



HOULIHAN LOKEY

Digital Infrastructure

INDUSTRY UPDATE | Q1 2022



Houlihan Lokey Digital Infrastructure Industry Update – Q1 2022

Dear Clients and Friends,

Houlihan Lokey is pleased to present its inaugural Digital Infrastructure Industry Update for Q1 2022.

We have included topical news stories, transaction announcements, public markets valuation data, and industry insights to help keep you abreast of this dynamic and constantly evolving industry. We hope you find this quarterly update to be informative and that it serves as a valuable resource to you. If there is additional content you would find useful for future updates, please don't hesitate to call or email us with your suggestions.

We look forward to staying in touch with you.

Regards,

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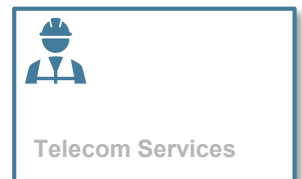
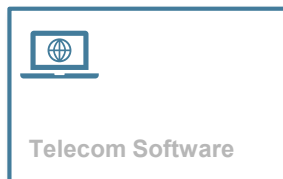
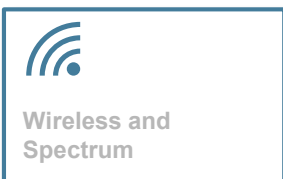
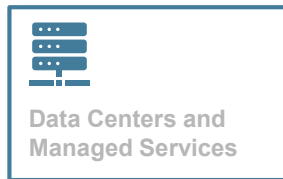
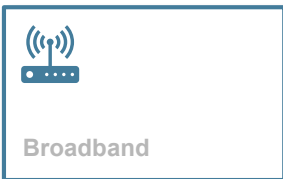
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Industry Subsectors Covered





Houlihan Lokey is the trusted advisor to more top decision-makers than any other independent global investment bank.

Corporate Finance

2021 Investment Banking Rankings
All Global Transactions

| Advisor | Deals |
|------------------|-------|
| 1 Houlihan Lokey | 549 |
| 2 Goldman Sachs | 511 |
| 3 JP Morgan | 508 |
| 4 Rothschild | 437 |
| 5 Morgan Stanley | 393 |

Source: Refinitiv Excludes accounting firms and brokers.

Technology Advisory

2021 M&A Advisory Rankings
Global Technology Transactions

| Advisor | Deals |
|--------------------------|-------|
| 1 Houlihan Lokey | 124 |
| 2 PricewaterhouseCoopers | 118 |
| 3 Goldman Sachs & Co | 114 |
| 4 KPMG | 108 |
| 5 JP Morgan | 91 |

Source: Refinitiv.

Private Equity Activity

2021 Most Active Investment Banks to
Private Equity - Global

| Advisor | Deals |
|---------------------------|-------|
| 1 Houlihan Lokey | 323 |
| 2 Deloitte | 218 |
| 3 William Blair & Company | 183 |
| 4 Lincoln International | 177 |
| 5 KPMG | 150 |

Source: PitchBook

No. 1 Global M&A Advisor

Leading Capital Markets Advisor

No. 1 Global Technology Practice

124 Completed Transactions in 2021

No. 1 Global M&A Fairness Opinion Advisor Over the Past 20 Years*

EXTENDED GLOBAL REACH WITH MORE THAN 1,000 CORPORATE FINANCE BANKERS ACROSS ALL MAJOR MARKETS

North America

■ Approx. 475 Corporate Finance Bankers

Atlanta Miami
Boston Minneapolis
Chicago New York
Dallas San Francisco
Houston Washington, D.C.
Los Angeles

Europe and Middle East

■ Approx. 340 Corporate Finance Bankers

Amsterdam Milan
Dubai Munich
Frankfurt Paris
Lausanne Stockholm
London Tel Aviv
Madrid Zurich
Manchester

Asia-Pacific

■ Approx. 200 Corporate Finance Bankers

Beijing Osaka
Fukuoka Shanghai
Ho Chi Minh City Singapore
Hong Kong SAR Sydney
Mumbai Tokyo
Nagoya
New Delhi

*Announced or completed transactions.

