partnerships,
00:01:25> 00:01:29:	provides technical assistance and capacity building at the local level
00:01:29> 00:01:32:	and then acts as a feedback loop to promote the
00:01:32> 00:01:36:	most innovative and or effective best practices.
00:01:36> 00:01:40:	To learn more about the Curtis Infrastructure Initiative,
00:01:40> 00:01:47:	please go to uli.org/infrastructure. So building on the idea of
00:01:47> 00:01:49:	the feedback loop,
00:01:49> 00:01:52:	the Curtis Infrastructure Initiative is excited to release its first
00:01:52> 00:01:55:	major report that was developed as a part of the
00:01:55> 00:01:58:	development of the background materials for one of our capacity
00:01:58> 00:01:59:	building projects in Baton Rouge,
00:01:59> 00:02:02:	LA. The report's goal, much like this webinars to better
00:02:02> 00:02:07:	understand the challenges and opportunities presented in addressing the digital
00:02:07> 00:02:07:	divide.
00:02:07> 00:02:11:	The tools and techniques available for both real estate and
00:02:11> 00:02:14:	land use industry and the need for communities to expand
00:02:14> 00:02:17:	and best take advantage of this connectivity.
00:02:17> 00:02:20:	You will, I staff will be sending everyone on this
00:02:20> 00:02:22:	web and R A link to this report.
00:02:25> 00:02:28:	So as we begin, I think we all have a
00:02:28> 00:02:31:	common understanding these days,
00:02:31> 00:02:34:	and perhaps the last 16 to 18 months have proven
00:02:34> 00:02:39:	that broadband is essential infrastructure just on the same order
00:02:39> 00:02:40:	of magnitude as water,
00:02:40> 00:02:43:	power, roads, bridges and other types of transportation.
00:02:43> 00:02:47:	It is the essential connective tissue for all of our
00:02:47> 00:02:48:	communities,
00:02:48> 00:02:50:	and bringing all of us together.
00:02:50> 00:02:54:	Can you imagine what the pandemic would have looked like
00:02:54> 00:02:56:	if we couldn't have worked?
00:02:56> 00:03:00:	From home. We couldn't have shopped from home.
00:03:00> 00:03:05:	We couldn't have done a number of things from the
00:03:05> 00:03:10:	sort of security and safety of our smaller communities next.
00:03:10> 00:03:13:	And we recognize now more than ever,
00:03:13> 00:03:16:	that broadband being an essential infrastructure,

00:03:16> 00:03:19:	is critical to how we continue to move our economies
00:03:20> 00:03:20:	forward.
00:03:20> 00:03:24:	EU S is very much of a knowledge based economy
00:03:24> 00:03:28:	and those sharing of ideas happens and more and more.
00:03:28> 00:03:32:	We're doing that in a virtual format and a virtual
00:03:32> 00:03:33:	arrangement.
00:03:33> 00:03:36:	But just being able to tap into the the networks
00:03:37> 00:03:40:	and ideas or critical they drives retail.
00:03:40> 00:03:42:	It tries warehousing and distribution.
00:03:42> 00:03:45:	It drives all kinds of elements of our economy these
00:03:45> 00:03:46:	days,
00:03:46> 00:03:49:	and we can't be without it and next slide.
00:03:49> 00:03:53:	But perhaps most importantly, we have to understand that being
00:03:53> 00:03:57:	essential infrastructure there is still a divide and we have
00:03:57> 00:04:01:	to make sure that those areas that don't have adequate
00:04:01> 00:04:04:	infrastructure get that infrastructure as quickly as possible,
00:04:04> 00:04:07:	because those are the areas that are going to be
00:04:07> 00:04:08:	challenged,
00:04:08> 00:04:11:	particularly when it comes to.
00:04:11> 00:04:14:	Uh, education, and then we know that education is the
00:04:14> 00:04:18:	most critical element in determining a person's success in the
00:04:18> 00:04:19:	future,
00:04:19> 00:04:22:	and so the more that we can get out to
00:04:22> 00:04:26:	those who don't have adequate and fast broadband,
00:04:26> 00:04:29:	the better. So with that,
00:04:29> 00:04:32:	I'd like to introduce our panelists as part of today's
00:04:32> 00:04:33:	webinar.
00:04:33> 00:04:35:	So first up, will be Eric Bathrick,
00:04:35> 00:04:38:	who leads a comms technology solutions group with more than
00:04:38> 00:04:40:	25 years in building broadband networks.
00:04:40> 00:04:43:	Eric will provide an overview of the topic,
00:04:43> 00:04:47:	can begin to talk about some broad solutions at the
00:04:47> 00:04:49:	state and local level.
00:04:49> 00:04:51:	After that will be mere Ruffin.
00:04:51> 00:04:54:	Who's in economic development planner and leads broadband expansion with
00:04:54> 00:04:57:	Baton Rouge is capital Regional Planning Commission.
00:04:57> 00:05:00:	She believes strongly in leveraging community to help determine their
00:05:00> 00:05:01:	own future,
00:05:01> 00:05:04:	and we'll talk about the balance between focusing on the

00:05:04> 00:05:06:	rural and urban divides,
00:05:06> 00:05:09:	and finally, Jeff Freeman, who is the President of the
00:05:09> 00:05:13:	broadband group that has been integral and building the connection
00:05:13> 00:05:16:	between the real estate industry and the need for broadband
00:05:16> 00:05:19:	since 2005, will talk about opportunities to leverage.
00:05:19> 00:05:22:	The private sector and to ensure access connectivity again,
00:05:22> 00:05:26:	please ask your questions and I'll make sure that they
00:05:26> 00:05:27:	are answered by the panelists.
00:05:27> 00:05:29:	With that Eric first up.
00:05:32> 00:05:34:	Great thanks Greg. Appreciate it.
00:05:34> 00:05:38:	So as Craig mentioned, we're going to start off our
00:05:38> 00:05:43:	discussion with really understanding the landscape of broadband infrastructure and
00:05:43> 00:05:44:	Paul if you can.
00:05:44> 00:05:48:	If you can go to the next slide so when
00:05:48> 00:05:52:	we look at the 100,000 foot view I call it
00:05:52> 00:05:58:	100,000 foot view where as Craig mentioned interest just in
00:05:58> 00:06:02:	terms of how essential broadband infrastructure is in terms of.
00:06:02> 00:06:05:	It's important and connectivity throughout.
00:06:05> 00:06:08:	If we look at this at this snapshot,
00:06:08> 00:06:13:	it it's really, you know it goes continent to continent
00:06:13> 00:06:15:	from with subsea cabling,
00:06:15> 00:06:19:	traverses the rural areas of our states in our country,
00:06:19> 00:06:22:	going from city to City,
00:06:22> 00:06:25:	town to town, and then town to what we call
00:06:25> 00:06:31:	last mile connectivity and and looking at that connectivity.
00:06:31> 00:06:36:	It is very. Diverse in terms of how connected different
00:06:36> 00:06:41:	parts of our communities are everything from the residents to
00:06:41> 00:06:46:	public safety site to the hospital to higher Ed and
00:06:46> 00:06:50:	then and then also the commercial and enterprise.
00:06:50> 00:06:55:	And as Craig mentioned, the importance of education what with
00:06:55> 00:07:00:	what we call community anchor institutions in terms of schools,
00:07:00> 00:07:03:	libraries, community centers. Community colleges,
00:07:03> 00:07:08:	government buildings. So this is the that the landscape of
00:07:08> 00:07:14:	broadband infrastructure and the potential of connectivity and how interconnected
00:07:14> 00:07:17:	you know our societies are in terms of the public
00:07:17> 00:07:22:	and the private and the home and the hospital.
00:07:22> 00:07:27:	And you utilizing this to really create that that snapshot

00:07:27> 00:07:27:	go ahead.
00:07:27> 00:07:32:	Paul, if you could go to the next one.
00:07:32> 00:07:35:	So what? What I refer to is the broadband stack,
00:07:35> 00:07:40:	right? So this is. Understanding getting data and information to
00:07:40> 00:07:45:	the end user and understanding how we can get there.
00:07:45> 00:07:49:	So it's you know, at the baseline at the foundation
00:07:49> 00:07:53:	of this broadband stack is fiber and Internet.
00:07:53> 00:07:56:	l always say fiber, you know.
00:07:56> 00:08:01:	Fiber loves wireless wireless loves fiber and at the very
00:08:01> 00:08:06:	baseline of this is is getting data and information.
00:08:06> 00:08:10:	Out to the end user and those end users are
00:08:10> 00:08:11:	individuals,
00:08:11> 00:08:16:	their devices, their buildings, their homes with the ultimate goal
00:08:16> 00:08:19:	to improve and advance our communities.
00:08:19> 00:08:22:	Our campuses are cities or the citizens.
00:08:22> 00:08:25:	The constituents are in. You know,
00:08:25> 00:08:30:	are are are different. You know family members and and
00:08:30> 00:08:36:	it's understanding that this combination of infrastructure and technology.
00:08:36> 00:08:39:	Come is utilized and how that's utilized in terms of
00:08:40> 00:08:43:	getting to the end user and what I like about
00:08:43> 00:08:44:	this this this.
00:08:44> 00:08:47:	This diagram is really it's it shows where that that
00:08:48> 00:08:49:	divide resides,
00:08:49> 00:08:53:	right? It's it's that that that that line between how
00:08:53> 00:08:56:	we get to the end user with the ultimate goal
00:08:56> 00:08:59:	of why do we want to get there?
00:08:59> 00:09:02:	We want to get there so we can.
00:09:02> 00:09:05:	We can gain knowledge we can improve and advance different
00:09:06> 00:09:07:	different initiatives.
00:09:07> 00:09:11:	And it shows also the combination and use of private
00:09:11> 00:09:15:	networks and public networks and the data centers and the
00:09:15> 00:09:20:	mobility of wireless and understanding that the combinations and the
00:09:20> 00:09:25:	coalescing of those infrastructures and convergence of those infrastructures can
00:09:25> 00:09:29:	help us ultimately with the end goal of connecting the
00:09:29> 00:09:32:	individual or the groups of individuals,
00:09:32> 00:09:35:	and are in our communities.
00:09:35> 00:09:40:	Next one Paul. So one of the one of the

00:09:40> 00:09:43:	important things is so why?
00:09:43> 00:09:46:	Why are we trying to do this?
00:09:46> 00:09:50:	Well, there's there's these forces that are shaping the stack
00:09:50> 00:09:55:	and the need and understanding that we have these applications
00:09:55> 00:09:57:	that we need to get to.
00:09:57> 00:10:01:	We have everything from video management systems to mapping to
00:10:01> 00:10:05:	the Google Suite products to Amazon Web Services to email
00:10:05> 00:10:08:	to Twitter to Facebook trying to get access.
00:10:08> 00:10:11:	To the telemedicine applications, video conferencing.
00:10:11> 00:10:15:	Those types of applications and getting them to the end.
00:10:15> 00:10:20:	Users which are takes, shape and form of computers and
00:10:20> 00:10:25:	smartphones and sensors and tablets and different types of signage
00:10:25> 00:10:29:	is and smart city types of IO T devices and
00:10:29> 00:10:33:	and then bring those onto to networks and these forces
00:10:33> 00:10:37:	are shaping this stack of in terms of priority in
00:10:37> 00:10:39:	terms of importance.
00:10:39> 00:10:41:	In terms of need with,
00:10:41> 00:10:46:	ultimately, we're trying to realize the importance and and meaningfulness
00:10:46> 00:10:47:	of broadband,
00:10:47> 00:10:52:	and that's when we are able to get.
00:10:52> 00:10:56:	Truly meaningful application services and content delivered to the end
00:10:56> 00:10:57:	users.
00:10:57> 00:11:01:	So again there in in the progress of gaining knowledge
00:11:01> 00:11:04:	with the individuals and and providing economic,
00:11:04> 00:11:09:	economic development opportunities and equity opportunities for for communities and
00:11:09> 00:11:12:	for individuals that are out there.
00:11:12> 00:11:16:	And if we can get that that get that true
00:11:16> 00:11:20:	meaning and value out to the end users,
00:11:20> 00:11:22:	then we are truly realizing.
00:11:22> 00:11:26:	Value and and the need for broadband and that's what's
00:11:26> 00:11:28:	exciting about what we were seeing now,
00:11:28> 00:11:32:	you know, through the federal and and state side in
00:11:32> 00:11:34:	terms of funding and funding programs,
00:11:34> 00:11:38:	is we're seeing this importance now we're seeing this this
00:11:38> 00:11:40:	investment that's that is starting to occur.
00:11:40> 00:11:42:	And and and. And you know,
00:11:42> 00:11:45:	at a national level, at a state level,

