



Building a future-proof network

A conversation with product and
engineering leaders at Zayo

The network for what's next.



Rising demand and the future of network capacity

As enterprises face growing pressure to accelerate their digital transformations, the demand for bandwidth is growing too — and fast. The cry for better and on-demand infrastructure can be heard from every corner of our ever-more-wired economy, from the digital fixes needed for the broken supply chain to the rise of network-dependent technologies like autonomous vehicles.

These innovations can only be achieved by meeting bandwidth demand, which is why Zayo is investing heavily both for today and tomorrow. Aaron Werley (Vice President, Lit Services, Zayo) and Chaz Kramer (Vice President, Product Management, Zayo), in an interview with Zayo CMO Kimberly Storin, discuss the trends driving bandwidth demands and how to design the network of the future.



Aaron Werley
Vice President, Lit Services
Zayo



Chaz Kramer
Vice President, Product Management
Zayo



Kimberly Storin
CMO
Zayo

Kimberly Storin:

What are the demands that we see most often from our Zayo customers? What are they asking for right now?

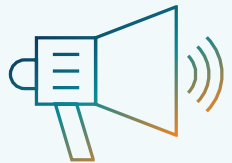
Chaz Kramer:

Well, it's layered. The starting point is: do you have a network where I want to go? Do you have capacity for my services, 10G, 100G, 400G? Can you then scale with my demand over time? And are you at the correct price point? And equally important, how quickly can you deliver to meet my needs?

Aaron Werley:

I would also say demands will vary by product. For instance, we get some rather large requests from cell carriers to school districts for very bespoke services; services highly tailored to their needs. Otherwise, the concerns Chaz mentioned are pretty consistent across our entire customer base. Do you have service where we need it? How much of it? And right now, there's huge pressure on how fast we can deliver.

The biggest demands from customers are:



- ✓ Location
- ✓ Capacity
- ✓ Cost
- ✓ Scalability
- ✓ Speed

Kimberly Storin:

We've heard again and again that organizations are pushing to innovate faster, and that the need to continue digital transformation is so acute. What do you hear from customers?

Aaron Werley:

Cloud providers, for example, are driving incredible bandwidth demands and often approach Zayo to help them meet their core business needs — time to deliver and capacity. We help provide solutions that often start out as high-capacity lit services which eventually evolve into dark fiber services, where Cloud Providers deploy and operate their own optical systems and gain economies of scale. Solutions like this provide the flexibility to meet short term and long term business needs.

Similarly we have the same dynamic on the cell site backhaul and enterprise service side of our network with demands being driven by 5G, the ever growing IOT applications, and remote work. Our customers are solving these demands and look to partner with Zayo to help supply high capacity and high performance connectivity services. They challenge us to provide solutions that easily scale to their needs — often by providing incremental capacity and/or additional logical services quickly and efficiently.

“ Right now, there's huge pressure on how fast we can deliver. ”

— Aaron Werley

Marketplaces currently driving digital transformation:



Chaz Kramer:

In addition to the cloud providers, you also have cloud adopters. We have customers who have a desire to build and configure their ecosystems on their own, with their own Intranets, hybrid cloud environments, enterprise applications, and other intercompany requirements. Data proliferation continues to be a driving factor but on top of that is how it is distributed across a company's footprint. Large data center connectivity to core office locations are a baseline requirement; but now, with everyone working from home as well, and a more general requirement of mobility, our customers need flexible and fast delivery over big pipes, over a broad network.



**Cost and capacity
benefits of newest
fiber technologies**

>60%

lower cost
per bit

2-3x

increased capacity
on fibers

Kimberly Storin:

But it's not just hyperscalers, cloud service providers, and carriers. You're seeing it trickle down into enterprises and mid-sized organizations as well, right?

Aaron Werley:

A great example you wouldn't think of is school districts: the amount of bandwidth that the school districts need is incredible. Learning continues to transform over the past few years and the demand for capacity and connectedness to the internet is more important than ever. We're regularly building private networks for school districts and seeing these needs come through in their requests. In many cases seeing demands in excess of 10 gigs of capacity to every school.