Accomplishments: Q1 2022 in Review











































Digital Infrastructure

Houlihan Lokey again demonstrated its position as the leading investment banking advisor to digital infrastructure and connectivity companies, having advised on more than 25 transactions totaling approximately \$13 billion in transaction value in 2021. The group has been among the most active advisor in the sector in Q1 2022, with numerous new deals announced, and expanded its sector coverage to include the telecom software industry.

The Digital Infrastructure team has earned a reputation for providing superior service and achieving outstanding results in M&A advisory, capital raising, restructuring, and valuation. A trusted advisor, the group combines extensive market capabilities with in-depth industry knowledge to help clients maximize shareholder value.

The Digital Infrastructure team is part of Houlihan Lokey's global Technology Group, with more than 200 bankers dedicated to delivering superior results and outstanding service in the TMT sector.

Selected Recent Transactions

| | | | | | |
|---|--|--|--|---|--|
|  <p>has received a growth equity investment of \$50,000,000 from</p>  <p>Exclusive Financial Advisor</p> |  <p>has been acquired by</p>  <p>Sellside Advisor</p> |  <p>a portfolio company of</p>  <p>has been acquired by</p>  <p>a portfolio company of</p>  <p>Sellside Advisor</p> |  <p>has acquired</p>  <p>Buyside Advisor</p> |  <p>has been acquired by</p>  <p>Sellside Advisor</p> |  <p>has entered into a joint venture with and received a minority equity investment from</p>  <p>Exclusive Financial Advisor</p> |
|  <p>has received a \$200 million preferred equity investment from</p>  <p>Financial Advisor</p> |  <p>has received an investment to fund acquisitions and organic growth from</p>  <p>Exclusive Financial Advisor & Placement Agent</p> |  <p>has received an investment from</p>  <p>Financing Advisor</p> |  <p>has conveyed a portfolio of tower sites to</p>  <p>Sellside Advisor</p> |  <p>has been acquired by</p>  <p>Sellside Advisor</p> |  <p>has received a strategic investment from funds affiliated with</p>  <p>Sellside Advisor</p> |
|  <p>has acquired</p>  <p>Buyside Advisor</p> |  <p>has been acquired by</p>  <p>in partnership with</p>  <p>Sellside Advisor</p> |  <p>has been acquired by</p>  <p>Sellside Advisor</p> |  <p>a portfolio company of</p>  <p>has been acquired by</p>  <p>in partnership with</p>  <p>Sellside Advisor</p> |  <p>has been acquired by</p>  <p>Sellside Advisor</p> |  <p>has been acquired by</p>  <p>a subsidiary of</p>  <p>Sellside Advisor</p> |

Key Industry Trends by Sector

Broadband

Residential Broadband

- Fiber-to-the-home (FTTH) build-out targets for homes passed continue to be announced by residential broadband ISPs in Q1 2022.
 - Cable One Clearwave JV targets 500,000 additional rural residential passings.
 - Google Fiber targets expansion in Salt Lake City, Utah, to its network that already covers 100,000 households with 1,000 miles of fiber.
 - TDS Telecom plans to build fiber to 20,000 new locations in Maine as part of the company's goal to build out 60% of its footprint.
- Residential broadband ISPs are also investing in providing faster speeds beyond 1 gig.
 - Verizon Fios, Altice, and Frontier debuted or announced future launch speed offerings above 1 gig.

Government Subsidy Programs

- Funds continue to be awarded at the local, state, and federal levels to help fund broadband infrastructure in unserved and underserved areas in Q1 2022.
 - \$65 billion is slated to support broadband deployment as part of the recently passed \$1.2 trillion federal infrastructure bill.
 - The FCC plans to roll out another \$1 billion for the Emergency Connectivity Fund.
 - The Tennessee Department of Economic and Community Development will award up to \$400 million to service providers for broadband infrastructure projects.
 - The state of Georgia allocated \$408 million in ARPA funding for 49 broadband projects covering 184,000 homes and businesses.