00:11:45> 00:11:49:	at a local level, because these these applications that we
00:11:49> 00:11:49:	we,
00:11:49> 00:11:52:	we we need to as as Craig mentioned.
00:11:52> 00:11:57:	The pandemic really brought it to fruition in terms of
00:11:57> 00:12:01:	bringing it to the forefront of the need and the
00:12:01> 00:12:05:	importance and the value of being able to do remote
00:12:05> 00:12:09:	learning. Being able to meet with your doctor via Tele
00:12:09> 00:12:11:	health and telemedicine,
00:12:11> 00:12:14:	and and having a A connectivity you know,
00:12:14> 00:12:18:	through video conferencing. And and I think that's where you
00:12:18> 00:12:23:	know the investment and and the importance of we everybody.
00:12:23> 00:12:26:	You know needs to be connected and and This is
00:12:26> 00:12:30:	why you know they need to be connected and and
00:12:30> 00:12:34:	these forces have now shaped how we're going to be
00:12:34> 00:12:38:	moving forward into the future in terms of the value
00:12:38> 00:12:42:	and of being connected and and bridging that digital divide.
00:12:42> 00:12:44:	And from here I'd like to.
00:12:44> 00:12:46:	Prep, Pass it onto Mia,
00:12:46> 00:12:47:	so thank you.
00:12:56> 00:13:01:	Good afternoon everyone. My name is Mia Ruffin.
00:13:01> 00:13:06:	I am the economic development planner at the Capital Region
00:13:06> 00:13:10:	Planning Commission in Baton Rouge,
00:13:10> 00:13:17:	LA. We serve 11 parishes in our region and we
00:13:17> 00:13:19:	also work step up.
00:13:19> 00:13:25:	In step with a number of regional and.
00:13:25> 00:13:30:	State. Programming and today I will offer a little bit
00:13:30> 00:13:34:	of the perspective that I have for my role.
00:13:34> 00:13:41:	The opportunities, the obstacles and such in relationship to broadband.
00:13:41> 00:13:45:	So here I have a map of our region.
00:13:45> 00:13:50:	It is one of eight of the development districts in
00:13:50> 00:13:51:	the state.
00:13:51> 00:13:55:	As I said, we cover 11 parishes out of the
00:13:55> 00:14:01:	64 and many of the programming mandates and goals that
00:14:01> 00:14:05:	are being set across the state really are.
00:14:05> 00:14:11:	Dependent on the grassroots efforts and understandings that are happening
00:14:11> 00:14:15:	on the ground in each of these places in the
00:14:15> 00:14:19:	urban and the rural neighborhoods of these communities.
00:14:19> 00:14:22:	So I'm sure that not everyone on this call has
00:14:23> 00:14:27:	had direct communication with their relative Planning

	Commission.
00:14:27> 00:14:33:	Whether they are interested in developing real estate or if
00:14:33> 00:14:38:	they're just curious to know about what is the broadband
00:14:38> 00:14:40:	temperature in their area?
00:14:40> 00:14:45:	KTVI itself was founded in 1967 and it does a
00:14:45> 00:14:51:	number of different things from both the technical side to
00:14:51> 00:14:57:	a planning side to a mediation side we work to
00:14:57> 00:15:00:	ensure that water, ground air disaster,
00:15:00> 00:15:06:	transportation planning, implementation and such are all aspects of our
00:15:06> 00:15:08:	eleven peers focus area,
00:15:08> 00:15:11:	as well as how these.
00:15:11> 00:15:16:	11 pier issues coincide with other things that are happening
00:15:16> 00:15:20:	in the state we worked to make sure that there
00:15:20> 00:15:24:	are not siloed pieces of information and that we can
00:15:24> 00:15:29:	leverage the skill set or the opportunities in one area
00:15:29> 00:15:34:	so that we can pull up work together and force
00:15:34> 00:15:38:	the needs or make sure that we are all moving
00:15:38> 00:15:41:	in tandem across our planning area.
00:15:41> 00:15:46:	Next, please Paul. So I wanna day to day basis
00:15:46> 00:15:51:	as I said and an economic development planner.
00:15:51> 00:15:56:	I'm also working as the broadband lead for my office.
00:15:56> 00:16:00:	Now this doesn't mean that I'm the only person in
00:16:00> 00:16:04:	my office who is responsible for broadband action.
00:16:04> 00:16:09:	There are other aspects that are handled like contracts like
00:16:10> 00:16:13:	grant funding and I'm a part of that team.
00:16:13> 00:16:17:	But generally my role. Is to do outreach to be
00:16:18> 00:16:24:	aware of collaborative opportunities to ensure that our team and
00:16:24> 00:16:26:	as much as it can be,
00:16:26> 00:16:30:	is aware of research of development of.
00:16:30> 00:16:35:	Aspects that may tie into the different communities that we
00:16:35> 00:16:36:	serve.
00:16:36> 00:16:40:	So in general, the larger part of my day is
00:16:40> 00:16:45:	working on and being on top of a statewide broadband
00:16:45> 00:16:47:	collaborative effort.
00:16:47> 00:16:52:	Then also I work in step with grant funding from
00:16:52> 00:16:53:	our office.
00:16:53> 00:16:58:	I provide technical assistance and I often support local transportation
00:16:58> 00:16:59:	needs,
00:16:59> 00:17:01:	whether that be with COA's.
00:17:01> 00:17:04:	Or just a smaller nonprofit,

00:17:04> 00:17:11:	or for profit organizations that provide transportation to people who
00:17:11> 00:17:13:	are in need for a.
00:17:13> 00:17:16:	List of reasons. Now with all that being said,
00:17:16> 00:17:18:	my days are kind of busy,
00:17:18> 00:17:22:	but what it also provides for me is the opportunity
00:17:22> 00:17:24:	to see broadband,
00:17:24> 00:17:27:	the need for it, and many different aspects.
00:17:27> 00:17:31:	So my perspective, at least what I believe I'm offering
00:17:31> 00:17:35:	to the conversation today is a look through a keyhole
00:17:35> 00:17:38:	of one of the many agencies and one of the
00:17:38> 00:17:42:	many roles you can lean on as you are wanting
00:17:42> 00:17:44:	to develop your.
00:17:44> 00:17:48:	Real estate understanding in a certain region next fall.
00:17:51> 00:17:54:	So you see here there is a grid of all
00:17:54> 00:17:58:	the different things on the horizon or are currently happening
00:17:58> 00:17:59:	within the state.
00:17:59> 00:18:03:	Many of us on this call are likely familiar with
00:18:03> 00:18:07:	the FCC's preliminary data mapping when it comes to
00:18:07> 00:18:10:	understanding what's on the ground and what else do we need.
00:18:10> 00:18:14:	That data has at this point been seen as a
00:18:14> 00:18:15:	good start point,
00:18:15> 00:18:18:	but that we need to get a little bit deeper
00:18:18> 00:18:20:	than census block awareness.
00:18:20> 00:18:23:	Because it leaves a number of folks who are not
00:18:23> 00:18:27:	participating or able to participate in the discussion about
	digital
00:18:27> 00:18:29:	divides because they just aren't marked.
00:18:29> 00:18:33:	As it stands, Louisiana falls somewhere between the 30s and
00:18:33> 00:18:36:	the mid 40s when it comes to broad being rankings,
00:18:36> 00:18:39:	so we have a lot of room for growth,
00:18:39> 00:18:43:	but we aren't 50, which is much closer to what
00:18:43> 00:18:44:	we used to be.
00:18:44> 00:18:48:	So we are seeing some sort of traction.
00:18:48> 00:18:50:	There are other images here,
00:18:50> 00:18:56:	such as our governor who has mandated and really supported
00:18:56> 00:18:58:	a huge broadband push.
00:18:58> 00:19:03:	This push has been supported through the creation of the
00:19:03> 00:19:05:	Office of Broadband,
00:19:05> 00:19:08:	the Louisiana Development District organization LAPD.
00:19:08> 00:19:13:	DRA has been definitely helping us push this by supporting

00:19:13> 00:19:15:	a grassroots challenge.
00:19:15> 00:19:18:	Not even a challenge, but.
00:19:18> 00:19:21:	A grassroots effort to collect data across the state.
00:19:21> 00:19:24:	We're calling it the delta broadband mapping project.
00:19:24> 00:19:27:	As you can see, we also have a seal for
00:19:27> 00:19:30:	EDA who is supporting a lot of our funding and
00:19:30> 00:19:32:	recently connect.
00:19:32> 00:19:35:	LA has released a broadband toolkit that helps small and
00:19:35> 00:19:39:	large communities really start to develop the beginnings of a
00:19:39> 00:19:43:	strategic plan so they can know what to ask for.
00:19:43> 00:19:46:	As funding comes down the pipe.
00:19:46> 00:19:52:	Next bottle. So this is a very busy slide up.
00:19:52> 00:19:56:	The slides will be shared with you all at the
00:19:56> 00:19:58:	end of this.
00:19:58> 00:20:01:	But what I find important here is just to see
00:20:02> 00:20:06:	the scale of all of the issues that precede us
00:20:06> 00:20:10:	as we continue to do the work to bring broadband
00:20:10> 00:20:14:	to Louisiana. In the rural communities,
00:20:14> 00:20:18:	alongside Kovit in all of the low rankings and the
00:20:18> 00:20:23:	diversity of needs that are happening in the Capital Region,
00:20:23> 00:20:26:	you can see that. Density is low,
00:20:26> 00:20:30:	which makes it a very low competitive.
00:20:30> 00:20:34:	Series of communities. When thinking about urban
	communities,
00:20:34> 00:20:37:	there's a lack of digital literacy and a lot of
00:20:37> 00:20:38:	these places,
00:20:38> 00:20:42:	and so they often have an issue when having to
00:20:42> 00:20:44:	communicate what they really need.
00:20:44> 00:20:49:	Likewise, urban communities are in need.
00:20:49> 00:20:51:	If you will go to the next slide for me,
00:20:51> 00:20:55:	Paul. And talking about an urban community,
00:20:55> 00:21:00:	we can zoom in for second to do the plank
00:21:00> 00:21:01:	Rd corridor.
00:21:01> 00:21:06:	The Plank Rd corridor is a little over 4 miles.
00:21:06> 00:21:10:	It is a street that is for more or less
00:21:10> 00:21:13:	of an understanding of it.
00:21:13> 00:21:17:	It's disinvested. It has been disinvested through a series of
00:21:17> 00:21:20:	decades and now it's medium.
00:21:20> 00:21:23:	Its median income is about \$20,000.
00:21:23> 00:21:25:	Less than the rest of the state,
00:21:25> 00:21:30:	uhm? About 40% of the residents in the area have
00:21:30> 00:21:35:	no broadband connection and almost a fourth of them have