Kimberly Storin:

Bringing up the public sector drives home the point of the ubiquity of that demand. You don't think of school districts as being particularly innovative, but they're having to be.

Aaron Werley:

I'd agree and am excited to see it taking place. On the service provider side, we are also focused on innovating to better support our customer's needs.

My team's focus has been on three phases: the first phase was to identify the right technology to meet the demand. We did a lot of analysis to identify modern platforms which accomplish both increasing fiber capacity and lowering Zayo's cost per bit to deliver services. As a result, Zayo was able to lower our cost per bit by over 60% all while increasing the amount of capacity that we're getting on fibers by 2-3x in some cases.

The second phase is investment. We're deploying that new technology across our network. We are creating significant new capacity as a result of that investment.

And finally, the third phase is pre-provisioning finished services. We have all that capacity in place, we now need to address the time to deliver that Chaz mentioned earlier. By understanding where the consistent demand for service exists, we enable our delivery teams with equipment in place, services prebuilt, ready to deliver. This is yet another investment we are making to reduce our delivery lead times. Through these efforts, we aim to improve our time-to-delivery for new services to no longer be measured in months, but in hours.

Chaz Kramer:

The one thing I'd layer onto that is that Zayo has a market-leading fiber network already. On top of that, we're leveraging that existing network technology to meet customer demand before it exists. There are a lot of companies that can roll out network capacity like Aaron described in the first two phases, but there are very few who are creating new network capacity preemptively.

Kimberly Storin:

Compare this proactive investment approach with how it is most commonly done.

Chaz Kramer:

A lot of times companies like Zayo will be moved by what our customers require us to do. Instead, we're now inverting that, predicting where our customers are going to go, and making proactive investments in those areas. So when the customer

“ We're leveraging existing network technology to meet customer demand before it exists. ”

— Chaz Kramer

asks us for new capacity in that area, we can say, "Great! We were planning on it, and we have it ready for you now." Or in 30 days, rather than in eight or nine months.

Kimberly Storin:

What are some of the barriers that companies face in getting more bandwidth, more quickly?

Aaron Werley:

It is almost certain they'll face supply chain issues right now. We invested early as we started to see the onset of supply chain issues. I believe we may be in a better position than some. And the other advantage, as Chaz mentioned, is really our network footprint. We've got fiber capacity and we've got coverage inherent to our network. For companies trying to replicate Zayo's footprint by building a parallel network, Zon-demand, they will hit large barriers to entry. You certainly can't do it quickly or cost effectively.

Kimberly Storin:

How is Zayo meeting the evolving “on-demand” expectations that you’re seeing with customers?

Chaz Kramer:

The requirements that are creating bandwidth proliferation creep up slowly over time, but they also happen quickly and all at once as well. There are times where customers of ours need to connect new sites or increase bandwidth unexpectedly. Or they realize that they need to build a more diverse path into their network, because they need resiliency. And they wanna know, “How quickly can you give it to me?” When that happens, we want to do our part and deliver on truncated timelines.



Zayo is making
proactive investments
so when our customers
are ready, so are we.

Stay ahead with Zayo

In the communications industry, a wait-and-see approach is the best way to get left behind. At Zayo, we're thinking two steps ahead, watching the market and listening to our customers to predict where things might be going. Interpreting current demand and projecting it forward helps us decide which technologies to pursue and which routes to develop to build the most flexible, future-ready platform.

Find out how you can stay ahead of business demands.

Connect with us: zayo.com

About Zayo

Zayo Group Holdings, Inc. provides mission-critical bandwidth to the world's most impactful companies, fueling the innovations that are transforming our society. Zayo's 126,000-mile network in North America and Europe includes extensive metro connectivity to thousands of buildings and datacenters. Zayo's communications infrastructure solutions include dark fiber, private data networks, wavelengths, Ethernet, dedicated internet access and datacenter connectivity solutions. Zayo owns and operates a Tier 1 IP backbone and through its CloudLink service, Zayo provides low-latency private connectivity that attaches enterprises to their public cloud environments. Zayo serves wireless and wireline carriers, media, tech, content, finance, healthcare and other large enterprises. For more information, visit zayo.com.