Data Centers and Managed Services

M&A and Financing Activity

- M&A activity and an influx of global capital have continued heading into 2022 with the take-privates of QTS and CyrusOne by infrastructure fund vehicles and American Tower's strategic acquisition of CoreSite.
- Switch, the last remaining U.S. public data center platform, has also reportedly begun exploring strategic options.
- Other privately backed operators like Flexential, Vantage, DataBank, and Cologix also continue to raise capital to fund expansion.

Front and Center in 2022: Hyperscale Growth

- Data center developers are building more and bigger facilities after a record year for cloud growth in 2021.
- In 2021, there was a record 493.4 megawatt net absorption of data center space in seven primary U.S. markets, a 31% increase over the previous record total from 2019 and a 50% increase from 2020.
- Meta (formerly Facebook) has announced three separate, \$800 million campus development projects in Kansas City, Temple, Texas, and Boise alone.

Ongoing Shift to the Cloud

- The public cloud market had reached more than \$140 billion in 2021.
- In 2022, demand for integration capabilities, agile work processes, and composable architecture is expected to drive continued shifts to the cloud.
- Gartner recently reported that more than half of enterprise IT spending in key market segments will shift to the cloud by 2025.

Key Industry Trends by Sector (cont.)

Wireless Infrastructure

M&A Activity

- There is strong buyer and investor appetite in wireless infrastructure in the U.S. in Q1 2022. Scarcity due to declining deal volume and the influx of new sources of capital in recent years have driven up average transaction valuations to more than 30 times enterprise value to tower cash flow.
- As of the end of the quarter, the publicly traded tower REITs (AMT, CCI, DBRG, and SBAC) maintain strong EV/EBITDA multiples averaging well over 20x.
- There is strong wireless infrastructure activity across Europe: Phoenix Towers acquired more than 3,200 towers in France from Cellnex; DigitalBridge acquired Telenet's tower assets in Belgium; and Deutsche Telekom announced plans to sell its 40,000 tower portfolio in Germany and Austria.

Increased Tower Activity

- To extend existing coverage and deploy 5G, the big three U.S. wireless carriers have forecasted a combined \$60 billion of capex in 2022 and elevated levels of spending over the next decade.
- DISH has begun to bolster new leasing activity with increased tower installations in recent months.
- In-building wireless solutions are increasingly being utilized to handle the reliance on wireless devices in office buildings, MDUs, college campuses, and lodging.
- Houlihan Lokey helped raise \$50 million of equity capital from InfraRed Capital Partners for Public Safety Tower Company (PSTC) to construct, own, and operate wireless cellular towers in underserved areas. The transaction closed in Q1 2022.

Wireless and Spectrum

Continued Demand for Mid-Band Spectrum

- The FCC closed its 3.45 GHz auction in January 2022, the Commission's third mid-band auction since 2020. Those three auctions raised more than \$100 billion in aggregate.
- In the FCC auctions, Verizon spent \$1.9 billion on CBRS and \$46 billion on C-band.
- AT&T spent \$23 billion on C-band and \$9 billion on 3.45 GHz spectrum.
- The FCC announced that Auction 108 will begin on July 29, 2022, and include licenses in the 2.5 GHz band offering.

Front and Center in 2022: 5G Deployments

- Verizon plans to deploy its recently acquired C-band spectrum to reach 175 million POPs in 2022–2023. Early clearance with satellite providers in 2021 enables Verizon to deploy 5G UWB to 30 additional markets by December 2023.
- AT&T covers 255 million POPs with 5G and has deployed mmWave in 40 cities/venues, two more than last year, utilizing dynamic sharing spectrum to leverage its 4G spectrum for 5G.
- T-Mobile has ~155 MHz of 2.5 GHz spectrum after acquiring Sprint and plans to have nationwide coverage by 2023.