00:21:35> 00:21:38:	never done a digital transaction.
00:21:38> 00:21:41:	So with all that being said,
00:21:41> 00:21:45:	the goal is to develop a program called the Imagine
00:21:45> 00:21:50:	Plank Rd plan what it would do is bring wireless
00:21:50> 00:21:53:	broadband to the area at no cost,
00:21:53> 00:21:57:	hopefully allowing there to be more leverage and more.
00:21:57> 00:22:01:	Of a competitive edge to the area for schools,
00:22:01> 00:22:05:	libraries, but mostly for profit organizations who are wanting to
00:22:05> 00:22:08:	come in and reinvest and bring more profit,
00:22:08> 00:22:13:	and more of a focus to the area.
00:22:13> 00:22:17:	Next fall. So I ran through a lot of these
00:22:17> 00:22:19:	things rather quickly,
00:22:19> 00:22:22:	I know, but what I would like to bring again
00:22:23> 00:22:26:	to to bring my point home is that there are
00:22:26> 00:22:30:	people who are on the ground who are not necessarily
00:22:30> 00:22:32:	hand in hand with development itself like me.
00:22:32> 00:22:36:	But there are ways that if you are looking to
00:22:36> 00:22:36:	develop,
00:22:36> 00:22:40:	you can also really take advantage of someone like me
00:22:40> 00:22:43:	so you can tap in and see how I'm communicating
00:22:43> 00:22:46:	with current stakeholders on the ground.
00:22:46> 00:22:48:	You can opt into that conversation.
00:22:48> 00:22:53:	You can see how your goals for the area are.
00:22:53> 00:22:56:	Oh sorry, how the goals for the area may be
00:22:56> 00:22:59:	already in alignment with your goals as is,
00:22:59> 00:23:03:	and you can also offer research and data that you
00:23:03> 00:23:06:	may have had for the area to help us better
00:23:06> 00:23:11:	develop strategic planning so that we can supplement what you
00:23:11> 00:23:15:	want with development as well as with their broadband imagination.
00:23:15> 00:23:19:	Next slide, please. This is how you can contact me
00:23:19> 00:23:23:	as needed and I look forward to answering your questions
00:23:23> 00:23:24:	in a few minutes.
00:23:24> 00:23:27:	I'm going to pass it on to Jeff and thank
00:23:27> 00:23:29:	you for your time.
00:23:31> 00:23:35:	Great, thank you very much Mia and hello everybody.
00:23:35> 00:23:38:	Thank you for the opportunity to participate and contribute to
00:23:38> 00:23:40:	this incredibly important and timely discussion.
00:23:40> 00:23:43:	I'm Geoff Ryman, President broadband group.
00:23:43> 00:23:47:	We're a consulting firm that has been active with ULI
00:23:47> 00:23:49:	for over 25 years.

00:23:49> 00:23:53:	Broadband in real estate. Understand the opportunity.
00:23:53> 00:23:56:	Now I think it's safe to assume that today's participants
00:23:56> 00:24:01:	are here because the importance of connectivity is fully recognized.
00:24:01> 00:24:04:	So I'm looking at opportunities to secure needed investments in
00:24:04> 00:24:07:	high performance broadband infrastructure.
00:24:07> 00:24:11:	What I wanted to emphasize today in these opening comments
00:24:11> 00:24:15:	is the monumental role that the land development and real
00:24:15> 00:24:20:	estate industry has played in advancing the telecommunications industry.
00:24:20> 00:24:23:	And I hope that this information serves to both educate
00:24:23> 00:24:26:	as well as motivate you ally members on how the
00:24:26> 00:24:30:	development community can continue to help shape the connectivity trajectory
00:24:30> 00:24:34:	of the region in which you are located.
00:24:34> 00:24:38:	Next slide please Paul. So we are focused on future
00:24:39> 00:24:40:	opportunities,
00:24:40> 00:24:43:	of course, but often when looking to understand how to
00:24:43> 00:24:46:	best position your development for future opportunities,
00:24:46> 00:24:50:	there can be great value in understanding what has worked
00:24:50> 00:24:51:	in the past.
00:24:51> 00:24:55:	Today, of course, you can't turn on the television,
00:24:55> 00:24:57:	be at CNBC or the Sunday political talk shows and
00:24:57> 00:25:01:	not hear about the need for more investment in broadband
00:25:01> 00:25:03:	infrastructure and often specifically,
00:25:03> 00:25:06:	they're talking about fiber infrastructure.
00:25:06> 00:25:09:	But as we look at how we might secure investments
00:25:09> 00:25:10:	in fiber networks,
00:25:10> 00:25:13:	it is relevant to note that fiber is not a
00:25:13> 00:25:16:	new innovative entrepreneurial investment thesis.
00:25:16> 00:25:19:	In fact, the first fiber to the Home network was
00:25:19> 00:25:20:	back in 1987,
00:25:20> 00:25:23:	and it was at a 2000 acre master planned community
00:25:24> 00:25:25:	in Central Florida.
00:25:25> 00:25:30:	It was called Heathrow. And the developer with Gina Paulucci,
00:25:30> 00:25:34:	Gino a billionaire businessman, best known for his food empire,
00:25:34> 00:25:38:	his brands, such as chunking Chicken and Gino's Pizza rolls,
00:25:38> 00:25:42:	which then became totinos pizza rolls when he sold the
00:25:42> 00:25:44:	brand to Pillsbury.
00:25:44> 00:25:46:	Now when Gina was planning Heathrow,

00:25:46> 00:25:48:	he had a vision for thousands of new homes and
00:25:49> 00:25:50:	businesses enterprise campuses,
00:25:50> 00:25:53:	but only had one problem.
00:25:53> 00:25:55:	Heathrow was located in the middle of Central Florida,
00:25:55> 00:25:57:	and very few people lived there and no one had
00:25:58> 00:25:59:	reason to live there.
00:25:59> 00:26:02:	And in looking to create this new city and how
00:26:02> 00:26:05:	to attract new population growth,
00:26:05> 00:26:08:	Gino knew that there had to be a connection between
00:26:08> 00:26:10:	economic development and connectivity.
00:26:10> 00:26:14:	Quite frankly, he was faced with many of the same
00:26:14> 00:26:19:	planning challenges that so many rural markets are faced with
00:26:19> 00:26:20:	today.
00:26:20> 00:26:22:	So what Geno did was he put together?
00:26:22> 00:26:26:	A planning team began working with Bell South Southern Belle,
00:26:26> 00:26:29:	and ultimately what they put together was the industry's first
00:26:29> 00:26:31:	fiber to the home network.
00:26:31> 00:26:33:	And with that network in place,
00:26:33> 00:26:36:	they went out and talked to corporate corporate enterprises.
00:26:36> 00:26:39:	In fact, they talked with AAA American Automobile Association,
00:26:39> 00:26:42:	who was announced that they were looking to relocate out
00:26:42> 00:26:45:	of their current location in Falls Church VA,
00:26:45> 00:26:49:	and we're looking at it either Florida or Texas.
00:26:49> 00:26:52:	Well, they talked to AAA about the fiber network that
00:26:52> 00:26:55:	was in place and AAA recognize that at its core
00:26:55> 00:26:57:	their communications company,
00:26:57> 00:27:01:	one 800 AAA help and that fiber infrastructure allowed for
00:27:01> 00:27:04:	more secure or reliable phone connectivity.
00:27:04> 00:27:08:	And they chose Heathrow to relocate their corporate headquarters there,
00:27:08> 00:27:11:	forever changing the trajectory of growth for that region.
00:27:11> 00:27:14:	Today, when you called one 800 AAA help,
00:27:14> 00:27:18:	you are likely calling that call center there in Heathrow
00:27:18> 00:27:22:	and likely utilizing that fiber that was placed back in
00:27:23> 00:27:23:	1987.
00:27:23> 00:27:25:	Other developments brambleton. In Northern Virginia.
00:27:25> 00:27:29:	Loudon County was Verizon's first fiber to the home network
00:27:29> 00:27:32:	that was before Verizon branded Fayose,
00:27:32> 00:27:34:	which was launched in Keller,
00:27:34> 00:27:38:	TX. Their first large scale fiber network deployment was at

00:27:38> 00:27:39:	Brambleton Ridgegate,
00:27:39> 00:27:42:	just South of Denver, in Lone Tree,
00:27:42> 00:27:46:	Co. Was Qwest, now Centurylink's first fiber to the home
00:27:46> 00:27:46:	network,
00:27:46> 00:27:49:	Colorado's first fiber to the Home Network,
00:27:49> 00:27:51:	Metro Development Group in Tampa,
00:27:51> 00:27:54:	FL, made the Wall Street Journal.
00:27:54> 00:27:58:	For working with the first major cable provider,
00:27:58> 00:28:02:	which was Bright House, which is now Charter Spectrum,
00:28:02> 00:28:06:	the first major MSO to deploy an all fiber symmetric
00:28:06> 00:28:07:	Gigabit network?
00:28:07> 00:28:10:	That was so relevant because it was the first time
00:28:11> 00:28:14:	that a cable operator had moved outside of its traditional
00:28:14> 00:28:15:	investment thesis.
00:28:15> 00:28:19:	Now what's relevant about this is that.
00:28:19> 00:28:22:	Service providers didn't approach these developers and say,
00:28:22> 00:28:26:	hey developers, we want to do something really different here
00:28:26> 00:28:27:	at your community.
00:28:27> 00:28:30:	Absolutely not. It was a bottom up planning thesis where
00:28:30> 00:28:34:	these developers first decided that they wanted to be a
00:28:34> 00:28:38:	showcase for connectivity that they wanted to make high performance
00:28:38> 00:28:42:	wired and wireless connectivity a cornerstone of their development project.
00:28:42> 00:28:45:	And then they went to the service providers and work
00:28:45> 00:28:49:	with them to create a platform for investment that otherwise.
00:28:49> 00:28:53:	Would not have occurred. Next slide.
00:28:53> 00:28:56:	And what's most important is that these developers were not
00:28:56> 00:28:57:	technologists.
00:28:57> 00:28:59:	They didn't understand all of the bits and bytes.
00:28:59> 00:29:02:	But as Gino said, I don't know the first thing
00:29:02> 00:29:03:	about fiber optics,
00:29:03> 00:29:05:	but I know what people need,
00:29:05> 00:29:09:	and I know the most important thing we do.
00:29:09> 00:29:15:	Is communicate. Next slide. So of course the importance of
00:29:15> 00:29:18:	broadband has never been clear,
00:29:18> 00:29:21:	as we have heard from our fellow panelists,
00:29:21> 00:29:24:	it is certainly more than just about economic development
	and
00:29:25> 00:29:26:	increased property value.
00:29:26> 00:29:29:	In the isolated world that has been and continues in
00:29:29> 00:29:31:	many ways to be our reality,