Expect Increased Residential Competition

- The nationwide wireless carriers are using multiple mediums in an effort to provide service to residential customers:
 - Targeting the residential fixed wireless market with 5G technology and recently acquired spectrum
 - Building new fiber routes; AT&T plans to double its fiber footprint by 2025, and Verizon continues to add ~400K FTTH per year (steady pace with prior years)

Key Industry Trends by Sector (cont.)

Telecom Services

M&A Activity

- After a record level of telecom services M&A activity in 2021, Q1 2022 transaction activity moderated.
- The biggest M&A news in the quarter was Audax announcing its acquisition of Centerline Communications and completion of five bolt-on acquisitions over the past seven months.
- Other recent, larger deals from the past few months include Oaktree's acquisition of ITG Communications, Blue Point Capital Partners' acquisition of National OnDemand, and Huron Capital's acquisition of TriStruX.

Sector Trends and Challenges

- With the keen interest of private investors and the availability of substantial public funding programs, communications companies are projected to spend more than \$200 billion in 2022 building telecom infrastructure across wireline, wireless, and data center subsectors.
- However, a tight labor market, customer pricing dynamics, rising fuel costs, and vehicle shortages are issues that operators need to focus on to maintain margins.
- M&A deals in this sector may potentially take longer to close due to supply chain issues.

Telecom Software

Houlihan Lokey Update

- Houlihan Lokey has published its first-ever thought piece on the telecom software market, including 70 pages of insights from recent assignments and conversations across the ecosystem. Please reach out to Will Cooper (WCooper@HL.com) for more information.

Software Is Key to Telecom's Future

- Networks are becoming larger, costlier, and more complex, exacerbated by a shortage of engineers. Capex is expected to double to \$60 billion next year.
- Pricing pressure is causing carriers to seek new monetization opportunities.
- Telco tech stacks are outdated, often operating on 500+ disparate applications.
- Software helps manage customers, billing, and the network. Winning solutions are cloud-based, interoperable, and scalable.
- Hyperscale providers are key enablers of solutions and are partnering with telcos (e.g., AWS/DISH, Azure/AT&T).

Telecom Software Market Activity

- DigitalBridge, focused exclusively on infrastructure, made its first software-oriented investment and simultaneously announced the launch of DigitalBridge Ventures to focus on digital infrastructure.
- Large funds are making second investments in the telecom software space.
 - Koch led the \$46 million Series D of Cohere Technologies.
 - H.I.G. acquired Mobileum.

Significant News Stories

Subject: Growing Telecom Services Market

Telecom Power System Market Worth \$5.4 billion by 2027

Cision PR Newswire

Date: March 31, 2022

“Published by MarketsandMarkets™, the Telecom Power System Market is projected to grow from USD 3.9 billion in 2022 to USD 5.4 billion by 2027; it is expected to grow at a CAGR of 7.1% from 2022 to 2027. The key factors fueling the growth of this market include increasing number of telecom infrastructure in remote areas, growing adoption of telecom services and high data traffic, rising awareness about reducing carbon footprint from telecom power systems, growing adoption of hybrid power systems, increasing technological advancements in cellular networks, rising use of GaN-based power devices with evolution of 5G technology, and surging requirements for advance telecom infrastructure and M2M connections.”

Subject: U.S. Carrier Capital Expenditures

U.S. Wireless CapEx Expected to Peak in 2022

InsideTowers

Date: March 22, 2022

“U.S. mobile network operators are already at a high level of capital expenditures as they build out their respective 5G networks on a national and regional scale. The aggregate wireless capex is expected to peak in 2022, reaching an all-time high of \$41.6 billion, then moderate down to \$30-31 billion a year by 2025. By comparison, 4G LTE capex levels topped out at about \$25 billion a year. Much of the differential is due to significant incremental investment by Verizon Wireless (NYSE:VZ) and AT&T Mobility (NYSE:T) for their respective C-band and 3.45 GHz spectrum deployments. This investment is on top of the capex already planned for 5G among all the MNOs, involving mainly macrocells on towers. Network densification using small cells is not expected to ramp up in earnest before 2024–2025 and beyond. Both Verizon and AT&T are underway with their C-band Phase I deployments that went live on January 19, as *Inside Towers* reported. Verizon committed \$10 billion over three years for activating all of its C-band licenses across the country. The company spent \$2.1 billion on C-band in 2021 and is planning to spend another \$5-6 billion in 2022, with the remaining \$2.4-2.5 billion in 2023, as it approaches the December 2023 C-band Phase II deadline.”

Subject: FCC Spectrum Auctions

FCC Hands T-Mobile the 2.5 GHz Auction It Always Wanted

Fierce Wireless

Date: March 22, 2022

“Yesterday, the Federal Communications Commission (FCC) announced that July 29, 2022, will be the start of bidding in Auction 108 for 2.5 GHz licenses. This auction will be for “white-spaces” of the 2.5 GHz band where no one owns the spectrum. T-Mobile is particularly interested in Auction 108 because it already owns or leases much of the 2.5 GHz spectrum across the United States, and it wants to fill in the gaps in its coverage. The auction will offer about 8,000 new county-based overlay licenses. ‘T-Mobile is likely to be the major winner, as the auction will allow the company to fix the ‘Swiss Cheese’ problem its 2.5 GHz network grid is known to suffer from,’ wrote New Street Research policy analyst Blair Levin in an investor note today. The FCC has decided to grant T-Mobile the things it wanted for this auction. First, the FCC is expediting the auction. Even though Verizon and AT&T have complained they can’t make informed bidding decisions unless they know some of the terms of T-Mobile’s existing 2.5 GHz leases with schools across the country, the FCC is moving forward quickly without making any public ruling on Verizon’s and AT&T’s request for lease information.”

Subject: Data Center Demand

CBRE Data Center Webinar

CBRE: Tim Huffman

Date: March 16, 2022

“CBRE tracked nearly 500 MWs of positive absorption (i.e. lease commencements) in 2021, with 352 MWs coming in 2H. Separately, we have heard that ~1,000 MWs were leased across the entire U.S. in 2021, so we would expect absorption to only grow in 2022. The activity levels remain very elevated in early 2022, skewed toward the hyperscalers that are both self-building/land banking and deploying in third-party facilities. Supply growth in 2021 (+17%) did not keep pace with net absorption (+70%), so many key markets shave historically low vacancy rates of <10% today. Huffman sees some sites in Northern Virginia taking up to two years to procure power capacity, while other markets (Silicon Valley) remain historically tight.”

Significant News Stories (cont.)

Subject: Nokia's Development of a New 5G Core

Nokia Deploys World's First 5G Edge Slicing Solution on Live Commercial Network With Cellcom and Telia

GlobeNewswire

Date: February 28, 2022

"Nokia today announced the world's first deployment of 5G Edge Slicing on a live commercial network with mobile operators Cellcom and Telia. Nokia's innovative Edge Slicing solution allows operators to offer their enterprise customers next-generation, secure, reliable, and high-performing Virtual Private Network (VPN) services over commercial 4G and 5G networks. Once launched, both companies will be able to offer new services to their customers—driving new revenue opportunities—as well as partner with cloud application and infrastructure service providers. Nokia's solution is available now for its global customer base."