00:29:31> 00:29:33:	if there was one thing.
00:29:33> 00:29:37:	That has held our entire economy together.
00:29:37> 00:29:40:	It is access to broadband and of course that is
00:29:40> 00:29:44:	only for those who are fortunate enough to have it.
00:29:44> 00:29:49:	Because whether using utilizing broadband for health care for Tele
00:29:49> 00:29:50:	health services,
00:29:50> 00:29:56:	educational distance, educational programs, or for work from home type
00:29:56> 00:29:59:	of priorities that quality matters.
00:29:59> 00:30:05:	The quality of the connection matters because performance matters.
00:30:05> 00:30:09:	And access to high performance connectivity at its core is
00:30:09> 00:30:10:	about social innovation.
00:30:10> 00:30:15:	It equates opportunity. It equates to fairness and in many
00:30:15> 00:30:18:	ways it equates to excellence and it touches on so
00:30:18> 00:30:22:	many critically important social priorities.
00:30:22> 00:30:25:	The poorest Congressional District in the country is New York's
00:30:25> 00:30:26:	16th district,
00:30:26> 00:30:30:	which includes the Northern Bronx and the southern half of
00:30:30> 00:30:32:	Westchester County.
00:30:32> 00:30:36:	The 16th district is represented by Congressman Richie
00.30.32 00.30.30.	Torrez.
00:30:36> 00:30:38:	
	Torrez.
00:30:36> 00:30:38:	Torrez. He was recently talking on.
00:30:36> 00:30:38: 00:30:38> 00:30:42:	Torrez. He was recently talking on. I believe it was faced the nation about low vaccination
00:30:36> 00:30:38: 00:30:38> 00:30:42: 00:30:42> 00:30:45:	Torrez. He was recently talking on. I believe it was faced the nation about low vaccination rates amongst his constituency,
00:30:36> 00:30:38: 00:30:38> 00:30:42: 00:30:42> 00:30:45: 00:30:45> 00:30:50:	Torrez. He was recently talking on. I believe it was faced the nation about low vaccination rates amongst his constituency, and he equated the greatest barrier to vaccine access was
00:30:36> 00:30:38: 00:30:38> 00:30:42: 00:30:42> 00:30:45: 00:30:45> 00:30:50: 00:30:50> 00:30:51:	Torrez. He was recently talking on. I believe it was faced the nation about low vaccination rates amongst his constituency, and he equated the greatest barrier to vaccine access was the digital divide.
00:30:36> 00:30:38: 00:30:38> 00:30:42: 00:30:42> 00:30:45: 00:30:45> 00:30:50: 00:30:50> 00:30:51: 00:30:51> 00:30:53:	Torrez. He was recently talking on. I believe it was faced the nation about low vaccination rates amongst his constituency, and he equated the greatest barrier to vaccine access was the digital divide. Access to information for his constituents.
00:30:36> 00:30:38: 00:30:38> 00:30:42: 00:30:42> 00:30:45: 00:30:45> 00:30:50: 00:30:50> 00:30:51: 00:30:51> 00:30:53: 00:30:53> 00:30:56:	Torrez. He was recently talking on. I believe it was faced the nation about low vaccination rates amongst his constituency, and he equated the greatest barrier to vaccine access was the digital divide. Access to information for his constituents. He stated that those in the Bronx who have no
00:30:36> 00:30:38: 00:30:38> 00:30:42: 00:30:42> 00:30:45: 00:30:45> 00:30:50: 00:30:50> 00:30:51: 00:30:51> 00:30:53: 00:30:53> 00:30:56: 00:30:56> 00:30:58:	Torrez. He was recently talking on. I believe it was faced the nation about low vaccination rates amongst his constituency, and he equated the greatest barrier to vaccine access was the digital divide. Access to information for his constituents. He stated that those in the Bronx who have no access to the Internet. Have much less access to information about vaccination
00:30:36> 00:30:38: 00:30:38> 00:30:42: 00:30:42> 00:30:45: 00:30:45> 00:30:50: 00:30:50> 00:30:51: 00:30:51> 00:30:53: 00:30:53> 00:30:56: 00:30:56> 00:30:58: 00:30:58> 00:31:02:	Torrez. He was recently talking on. I believe it was faced the nation about low vaccination rates amongst his constituency, and he equated the greatest barrier to vaccine access was the digital divide. Access to information for his constituents. He stated that those in the Bronx who have no access to the Internet. Have much less access to information about vaccination sites and have no real ability to participate in online registration
00:30:36> 00:30:38: 00:30:38> 00:30:42: 00:30:42> 00:30:45: 00:30:45> 00:30:50: 00:30:50> 00:30:51: 00:30:51> 00:30:53: 00:30:53> 00:30:56: 00:30:56> 00:30:58: 00:30:58> 00:31:02: 00:31:02> 00:31:06:	Torrez. He was recently talking on. I believe it was faced the nation about low vaccination rates amongst his constituency, and he equated the greatest barrier to vaccine access was the digital divide. Access to information for his constituents. He stated that those in the Bronx who have no access to the Internet. Have much less access to information about vaccination sites and have no real ability to participate in online registration systems.
00:30:36> 00:30:38: 00:30:38> 00:30:42: 00:30:42> 00:30:45: 00:30:45> 00:30:50: 00:30:50> 00:30:51: 00:30:51> 00:30:53: 00:30:53> 00:30:56: 00:30:56> 00:30:58: 00:30:58> 00:31:02: 00:31:02> 00:31:10:	Torrez. He was recently talking on. I believe it was faced the nation about low vaccination rates amongst his constituency, and he equated the greatest barrier to vaccine access was the digital divide. Access to information for his constituents. He stated that those in the Bronx who have no access to the Internet. Have much less access to information about vaccination sites and have no real ability to participate in online registration systems. The importance has never been clear and the data is
00:30:36> 00:30:38: 00:30:38> 00:30:42: 00:30:42> 00:30:45: 00:30:45> 00:30:50: 00:30:50> 00:30:51: 00:30:51> 00:30:53: 00:30:55> 00:30:56: 00:30:56> 00:30:58: 00:30:58> 00:31:02: 00:31:02> 00:31:10: 00:31:11> 00:31:12:	Torrez. He was recently talking on. I believe it was faced the nation about low vaccination rates amongst his constituency, and he equated the greatest barrier to vaccine access was the digital divide. Access to information for his constituents. He stated that those in the Bronx who have no access to the Internet. Have much less access to information about vaccination sites and have no real ability to participate in online registration systems. The importance has never been clear and the data is crystal clear. Increasing access, adoption, and use of broadband
00:30:36> 00:30:38: 00:30:38> 00:30:42: 00:30:42> 00:30:45: 00:30:45> 00:30:50: 00:30:50> 00:30:51: 00:30:51> 00:30:53: 00:30:53> 00:30:56: 00:30:56> 00:30:58: 00:30:58> 00:31:02: 00:31:02> 00:31:10: 00:31:11> 00:31:12: 00:31:12> 00:31:16:	Torrez. He was recently talking on. I believe it was faced the nation about low vaccination rates amongst his constituency, and he equated the greatest barrier to vaccine access was the digital divide. Access to information for his constituents. He stated that those in the Bronx who have no access to the Internet. Have much less access to information about vaccination sites and have no real ability to participate in online registration systems. The importance has never been clear and the data is crystal clear. Increasing access, adoption, and use of broadband infrastructure be in
00:30:36> 00:30:38: 00:30:38> 00:30:42: 00:30:42> 00:30:45: 00:30:45> 00:30:50: 00:30:50> 00:30:51: 00:30:51> 00:30:53: 00:30:53> 00:30:56: 00:30:56> 00:30:58: 00:30:58> 00:31:02: 00:31:02> 00:31:10: 00:31:11> 00:31:12: 00:31:12> 00:31:12: 00:31:12> 00:31:19:	Torrez. He was recently talking on. I believe it was faced the nation about low vaccination rates amongst his constituency, and he equated the greatest barrier to vaccine access was the digital divide. Access to information for his constituents. He stated that those in the Bronx who have no access to the Internet. Have much less access to information about vaccination sites and have no real ability to participate in online registration systems. The importance has never been clear and the data is crystal clear. Increasing access, adoption, and use of broadband infrastructure be in rural areas or in underserved urban markets.

	unemployment rates,
00:31:28> 00:31:33:	not to mention the value that's created through improved educational
00:31:34> 00:31:38:	opportunities and access to important health care services.
00:31:38> 00:31:43:	Next slide, please. In an educational forum like this,
00:31:43> 00:31:46:	I think it's often important to point out so often
00:31:46> 00:31:49:	at the broadband group we talked about the importance of
00:31:49> 00:31:53:	fiber infrastructure and a question is often raised.
00:31:53> 00:31:56:	You know, we're living in an increasingly wireless world.
00:31:56> 00:31:58:	Why all this talk about wires?
00:31:58> 00:32:01:	You guys sound like a bunch of dinosaurs.
00:32:01> 00:32:04:	Well, it's important to understand that high quality,
00:32:04> 00:32:09:	high performance wireless connectivity. Does not occur without wires plugging
00:32:09> 00:32:12:	into those antennas that can then distribute that signal.
00:32:12> 00:32:16:	The fiber is necessary in order for strong signal to
00:32:16> 00:32:20:	be deployed from those wireless and tennis.
00:32:20> 00:32:23:	Without fiber, you're going to lack the ability to have
00:32:23> 00:32:25:	high performance wireless,
00:32:25> 00:32:28:	so they are directly related directly complementary.
00:32:28> 00:32:32:	It's important to understand that when looking at the various
00:32:32> 00:32:35:	opportunities to improve connectivity.
00:32:35> 00:32:39:	Fiber, of course, is the gold standard to every premise.
00:32:39> 00:32:42:	Not always feasible, not always cost effective,
00:32:42> 00:32:46:	but it's important. Understand the relevance and the need for
00:32:46> 00:32:50:	fiber in the network to then connect to those wireless
00:32:50> 00:32:53:	signals that can then be distributed to allow for the
00:32:53> 00:32:57:	connectivity where it is needed.
00:32:57> 00:32:58:	That was my opening comments.
00:32:58> 00:33:02:	Paul, thank you again. Actually have one last slide and
00:33:02> 00:33:02:	I come.
00:33:02> 00:33:05:	This is who I always find for my inspirations.
00:33:05> 00:33:07:	Blair Levin with the Brookings Institute.
00:33:07> 00:33:11:	He was actually the lead author of the FCC's National
00:33:11> 00:33:13:	Broadband Plan back in 2009.
00:33:13> 00:33:17:	Actions taken today will affect what kind of broadband networks
00:33:17> 00:33:20:	the city has in 10 years and in 10 years
00:33:20> 00:33:21:	whether it has faster,
00:33:21> 00:33:25:	cheaper, better broadband networks will affect everything that state and
00:33:25> 00:33:25:	city does.
00:33:27> 00:33:30:	Thank you again and look forward to the any questions

00:33:30> 00:33:31:	we might be able to field as a group.
00:33:33> 00:33:36:	Jeff, Erik and Mia, thank you so much for those
00:33:36> 00:33:37:	opening comments.
00:33:37> 00:33:40:	That was very informative and I think we had the
00:33:40> 00:33:42:	benefit from each of you all at really getting a
00:33:43> 00:33:46:	nice taste of the very different scales of the issue
00:33:46> 00:33:49:	that we have when it comes to the provision of
00:33:49> 00:33:50:	broadband.
00:33:50> 00:33:53:	And I want to spend just a minute as we
00:33:53> 00:33:57:	sort of wait for a few questions to queue up.
00:33:57> 00:34:00:	To just chat a little bit about that sort of
00:34:00> 00:34:01:	barriers,
00:34:01> 00:34:04:	how do we get work with the condition constituency?
00:34:04> 00:34:09:	Like U Li who oftentimes land development community is looking
00:34:09> 00:34:13:	at a very site specific parcel and you know they
00:34:13> 00:34:16:	may or may not be in an area that's got
00:34:16> 00:34:17:	choice of broadband, much less.
00:34:17> 00:34:21:	You know, high quality you know single element broadband,
00:34:21> 00:34:25:	much like Maya was talking about some of the areas
00:34:25> 00:34:27:	in her community.
00:34:27> 00:34:30:	What is the thing said you a lion in the
00:34:30> 00:34:32:	real estate community can do?
00:34:32> 00:34:34:	You know, aside perhaps or including,
00:34:34> 00:34:38:	you know just spending the money to run the fiber
00:34:38> 00:34:42:	from the closest connection point to where they need to
00:34:42> 00:34:43:	go.
00:34:43> 00:34:47:	And I wonder, maybe that can be equated as you're
00:34:47> 00:34:49:	sort of talking about what do we do?
00:34:49> 00:34:52:	Same thing with water and sewer.
00:34:52> 00:34:55:	How do we how we manage those issues and how
00:34:55> 00:34:57:	we make those connections?
00:34:57> 00:35:01:	And we improve those connections to those particular sites.
00:35:01> 00:35:03:	Eric Jeff man. Any thoughts about that?
00:35:06> 00:35:09:	Uhm, I will say that I think what is very
00:35:10> 00:35:14:	important is to have a general understanding of what the
00:35:15> 00:35:15:	Community.
00:35:15> 00:35:19:	Sees broadband, ask, do they see it as something that
00:35:19> 00:35:23:	is more of a responsibility for the private ISP's?
00:35:23> 00:35:27:	Do they see it as something that they need to
00:35:27> 00:35:28:	maintain?
00:35:28> 00:35:31:	Is it something that they need to update?