Subject: Fiber Deployment

Altice USA Announces Acceleration in Fiber Deployment Strategy; Announces Multi-Year Plan to Bring 100% Fiber Broadband to More Than 6.5 Million Passings Across the Optimum and Suddenlink Footprint

Business Wire

Date: February 16, 2022

"Altice USA (NYSE:ATUS) today announces an acceleration of its fiber deployment strategy over the next four years across its Optimum and Suddenlink footprint, expecting to reach 6.5 million passings by the end of 2025. This new fiber expansion in Suddenlink coupled with the continued fiber build in Optimum will position the company to pass more than two-thirds of its entire footprint with 100% fiber broadband over the next four years, including approximately 2.5 million fiber passings at Suddenlink and 4 million fiber passings at Optimum. Altice USA has been building a fiber broadband network in its Optimum territory in the New York Tri-State area (New York, New Jersey, Connecticut) with 1.2 million fiber passings available for sales as of December 31, 2021. For Suddenlink, construction is expected to begin this year in areas of Texas. Additional states in the Suddenlink footprint that will benefit from this fiber expansion plan include areas of Arizona, California, Louisiana, Missouri, North Carolina, New Mexico, Oklahoma, and West Virginia."

Subject: Federal Funds for Fiber

FCC Rolls Out Affordable Connectivity Program to Replace EBB

Fierce Telecom

Date: January 4, 2022

"Congress mandated the creation of the ACP as part of the Infrastructure Investment and Jobs Act, which became law in November 2021. The program was designed as a permanent extension of the EBB, with a handful of changes. The EBB was launched in May 2021 and offered eligible households up to \$50 per month off their broadband bill or \$75 per month if the household was on Tribal land. More than 1,000 fixed and mobile broadband providers signed on to offer service through the program. Under the ACP, the maximum household benefit will be reduced to \$30 per month for most homes, though the benefit for those on Tribal lands will remain the same."

Subject: C-Band Deployment

Despite Delays, Verizon to Hit 100M C-Band Coverage Target This Month

Fierce Wireless

Date: January 4, 2022

"Verizon says its 5G service using the mid-band airwaves is set to cover 100 million people later this month, which is ahead of schedule. Verizon (and AT&T) yesterday agreed to another delay while concerns related to potential interference and air safety are sorted out between the FCC and Federal Aviation Administration, pushing an expected January 5 launch to January 19. Adam Koeppel, SVP of Technology Strategy Architecture and Planning for Verizon, said the important thing about the latest agreement is 'we have a date certain now. On the 19th, our 5G Ultra Wideband C-band is launching,' Koeppel told Fierce on Tuesday. The Ultra Wideband branding is already used for Verizon's 5G service on millimeter wave spectrum and will now also incorporate C-band. Covering 100 million people with C-band across 50 top markets by then will be on the early side of an end-of-March timeline."