00:35:31> 00:35:34:	Do they have a understanding of their terrain?
00:35:34> 00:35:38:	So maybe they would prefer satellite as opposed to fiber?
00:35:38> 00:35:42:	If they have a lot of water or you know
00:35:42> 00:35:44:	things like that.
00:35:44> 00:35:47:	On the flip side, is it a community that is
00:35:47> 00:35:51:	interested in wanting to work with the local co-ops and
00:35:51> 00:35:51:	such,
00:35:51> 00:35:56:	and I think. Having that understanding at least allows you
00:35:56> 00:35:58:	to join the conversation.
00:35:58> 00:36:02:	Plus, if in the research you've done to bring development
00:36:02> 00:36:03:	in the area,
00:36:03> 00:36:07:	if you feel that you have some sort of valuable
00:36:07> 00:36:11:	set of data to share with that community very much
00:36:11> 00:36:15:	so to the point that it is maybe more expensive
00:36:15> 00:36:18:	to do said research and you want to kind of
00:36:18> 00:36:21:	build a partnership with our community,
00:36:21> 00:36:24:	I think that that is an opportunity for you.
00:36:24> 00:36:26:	To kind of get a feel.
00:36:26> 00:36:32:	Did an understanding whether you are you allowed member
	or
00:36:32> 00:36:34:	whether you are dumb.
00:36:34> 00:36:37:	Someone leading something like a UI tab.
00:36:37> 00:36:42:	Uh, which is leveraging that the Kurdish infrastructure programming to
00:36:42> 00:36:47:	bring like minded folks in case studies to the community.
00:36:48> 00:36:51:	I think it also needs to be viewed as integral
00:36:51> 00:36:56:	to the entire planning process it touches on every component
00:36:56> 00:36:58:	of what the development is looking to be,
00:36:58> 00:37:01:	and it should not be viewed as foreign.
00:37:01> 00:37:04:	Amorphous may be difficult to understand outside planning priority.
00:37:04> 00:37:08:	It needs to be integrated into everything that is done
00:37:08> 00:37:11:	because as Blair Levin wrote in his quote,
00:37:11> 00:37:14:	it's going to dictate how everything is eventually worked within
00:37:14> 00:37:15:	that community.
00:37:15> 00:37:17:	So working with the service providers,
00:37:17> 00:37:19:	making it clear. That you,
00:37:19> 00:37:22:	as a developer, understand the importance of connectivity and that
00:37:22> 00:37:24:	you as a developer want to understand.
00:37:24> 00:37:26:	How can I be a better customer for you?
00:37:26> 00:37:29:	What are the challenges that you typically have working with

00:37:29> 00:37:31:	the land development and real estate industry,
00:37:31> 00:37:33:	and oftentimes it's the fact that both industries are just
00:37:33> 00:37:35:	talking different languages.
00:37:35> 00:37:38:	Different expectations when the land developer says we need connectivity
00:37:38> 00:37:39:	in the near term,
00:37:39> 00:37:41:	they mean 12 to 16 months when a service provider
00:37:41> 00:37:43:	says we need connectivity in near term,
00:37:43> 00:37:46:	they here three months and so the service writer gets
00:37:46> 00:37:47:	there in three months.
00:37:47> 00:37:49:	The land developer is not.
00:37:49> 00:37:52:	Ready for service to have customers for them for another
00:37:52> 00:37:52:	year.
00:37:52> 00:37:54:	The service provider gets frustrated.
00:37:54> 00:37:56:	Then they're not there when they actually do need the
00:37:56> 00:37:57:	services activated,
00:37:57> 00:38:00:	and then there, that's when the antagonistic relationship continues to
00:38:00> 00:38:01:	spiral downward.
00:38:01> 00:38:04:	So working with the service provider telling them we have
00:38:04> 00:38:05:	a plan,
00:38:05> 00:38:07:	we want to be good customers for you.
00:38:07> 00:38:10:	We want to help create more visible revenue than what
00:38:10> 00:38:13:	would otherwise be the case if you were to do
00:38:13> 00:38:16:	this independent without our involvement and how can we create
00:38:16> 00:38:21:	a platform for investment that might not otherwise occur.
00:38:21> 00:38:21:	Yeah,
00:38:21> 00:38:24:	I I think just just to add to that Jeff
00:38:25> 00:38:29:	as well is is working with and and connecting with
00:38:29> 00:38:33:	the public sector as well as the private sector.
00:38:33> 00:38:35:	And understanding you know what?
00:38:35> 00:38:38:	You know what the the the goal you know designed
00:38:38> 00:38:43:	with the end in mind and understanding that there's opportunities
00:38:43> 00:38:44:	out there.
00:38:44> 00:38:47:	We're seeing a lot of you know in the industry
00:38:47> 00:38:49:	where data centers,
00:38:49> 00:38:53:	data centers. Are are becoming more and more important and
00:38:53> 00:38:54:	integral in terms of,
00:38:54> 00:38:58:	UM, you know you see in different parts of the
00:38:58> 00:39:02:	country where where land is fairly expensive and and some

00:39:02> 00:39:04:	of the data center hubs.
00:39:04> 00:39:08:	So understanding opportunities that you know the rural parts
	of
00:39:08> 00:39:12:	the states in the country can can bring in terms
00:39:12> 00:39:13:	of you know,
00:39:13> 00:39:17:	building out data centers and understanding the value of a
00:39:17> 00:39:20:	data center and understanding the value of.
00:39:20> 00:39:24:	Private connectivity and public connectivity into those data centers and
00:39:24> 00:39:27:	understanding the appearing strategy in terms of,
00:39:27> 00:39:31:	uh, there's the old adage of build it and they
00:39:31> 00:39:32:	will come,
00:39:32> 00:39:37:	you know? So understanding that with that end in mind
00:39:37> 00:39:39:	of what you want to achieve,
00:39:39> 00:39:42:	one being on the data center side,
00:39:42> 00:39:47:	and then secondarily what we're also seeing are opportunities where
00:39:47> 00:39:51:	developments are being created that are also bringing in new
00:39:51> 00:39:52:	technologies.
00:39:52> 00:39:57:	Like 5G and having that opportunity where developers can provide
00:39:57> 00:40:03:	an infrastructure that not only serves up you know residents
00:40:03> 00:40:05:	of the Community can.
00:40:05> 00:40:10:	Also what I call fiber deserts can reach connectivity into
00:40:10> 00:40:13:	these fiber deserts within urban communities,
00:40:13> 00:40:18:	but also develop an infrastructure that has an opportunity of
00:40:18> 00:40:22:	creating and implementing new technologies.
00:40:22> 00:40:26:	And bringing in carriers to as a as a infrastructure
00:40:26> 00:40:28:	as a service for carriers,
00:40:28> 00:40:32:	wireless carriers to come in and and utilize that infrastructure
00:40:32> 00:40:34:	to serve their customers.
00:40:34> 00:40:38:	And that those those manifest themselves in terms of you
00:40:38> 00:40:38:	know,
00:40:38> 00:40:41:	apartment buildings, condominiums on you know,
00:40:41> 00:40:43:	folks on the street in parks,
00:40:43> 00:40:48:	those types of things. So it's really understanding with with
00:40:48> 00:40:49:	that end in mind,
00:40:49> 00:40:52:	designing with the end in mind and.
00:40:52> 00:40:56:	And there are. There's a lot of opportunities out there
00:40:56> 00:40:58:	in terms of real estate,
00:40:58> 00:41:01:	real estate development in terms of the impact of what
00:41:01> 00:41:02:	can be done locally,
00:41:02> 00:41:05:	and then also obviously as a business itself.

00:41:07> 00:41:11:	So my experience working with land development has been such
00:41:11> 00:41:15:	that we have our opening conversations with the water and
00:41:15> 00:41:16:	sewer folks,
00:41:16> 00:41:18:	usually municipality, sometimes at private,
00:41:18> 00:41:22:	offering. But they always almost always have some type of
00:41:22> 00:41:27:	cost sharing or some type of program for the extension
00:41:27> 00:41:30:	of utilities or the upgrading utilities.
00:41:30> 00:41:32:	For particular site power, same thing.
00:41:32> 00:41:37:	Most power companies have an economic development program to you
00:41:37> 00:41:41:	know increase load on their system and they have grant
00:41:41> 00:41:44:	programs and extension policies to do that.
00:41:44> 00:41:47:	That hasn't been my case with ISP's now may I
00:41:48> 00:41:52:	haven't talked to the right ones and maybe that's changing,
00:41:52> 00:41:56:	but I wonder from your perspective very different views are
00:41:57> 00:42:00:	the ISP's and the providers out there seeing themselves.
00:42:00> 00:42:05:	In the same way that utilities are and being proactive
00:42:05> 00:42:10:	about extensions of those services and working with development to
00:42:10> 00:42:13:	upgrade service to be able to get faster,
00:42:13> 00:42:16:	more reliable service in areas.
00:42:16> 00:42:17:	1
00:42:17> 00:42:18:	think it depends, I think,
00:42:18> 00:42:22:	to be clear, understand the mindset of the service provider
00:42:22> 00:42:23:	that has no competition.
00:42:23> 00:42:26:	They're not motivated to serve your development with anything special,
00:42:26> 00:42:29:	and what I mean by that is because they look
00:42:29> 00:42:33:	like they're going to get the business regardless whether you
00:42:33> 00:42:34:	hate him or not.
00:42:34> 00:42:37:	'cause you know how many other opportunities the one thing
00:42:37> 00:42:40:	that's going to motivate them is the opportunity to not
00:42:40> 00:42:42:	serve your business.
00:42:42> 00:42:45:	Your new development project. So creating a platform of competition,
00:42:45> 00:42:49:	be it. Recognizing alternative qualified service providers that might come
00:42:49> 00:42:52:	in to serve your community or opportunities for alternative access
00:42:53> 00:42:55:	to the Internet is what's going to motivate them to
00:42:55> 00:42:57:	do anything different other than that.
00:42:57> 00:42:59:	Again, they have no motivation.

00:42:59> 00:43:01:	They have no reason to act differently.
00:43:01> 00:43:04:	These are nationwide companies with millions and millions of
	subscribers
00:43:04> 00:43:06:	do anything different outside of their playbook.
00:43:06> 00:43:09:	You understand, it makes it very challenging for them.
00:43:09> 00:43:12:	They were to do that in every market around the
00:43:12> 00:43:12:	country.
00:43:12> 00:43:14:	It would be a mess.
00:43:14> 00:43:17:	They can't do it. So how can you help?
00:43:17> 00:43:20:	Bring them into a market at a pace they wouldn't
00:43:20> 00:43:22:	otherwise go on their own,
00:43:22> 00:43:24:	and that's what each of those developments that you saw
00:43:24> 00:43:28:	were able to accomplish through a structured plan that understands
00:43:28> 00:43:29:	their business model.
00:43:29> 00:43:32:	If you ask them to do something that's not reasonable,
00:43:32> 00:43:33:	it's not going to happen.
00:43:33> 00:43:36:	Make it reasonable. Make it structured and create a platform
00:43:36> 00:43:37:	for competition,
00:43:37> 00:43:39:	either very real or even perceived.
00:43:39> 00:43:41:	Helping them understand you're thinking of alternatives.
00:43:41> 00:43:43:	That's how you get their attention.
00:43:44> 00:43:49:	And Eric, I'm gonna give you the floor because in
00:43:49> 00:43:49:	a second,
00:43:49> 00:43:54:	because my background, my perspective essentially doesn't really allow me
00:43:54> 00:43:56:	the opportunity to interact with ISP's.
00:43:56> 00:43:59:	Very often, my time is almost always,
00:43:59> 00:44:03:	you know, given to folks who are the citizens and
00:44:03> 00:44:04:	whatnot.
00:44:04> 00:44:07:	But what I would say is Interstate,
00:44:07> 00:44:11:	or at least in a part of a state where
00:44:11> 00:44:15:	a lot of the effort is going towards.
00:44:15> 00:44:21:	Especially when we're talking about legislation to support private ISP's
00:44:21> 00:44:22:	and whatnot.
00:44:22> 00:44:25:	A lot of the information at the communities would want
00:44:25> 00:44:27:	to inform themselves like Jeff is Speaking of,
00:44:27> 00:44:31:	which I think is a fantastic idea right to edit
00:44:31> 00:44:34:	and develop your strategic plan so that it is a
00:44:34> 00:44:37:	fall into place sort of model.
00:44:37> 00:44:40:	A lot of this information is very prized here,
00:44:40> 00:44:43:	and it isn't easy access or said.

00:44:43> 00:44:48:	Communities don't really know what to do with this information
00:44:48> 00:44:49:	once getting it.
00:44:49> 00:44:52:	If it you know if ever getting it.
00:44:52> 00:44:57:	And so I'm curious to hear Jeff and Eric what
00:44:57> 00:45:00:	your thoughts are with the top.
00:45:00> 00:45:04:	Talking about communities that are maybe on the outskirts of
00:45:04> 00:45:07:	urban areas and rural communities,
00:45:07> 00:45:11:	how they could develop or have a better understanding of
00:45:11> 00:45:16:	fitting themselves into a model for much more dense areas.
00:45:19> 00:45:22:	Yes, So what? I've what I've seen in in out
00:45:22> 00:45:27:	there and and different object opportunities in terms of States
00:45:28> 00:45:29:	and counties is.
00:45:29> 00:45:32:	Is the partnership between the public and the private,
00:45:32> 00:45:37:	so when there is a site or a development of
00:45:37> 00:45:37:	a site?
00:45:37> 00:45:41:	You know, there's also an opportunity to partner with the
00:45:42> 00:45:45:	public sector to see if there's an opportunity to also
00:45:45> 00:45:49:	help the public sector gain connectivity through,
00:45:49> 00:45:53:	you know, meaning gain connectivity to several schools in the
00:45:53> 00:45:56:	area to a Community Center to a library,
00:45:56> 00:46:01:	and leveraging you know that potential future build to get
00:46:01> 00:46:05:	out to that development parcel or whatever that site may
00:46:05> 00:46:09:	be on the private side and help share in the
00:46:09> 00:46:11:	costs. To get connectivity there,
00:46:11> 00:46:14:	and we've seen that in practice where you have both
00:46:15> 00:46:19:	the public sector and the private sector coming together in
00:46:19> 00:46:21:	joint builds sharing the same,
00:46:21> 00:46:25:	what I call a trench and offsetting costs by as
00:46:25> 00:46:26:	much as 50%
00:46:26> 00:46:30:	to help get connectivity out to a certain location where
00:46:30> 00:46:33:	the the public sector can benefit as well as the
00:46:33> 00:46:35:	private sector can benefit,
00:46:35> 00:46:39:	and they're able to share that trench in that infrastructure
00:46:39> 00:46:40:	and and.
00:46:40> 00:46:44:	And being able to get connectivity and help offset costs
00:46:44> 00:46:48:	where where the public and private can come together and
00:46:48> 00:46:49:	partnerships.
00:46:49> 00:46:53:	One of the one of the important aspects of this
00:46:53> 00:46:58:	is is that you know it's innovating and strategy and
00:46:58> 00:47:00:	tactics for connectivity.
00:47:00> 00:47:04:	Where there's this convergence between public and private

	and converge
00:47:04> 00:47:07:	the the infrastructures when it's appropriate.
00:47:07> 00:47:11:	When there's when the opportunity presents itself.
00:47:11> 00:47:13:	And when it comes to it could be again a
00:47:13> 00:47:17:	development and a water treatment facility and a school.
00:47:17> 00:47:20:	They're all in the same general area.
00:47:20> 00:47:22:	It's it's working together to understand.
00:47:22> 00:47:26:	How can we get there together to help one another
00:47:26> 00:47:29:	be able to serve each of their missions and objectives
00:47:29> 00:47:32:	to get connectivity out to those locations?
00:47:32> 00:47:35:	Excellent, wonderful, thank you, and we're starting
00:47:35> 00:47:38:	to get some comments back from our participants.
00:47:38> 00:47:41:	So one of the ones I think.
00:47:41> 00:47:44:	You know, it's something that all look local governments are
00:47:44> 00:47:45:	dealing with.
00:47:45> 00:47:48:	So actually with broadband we have in most communities we
00:47:48> 00:47:50:	at least have two choices.
00:47:50> 00:47:53:	One is a wired solution and one is a wireless
00:47:53> 00:47:53:	solution.
00:47:53> 00:47:57:	Even though Jeff told us you can't have wireless without
00:47:57> 00:47:57:	wired,
00:47:57> 00:48:01:	but you know you can have the AT&T Verizon T-Mobile
00:48:01> 00:48:04:	over your phone as well as something that is a
00:48:04> 00:48:07:	cable coming right to your house.
00:48:07> 00:48:11:	But as part of that transition to 5G.
00:48:11> 00:48:14:	Is one of the questions is that a lot of
00:48:14> 00:48:15:	people are,
00:48:15> 00:48:17:	you know, looking to develop 5G.
00:48:17> 00:48:20:	People want it, but some people don't want the look
00:48:20> 00:48:23:	of the 5G towers and often protests those zoning changes.
00:48:23> 00:48:27:	We're seeing that change. I know that there's some preemption
00:48:27> 00:48:30:	from local governments and state governments and the federal government
00:48:30> 00:48:31:	about that.
00:48:31> 00:48:34:	But what what's happening out there in the in the
00:48:34> 00:48:35:	marketplace these days?
00:48:35> 00:48:36:	Right?
00:48:36> 00:48:38:	From a land development perspective three years ago?
00:48:38> 00:48:42:	Mainly because of the promotion by all the carriers.
00:48:42> 00:48:45:	The land development community would say we want to be
00:48:45> 00:48:46:	a 5G community.

00:48:46> 00:48:49:	We want to be able to showcase that as an
00:48:49> 00:48:50:	amenity as a differentiator.
00:48:50> 00:48:53:	Well, once it became clear that in order to have
00:48:53> 00:48:55:	that high performance connectivity,
00:48:55> 00:48:57:	there's different flavors of 5G,
00:48:57> 00:49:00:	by the way, to make it even more confusing.
00:49:00> 00:49:02:	But the high performance 5G that's being promised requires what's
00:49:02> 00:49:04:	called network densification,
00:49:04> 00:49:08:	which means small cells which are not necessarily small in
00:49:08> 00:49:10:	size but are small in range in terms of how
00:49:11> 00:49:12:	far the signal can travel.
00:49:12> 00:49:16:	Have to be populated very closely together within a few
00:49:16> 00:49:16:	hundred feet,
00:49:16> 00:49:19:	meaning that if you really want that type of high
00:49:19> 00:49:20:	performance,
00:49:20> 00:49:23:	5G wireless connectivity in your land development project,
00:49:23> 00:49:26:	it runs the risk of being polluted with all of
00:49:26> 00:49:30:	these small cells and so developers have shifted from.
00:49:30> 00:49:32:	We want to absolutely be a 5G community to a
00:49:32> 00:49:36:	more realistic approach of we want that high performance
	wireless
00:49:36> 00:49:37:	connectivity,
00:49:37> 00:49:40:	but of course we want it to be invisible.
00:49:40> 00:49:43:	So how do we pre plan for where those?
00:49:43> 00:49:47:	Locations can be how can we carve out space,
00:49:47> 00:49:50:	place the power conduit, the communication conduit,
00:49:50> 00:49:53:	the fiber that then goes to that signal that gets
00:49:53> 00:49:54:	it distributed.
00:49:54> 00:49:58:	So the more that you can pre plan in advance
00:49:58> 00:50:02:	in the anticipation of the placement of that infrastructure,
00:50:02> 00:50:05:	the more beneficial your development is going to be and
00:50:05> 00:50:07:	within buildings themselves,
00:50:07> 00:50:09:	making sure there's appropriate space.
00:50:09> 00:50:13:	Telecom closet, horizontal vertical conduit runs so that equipment can
00:50:13> 00:50:14:	be.
00:50:14> 00:50:18:	Placed on the roof to then distribute signal throughout the
00:50:18> 00:50:20:	area in which you are located.
00:50:20> 00:50:23:	All of these pre planning ideas which are very simple,
00:50:23> 00:50:27:	upfront but tremendously challenging to put in place in the
00:50:27> 00:50:28:	built environment.
00:50:28> 00:50:31:	So I think maybe me or Eric can talk more

00:50:31> 00:50:33:	about in the built environment.
00:50:33> 00:50:36:	You know, the opportunities for advancing wireless
	infrastructure,
00:50:36> 00:50:39:	be it through public private partnerships or others.
00:50:41> 00:50:44:	So I'll quickly say that rose,
00:50:44> 00:50:49:	in short, most of my conversations are closer to when
00:50:49> 00:50:52:	will you be bringing these towers in?
00:50:52> 00:50:56:	We need the Internet now so.
00:50:56> 00:51:00:	I think that there is and I really don't want
00:51:00> 00:51:04:	to speak about the the constituency that are served using
00:51:04> 00:51:08:	any sort of verbiage to make it seem like they
00:51:08> 00:51:13:	don't know what they want or there isn't ignorance in
00:51:13> 00:51:17:	our state or an ignorance and our parish people are
00:51:17> 00:51:20:	very aware that they are lacking a very.
00:51:20> 00:51:25:	Ascential, I'll take a wire from Craig's presentation earlier.
00:51:25> 00:51:30:	A very essential element to the modern experience.
00:51:30> 00:51:36:	And there's just so many things with telecommunications educations.
00:51:36> 00:51:40:	Even even even just setting yourself up so that you
00:51:40> 00:51:43:	can be comfortable during hurricane season.
00:51:43> 00:51:48:	A lot of these things are found almost exclusively online,
00:51:48> 00:51:52:	almost exclusively through the 5G network on your cell phone.
00:51:52> 00:51:55:	If you have a cell phone,
00:51:55> 00:51:59:	right? And so many people are not at the point
00:51:59> 00:52:03:	where they can talk about something like a,
00:52:03> 00:52:05:	what did you call it?
00:52:05> 00:52:09:	Jeff? A technological? Closet or something like that,
00:52:09> 00:52:11:	but it's not the communications closet,
00:52:11> 00:52:16:	right? And even as someone who was serving them.
00:52:16> 00:52:20:	That that's Burbage that I need to continue to learn,
00:52:20> 00:52:23:	because we quite frankly aren't there yet.
00:52:23> 00:52:25:	People are not. While there is,
00:52:25> 00:52:27:	of course a healthy level of skepticism,
00:52:27> 00:52:30:	you know across the board everywhere.
00:52:30> 00:52:33:	No one. No one is in the no one is
00:52:33> 00:52:37:	in the interest of not being served and everyone wants
00:52:37> 00:52:39:	adequate service.
00:52:39> 00:52:41:	I think the specifics to say,
00:52:41> 00:52:43:	well, this is how you prepared.
00:52:43> 00:52:46:	This is what we don't want or to even be
00:52:47> 00:52:50:	at a point where you can protest the aesthetic of
00:52:50> 00:52:55:	your built environment in lieu of not having broadband at

00:52:55> 00:52:59:	all. That conversation isn't quite happening yet,
00:52:59> 00:53:01:	at least in my purview.
00:53:01> 00:53:03:	But you know I'm one person.
00:53:07> 00:53:11:	Is so I'll just add a couple of items,
00:53:11> 00:53:15:	so one of the things that I would recommend is
00:53:15> 00:53:20:	in that that we recommend is is establishing standards for
00:53:20> 00:53:20:	Poles,
00:53:20> 00:53:25:	right? So the types of poles and and and connectivity
00:53:25> 00:53:29:	and and what we call hotel ING to ensure that
00:53:29> 00:53:32:	aesthetically it can it can.
00:53:32> 00:53:35:	It can be as pleasing as possible.
00:53:35> 00:53:39:	One of the challenges. Again is as panel has mentioned
00:53:39> 00:53:41:	is the aesthetics,
00:53:41> 00:53:44:	but there are ways to mitigate that.
00:53:44> 00:53:48:	Again, it's working with public sector entities as well,
00:53:48> 00:53:52:	and understanding that there are we're seeing more and
	more
00:53:52> 00:53:55:	aesthetically pleasing light poles.
00:53:55> 00:53:59:	I think that's a another opportunity that's out there is.
00:53:59> 00:54:03:	We are seeing Smart street lighting that is being those
00:54:03> 00:54:05:	initiatives throughout.
	C C
00:54:05> 00:54:09:	Cities are are are. Are being implemented and designed where
	Cities are are are. Are being implemented and designed
00:54:05> 00:54:09:	Cities are are are. Are being implemented and designed where leveraging the same type of infrastructure for multiple
00:54:05> 00:54:09: 00:54:09> 00:54:14:	Cities are are are. Are being implemented and designed where leveraging the same type of infrastructure for multiple platforms technology
00:54:05> 00:54:09: 00:54:09> 00:54:14: 00:54:14> 00:54:15:	Cities are are are. Are being implemented and designed where leveraging the same type of infrastructure for multiple platforms technology platforms.
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00:54:05> 00:54:09: 00:54:09> 00:54:14: 00:54:14> 00:54:15: 00:54:15> 00:54:20: 00:54:20> 00:54:21: 00:54:21> 00:54:24: 00:54:24> 00:54:29: 00:54:33> 00:54:33: 00:54:38> 00:54:42: 00:54:43> 00:54:44: 00:54:44> 00:54:48:	Cities are are are. Are being implemented and designed where leveraging the same type of infrastructure for multiple platforms technology platforms. So there's the smart city lighting that is changing over to LED. There's the hotel ING of the wireless antennas, so there's many different ways that technology can be layered and infrastructure can be layered where it's aesthetic, aesthetically pleasing and also handling multiple initiatives with one. One piece of infrastructure and we are seeing those and again I'll I'll. I'll certainly beat the drum with Jeff Fiber. Loves wireless wireless, loves fiber of robust fiber
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00:55:07> 00:55:10:	head end. Back to the data center.
00:55:10> 00:55:13:	Back to whatever that core location is getting back to
00:55:13> 00:55:17:	another tower is incredibly important is to have a good
00:55:17> 00:55:21:	robust fiber infrastructure and then wireless or what we call
00:55:21> 00:55:25:	mobility. Being able to supplement as needed when needed.
00:55:25> 00:55:27:	When applicable, right? Eric? While you're
00:55:27> 00:55:30:	on that, let me pick up on that real quick
00:55:30> 00:55:33:	because one of the questions that we just got in
00:55:33> 00:55:38:	was does emergence of satellite constellation broadband systems.
00:55:38> 00:55:41:	Truly threatened the assumption that you can't have wireless without
00:55:41> 00:55:42:	wires.
00:55:42> 00:55:45:	Are these systems feasible at scale in your view,
00:55:45> 00:55:47:	and what's the expected impact?
00:55:47> 00:55:51:	Is this real? Is this billionaire's view of life or
00:55:51> 00:55:51:	what does
00:55:51> 00:55:54:	that look like? So, so yeah.
00:55:54> 00:55:55:	So I've had, you know,
00:55:55> 00:55:58:	hear that question more and more,
00:55:58> 00:56:02:	and so when it comes to satellite satellite will have.
00:56:02> 00:56:05:	In my opinion, will have a niche.
00:56:05> 00:56:07:	There is a niche for it,
00:56:07> 00:56:09:	right when they were talking,
00:56:09> 00:56:13:	you know. Truly rural remote types of locations satellite again,
00:56:13> 00:56:16:	it's mobility, right? So it's up being able to supplement
00:56:16> 00:56:17:	when applicable,
00:56:17> 00:56:20:	but when we look at?
00:56:20> 00:56:24:	Uhm, smart city types of initiatives and all the IO
00:56:24> 00:56:26:	T devices and,
00:56:26> 00:56:30:	and we're talking smart vehicles and we're talking all of
00:56:30> 00:56:31:	the the,
00:56:31> 00:56:36:	you know, consolidation of all the technology initiatives that are,
00:56:36> 00:56:38:	you know, digital signage. There's,
00:56:38> 00:56:42:	you know the ability for satellite to be able to
00:56:42> 00:56:47:	then push bandwidth out to all of these different locations.
00:56:47> 00:56:51:	It it's it's going to be nearly impossible.
00:56:51> 00:56:53:	To be able to serve,
00:56:53> 00:56:56:	you know, from a satellite type of service provider,
00:56:56> 00:57:00:	you know that's again goes to having that robust fiber
00:57:00> 00:57:04:	infrastructure can then get your digital signage for your kiosk.

00:57:04> 00:57:07:	You're you're smart, you're your IoT devices.
00:57:07> 00:57:09:	Your your sensors, your cameras,
00:57:09> 00:57:12:	all of those. If you think about a roadway and
00:57:12> 00:57:16:	all of the different items and devices that will be
00:57:17> 00:57:18:	on that roadway,
00:57:18> 00:57:21:	fiber will ultimately be able to and then.
00:57:21> 00:57:25:	Again, that mesh component of a wireless supplements will be
00:57:25> 00:57:26:	able to serve.
00:57:26> 00:57:29:	The satellite will have a purpose and will have a
00:57:30> 00:57:30:	need,
00:57:30> 00:57:33:	but that's going to be more of a niche type
00:57:33> 00:57:37:	environment where it can serve single user type of connectivity,
00:57:37> 00:57:41:	right? Survey home that is very remote and and in
00:57:41> 00:57:42:	rural areas guide Jeff.
00:57:44> 00:57:47:	Yeah, and I guess I should clarify.
00:57:47> 00:57:49:	When I say wireless requires fiber,
00:57:49> 00:57:53:	high performance wireless require spider is what we were talking
00:57:53> 00:57:56:	about here and I think in this discussion we're talking
00:57:56> 00:57:58:	about how to secure reliable,
00:57:58> 00:58:02:	high quality connectivity. As I said in my opening comments,
00:58:02> 00:58:05:	quality matters, quality of the connection matters.
00:58:05> 00:58:09:	Satellite wireless will play an important role in filling in
00:58:09> 00:58:12:	the gaps where it just is cost prohibitive,
00:58:12> 00:58:14:	especially from a timing perspective of.
00:58:14> 00:58:17:	Getting it there sooner than where it might be for
00:58:17> 00:58:20:	the wired connectivity to get out there,
00:58:20> 00:58:23:	but when thinking about goal setting when looking at place
00:58:23> 00:58:26:	making you should be looking at satellite as your fail
00:58:26> 00:58:27:	safe.
00:58:27> 00:58:30:	I suspect as opposed to your plan because otherwise your
00:58:30> 00:58:33:	future or current residents are going to be disappointed even
00:58:33> 00:58:35:	if it's good enough today.
00:58:35> 00:58:38:	The trajectory of bandwidth growth and demand is continuing to
00:58:38> 00:58:42:	outpace the ability for services like satellite broadband to be
00:58:42> 00:58:43:	able to keep up.
00:58:44> 00:58:47:	And if I can round out that conversation,
00:58:47> 00:58:52:	I'd just like to bring it back to web,
00:58:52> 00:58:54:	develop whatever you developing residential,
00:58:54> 00:58:56:	commercial. You know I'm feeling like.

00:58:56> 00:59:00:	And this is true of the of the field that
00:59:00> 00:59:05:	there is a level of Community responsibility of understanding what
00:59:05> 00:59:07:	your competitive edge is.
00:59:07> 00:59:11:	What you need, especially as you are wanting to promote
00:59:11> 00:59:14:	invite more development maintains.
00:59:14> 00:59:18:	The development in your area I'm thinking about specifically the
00:59:18> 00:59:19:	communities at hand.
00:59:19> 00:59:24:	As a developer, you know attempts to join them.
00:59:24> 00:59:27:	And I think in a point that Rose put in
00:59:27> 00:59:28:	the chat earlier,
00:59:28> 00:59:32:	but also kind of coming back to the satellite point.
00:59:32> 00:59:35:	I think zoning in and of itself is still developing,
00:59:35> 00:59:38:	right? We're still having conversations about single use.
00:59:38> 00:59:40:	We're still having conversations about really.
00:59:40> 00:59:43:	What is the definition of a rural community?
00:59:43> 00:59:47:	And so while we are talking about.
00:59:47> 00:59:50:	Or should we be thinking about satellite?
00:59:50> 00:59:52:	Should we be thinking about fiber?
00:59:52> 00:59:55:	I think there are a couple of other things that
00:59:55> 00:59:56:	can come before that,
00:59:56> 00:59:59:	such as if fiber is as.
00:59:59> 01:00:03:	If wireless is as dependent on fiber as I trust
01:00:03> 01:00:07:	it is because of Jeffs long background with this kind
01:00:07> 01:00:11:	of work it would be nice for certain communities and
01:00:11> 01:00:16:	organizations to have a level of transparency of understanding where
01:00:16> 01:00:19:	fiber is in their community right in their state so
01:00:19> 01:00:22:	that they can better verbalize what they need.
01:00:22> 01:00:26:	Or a developer who was wanting to come into that
01:00:26> 01:00:29:	area wanting to understand where is the most.
01:00:29> 01:00:34:	Opportune area to put this business to put this building
01:00:34> 01:00:35:	that I want.
01:00:35> 01:00:39:	I think there is a level of sustainability that needs
01:00:39> 01:00:42:	to continue to happen in conversations.
01:00:42> 01:00:47:	Transparency, things that are already standing that can be retrofitted
01:00:47> 01:00:51:	like the the skeleton of a Main Street corridor,
01:00:51> 01:00:55:	right? Wanting to revisit that wanting to maybe understand.
01:00:55> 01:00:59:	Are there federal organizations that long ago put things like
01:00:59> 01:01:00:	dark fiber?
01:01:00> 01:01:03:	In these areas and we just don't know I I

don't want to go off until another tangent but super
long story.
What I'm saying is we can think about how do
St lights look.
We can think about. Elon Musk put in satellites in
the sky,
but I think what is most important right now whether
we're talking about a rule or urban community is that
they still have a lot of people who do not
have Internet, let alone let alone 25.
Three levels of broadband connectivity.
And. The pole can look like maybe anything that's not
incredibly ugly as long as they can pay their bill
without having to go an hour into the city center
to pay it, they are willing to talk about and
develop or within their affordability pay for a certain provider
to bring it to their home if.
When a hurricane comes or there's a flood event.
They can still communicate with an emergency organization or their
family,
and so there's high level.
There's low level, but. You know it,
the conversation is big and I think transparency is so
important to having a real strategic understanding of it,
especially to take everything into edge of what Eric and
Jeff shared with us today.
Thank you. I think
we've got time for maybe 1 1/2 more questions as
part of it,
but when I guess quick question,
how far out do you see fiber taking over all
major metro areas?
Are we covered in our metro areas these days or
we still have room to room to grow?
Uh, did the the urban digital divide,
which isn't often talked about,
is much more stark in terms of a population then
then the rule both critically important,
but the urban does not get the political attention,
mainly because, well, there's a number of reasons for it
that we don't need to get into this,

01:03:03> 01:03:06:	but the urban digital divide is very real and it
01:03:06> 01:03:09:	is critically important that it be addressed.
01:03:09> 01:03:12:	There are fiber networks throughout the cities,
01:03:12> 01:03:15:	but having them extend. To connect to the buildings to
01:03:15> 01:03:19:	the population centers is expensive in California and
	underground fiber
01:03:19> 01:03:22:	build 1 to \$2 million in major cities,
01:03:22> 01:03:25:	Perma one or \$2 million per month is the cost
01:03:25> 01:03:27:	of deploying that fiber network,
01:03:27> 01:03:30:	and that's to get your residents of subscribers and then
01:03:30> 01:03:33:	are paying 40 or 50 bucks a month.
01:03:33> 01:03:36:	It's very hard economics and that's why you don't see
01:03:36> 01:03:36:	it.
01:03:36> 01:03:39:	So how can we effectively change the map?
01:03:39> 01:03:42:	And it's not easy. It takes time.
01:03:42> 01:03:44:	As I mentioned in the blares.
01:03:44> 01:03:47:	He's the reason why he said in 10 years,
01:03:47> 01:03:49:	because it often takes that long.
01:03:49> 01:03:50:	It's not a quick fix,
01:03:50> 01:03:52:	but having a plan in place,
01:03:52> 01:03:53:	working with your current providers,
01:03:53> 01:03:55:	identifying qualified potential competitive providers,
01:03:55> 01:03:58:	and figuring out how you can create a platform for
01:03:58> 01:03:59:	investment by weather.
01:03:59> 01:04:02:	As Eric said earlier, working with public entities of maybe
01:04:02> 01:04:03:	there's other demand points,
01:04:03> 01:04:06:	and if they build the fiber to connect to that
01:04:06> 01:04:07:	residential unit,
01:04:07> 01:04:10:	there might also be a public building there that also
01:04:10> 01:04:13:	needs better connectivity that they're not thinking about.
01:04:13> 01:04:15:	And now you've increased the visible revenue.
01:04:15> 01:04:22:	From that build better changing the economics for it so.
01:04:22> 01:04:26:	Urban fiber it's there. There's a long way to go
01:04:26> 01:04:27:	great.
01:04:28> 01:04:32:	Yeah, I'm sorry Craig can happen that real quick.
01:04:32> 01:04:34:	Yeah, Jeff is so completely right.
01:04:34> 01:04:38:	There are so many. Not so many,
01:04:38> 01:04:42:	but I've seen plenty of studies that say that the
01:04:42> 01:04:45:	urban digital divide is more stark than a rural digital
01:04:46> 01:04:46:	divide,
01:04:46> 01:04:48:	and I think that the conversation,
01:04:48> 01:04:51:	or at least my presence in this conversation,

01:04:51> 01:04:55:	is to make sure that there is a continued light
01:04:55> 01:04:57:	on the rural conversation.
01:04:57> 01:05:00:	But I hope that I am not taking away from
01:05:00> 01:05:04:	the truth that there are so many implications that are
01:05:04> 01:05:07:	not spoken of when we're talking about.
01:05:07> 01:05:11:	That urban digital issues there are so many demographic implications
01:05:11> 01:05:14:	whether we're talking about poverty.
01:05:14> 01:05:17:	But we're talking about absence of educational advantages.
01:05:17> 01:05:22:	If we're talking about. Transportation,
01:05:22> 01:05:25:	even to be able to get to a library right
01:05:25> 01:05:26:	there,
01:05:26> 01:05:29:	maybe fibra underneath a series of apartment complexes,
01:05:29> 01:05:31:	but the affordability of it,
01:05:31> 01:05:33:	or just the awareness of it,
01:05:33> 01:05:37:	is so stark compared to the issues that you would
01:05:37> 01:05:39:	find in a rural community,
01:05:39> 01:05:42:	right? A lot of these places,
01:05:42> 01:05:44:	they just lack the present,
01:05:44> 01:05:47:	the precedence of building out something like that.
01:05:47> 01:05:50:	They lack the foundational infrastructure to bring in.
01:05:50> 01:05:55:	And then. Maintain broadband and so it is so important
01:05:55> 01:05:56:	but.
01:05:56> 01:06:00:	The density that people are looking for ISP's are often
01:06:00> 01:06:03:	looking for are in those urban communities.
01:06:03> 01:06:07:	It's so many, other less than tactile issues that make
01:06:08> 01:06:12:	that digital divide really so much more of a stark
01:06:12> 01:06:15:	and interesting for lack of a better word case.
01:06:16> 01:06:19:	Great, thank you, so I'd like to go ahead and
01:06:19> 01:06:23:	and start to wrap up this conversation as we come
01:06:23> 01:06:26:	up on our one hour and 15 minutes spot here
01:06:26> 01:06:28:	Eric, I'm gonna give you an opportunity to wrap up
01:06:28> 01:06:29:	comments,
01:06:29> 01:06:31:	thoughts, things we haven't touched on.
01:06:33> 01:06:34:	Yeah,
01:06:34> 01:06:37:	so I think the one of the one of the
01:06:37> 01:06:43:	important factors to bridging this divide and and and being
01:06:43> 01:06:49:	able to optimize connectivity is convergence and partnership.
01:06:49> 01:06:54:	Is understanding that the the public sector entities?
01:06:54> 01:06:58:	Uh, there is an interest to partner there.
01:06:58> 01:07:04:	There is an opportunity to partner to to be able
01:07:04> 01:07:05:	to.

01:07:05> 01:07:10:	Work with public sector entities to be able to optimize
01:07:10> 01:07:15:	investment where business models become much more,
01:07:15> 01:07:21:	uh. In terms of a business model for build become
01:07:21> 01:07:23:	much more.
01:07:23> 01:07:26:	Amenable and and and and and it becomes a
01:07:26> 01:07:30:	an easier business model to connect to to the end
01:07:30> 01:07:31:	user.
01:07:31> 01:07:33:	I I do really quick.
01:07:33> 01:07:36:	Want to just dovetail on me as comments in terms
01:07:36> 01:07:38:	of the urban peace,
01:07:38> 01:07:42:	real quick and and we did a recent study and
01:07:42> 01:07:46:	one of the big challenges this was in Ohio in
01:07:46> 01:07:48:	the city and what it was.
01:07:48> 01:07:52:	Affordability that was one of the main challenges and gaps
01:07:52> 01:07:53:	for for connectivity.
01:07:53> 01:07:57:	Was affordability and it was the affordability to be able
01:07:57> 01:08:01:	to have broadband on your phone and broadband at home,
01:08:01> 01:08:04:	but not being able to to do both and I
01:08:04> 01:08:08:	think that's one of the big challenges with on the
01:08:08> 01:08:12:	urban side from our from our study that we we
01:08:12> 01:08:16:	found is is that affordability piece so I think there's
01:08:16> 01:08:20:	the opportunity to be able to partner with public sector
01:08:20> 01:08:24:	and private sector and then also the federal monies.
01:08:24> 01:08:27:	Is that are out there where it's where,
01:08:27> 01:08:31:	it's the emergency broadband benefit program in terms of affordability
01:08:31> 01:08:32:	and and aligning.
01:08:32> 01:08:36:	What the goals are for for your entity and aligning
01:08:36> 01:08:40:	those with the federal monies that are out there.
01:08:40> 01:08:44:	We're seeing tremendous potential and opportunity just to put it
01:08:44> 01:08:45:	in perspective.
01:08:45> 01:08:49:	When President Obama passed the the the stimulus package back
01:08:49> 01:08:50:	in 2008,
01:08:50> 01:08:52:	it was 4.2 or 4.5 billion.
01:08:52> 01:08:56:	That was there for. For the broadband.
01:08:56> 01:09:00:	There's now upwards of 100 million right to put this
01:09:00> 01:09:01:	in perspective,
01:09:01> 01:09:05:	there's upwards of approximately 100 million sixty five recently that
01:09:05> 01:09:06:	just passed it,
01:09:06> 01:09:09:	plus other monies. So there's now a true investment from

01:09:09> 01:09:13: 01:09:13> 01:09:16: 01:09:16> 01:09:19: 01:09:20> 01:09:21: 01:09:21> 01:09:23: 01:09:23> 01:09:25: 01:09:25> 01:09:27:	the federal government to work with States and work with counties and work and work with municipalities. And there's opportunity on the commercial side to partner up with those entities. So thank you, that's important. Two minutes, Jeff. Just carrying on what Eric said,
01:09:27> 01:09:31:	there are \$65 billion in the current infrastructure bill.
01:09:31> 01:09:35:	42 billion will be allocated to the states in block
01:09:35> 01:09:39:	grants for them to be able to allocate or localities.
01:09:39> 01:09:43: 01:09:43> 01:09:46:	The better plan you have in place demonstrated a need
01:09:46> 01:09:50:	with A at the story of how it's going to benefit with a clear plan on how those monies will
01:09:50> 01:09:54:	be spent and how it will benefit the overall economic,
01:09:54> 01:09:57:	social, political, educational. Population of your region,
01:09:57> 01:10:00:	the better position you will be to receive those funds.
01:10:00> 01:10:03:	Start planning now that money will likely be approved in
01:10:03> 01:10:04:	some form,
01:10:04> 01:10:07:	but trying to don't wait to see what form it
01:10:07> 01:10:07:	is.
01:10:07> 01:10:10:	Your plan in place, and then you'll be able to
01:10:10> 01:10:12:	shape it when those monies become available.
01:10:12> 01:10:15:	Otherwise the timeline is going to be too tight.
01:10:15> 01:10:18:	So start planning now, but great conversation Greg.
01:10:18> 01:10:21:	Thanks for leaving it. This was my pleasure to be
01:10:21> 01:10:21:	part
01:10:21> 01:10:23:	of it. Thank you, Mia.
01:10:23> 01:10:23:	Final thoughts.
01:10:26> 01:10:27:	As a developer, you know,
01:10:27> 01:10:31:	be aware that you may be coming into the.
01:10:31> 01:10:35:	Early part of the broadband conversation you may be kicking
01:10:35> 01:10:36:	it off.
01:10:36> 01:10:39:	He may be coming in at the very end,
01:10:39> 01:10:44:	you know, but. The partnership element that.
01:10:44> 01:10:49:	Jeff and Eric have talked about throughout the conversation.
01:10:49> 01:10:53:	It is so important and I think.
01:10:53> 01:10:57:	Recognizing that there are organizations that aren't down the street
01:10:57> 01:11:02:	but are still responsible and still have a tangible relationship
01:11:02> 01:11:06:	with the community that you're wanting to develop and invest
01:11:06> 01:11:11:	in, they very often have some sort of technical background
01:11:11> 01:11:16:	or some sort of longstanding understanding of how this piece

01:11:16> 01:11:20:	fits into the larger scope and how you can align
01:11:20> 01:11:23:	your goals, but what's happening.
01:11:23> 01:11:27:	Or maybe a more macro scale than just the acre
01:11:27> 01:11:29:	or so that you are working on,
01:11:29> 01:11:35:	or just the UM. Pro former that you're looking at.
01:11:35> 01:11:40:	There are communities that very much so are lacking elements
01:11:40> 01:11:42:	of digital literacy,
01:11:42> 01:11:46:	but they are not without interest in being a part
01:11:47> 01:11:49:	of the conversation.
01:11:49> 01:11:54:	They are not without the the ability to communicate what
01:11:54> 01:11:55:	they want,
01:11:55> 01:12:00:	what they need. And they would love to to be
01:12:00> 01:12:04:	a part of a discussion like this too.
01:12:04> 01:12:05:	So that's all I have.
01:12:05> 01:12:07:	Thank you. This is
01:12:07> 01:12:10:	fantastic. Thank you everyone and my thesis at the beginning
01:12:10> 01:12:13:	about broadband being part of the utility infrastructure and being
01:12:13> 01:12:14:	essential.
01:12:14> 01:12:17:	I think we proved that in the last year and
01:12:17> 01:12:19:	a half weren't for broadband.
01:12:19> 01:12:23:	We'd probably all be trading in toilet paper and bottled
01:12:23> 01:12:24:	water at this point,
01:12:24> 01:12:26:	and the economic system would have crumbled.
01:12:26> 01:12:28:	And so we know that.
01:12:28> 01:12:32:	All the. The values that we have that we have.
01:12:32> 01:12:35:	The panelists have talked about education and healthcare and real
01:12:35> 01:12:38:	estate demands and needs all kind of lead into that.
01:12:38> 01:12:40:	That central thesis of this really,
01:12:40> 01:12:44:	truly is just as important as getting water and sewer
01:12:44> 01:12:46:	and power to any particular site.
01:12:46> 01:12:49:	It's all very critical, but we still do have a
01:12:49> 01:12:51:	long way to go for sure.
01:12:51> 01:12:54:	So with that, thank you everyone for participating.
01:12:54> 01:12:56:	Thank you to my panelists,
01:12:56> 01:12:59:	Jeff, Mia, and Eric. Thank you to you alive.
01:12:59> 01:13:01:	We're hosting this another great webinar.
01:13:01> 01:13:04:	Thank you once again. Everyone have a great afternoon,
01:13:04> 01:13:06:	morning or evening wherever you're coming from.

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