Select Q1 2022 M&A Transactions

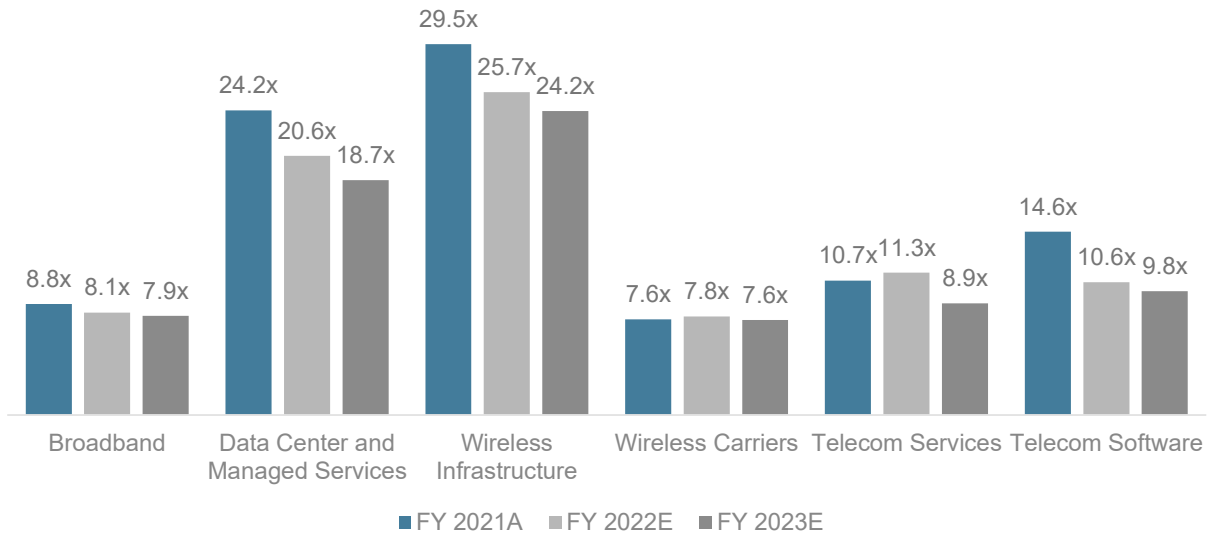
| Announced Date | Target | Acquirer | Description |
|--|-----------------------------|----------------------------------|---|
| United States | | | |
| Broadband | | | |
| Mar-22 | Empire Access | Antin Infrastructure | Empire offers high-speed FTTP internet, voice and digital TV services. With a network of 1,280 fiber route miles servicing over 92,000 addresses and 24,000 customers |
| Mar-22 | Greenlight Networks | Oak Hill Capital | Oak Hill Capital acquired a majority interest in Greenlight Networks, a FTTH service provider in Upstate New York |
| Mar-22 | Consolidated Communications | Alinda | Consolidated to sell its Kansas City HFC Network to Alinda for ~\$90 million |
| Feb-22 | Dobson Fiber | iCON Infrastructure | Dobson Fiber has agreed to a strategic partnership with iCON infrastructure and will support Dobson's \$700 million fiber deployment plan |
| Feb-22 | ImOn Communications | Goldman Sachs Asset Management | Goldman Sachs Asset Management acquired ImOn Communications, a FTTP service provider in eastern Iowa with a 2,000 mile network |
| Jan-22 | Clearwave Fiber | TPO, Stephens Capital, GTCR | Cable One formed a joint venture with GTCR, Stephens Capital Partners, and The Pritzker Organization, aimed at growing the Clearwave Fiber division of Cable One |
| Jan-22 | Metronet | Vexus | MetroNet, the nation's largest independently owned, 100 percent fiber optic network provider merged with Lubbock, Texas-based Vexus Fiber |
| Jan-22 | Wood River Network | Great Plains Communications | Great Plains Communications acquired Wood River Network, providing Grain Management with access to a 10.6-mile fiber network that can serve 500 homes and 60 businesses in Wood River, Nebraska |
| Data Centers and Managed Services | | | |
| Mar-22 | CyrusOne | DataBank | DataBank acquired four Houston-area data centers from CyrusOne for \$670m, adding significant capacity, customers, and the fourth largest metro market to DataBank's edge infrastructure footprint |
| Jan-22 | vXchnge | H5 Data Centers | Acquisition of seven data centers from vXchnge increases the number of U.S. markets served by H5 to 20; the deal included over 250,000 sq. ft of data center space and more than 150 unique customers |
| Jan-22 | Just Analytics | Rackspace Technology | Rackspace announced the acquisition of a cloud-based data, analytics, and AI services provider based in the Asia-Pacific and Japan region, bringing strong regional ties into the Microsoft Azure ecosystem |
| Jan-22 | QOS Networks | Zayo Group | QOS provides managed services including SD-WAN and operates as a reseller for VMware, Palo Alto Networks, and Versa |
| Jan-22 | General Datatech | H.I.G. Capital | Headquartered in Dallas, Texas, GDT is a leading multi-vendor serving blue chip enterprises and government agencies across the globe |
| Wireless Infrastructure | | | |
| Jan-22 | Public Safety Tower Company | InfraRed Capital Partners | Public Safety Tower Company plans to construct, own, and operate wireless cellular towers in underserved areas focusing on first responders |
| Wireless and Spectrum | | | |
| Jan-22 | FCC Auction 110 | AT&T, Dish, T-Mobile, and others | Auction 110 offered 100 megahertz of mid-band spectrum in the 3.45–3.55 GHz band (the "3.45 GHz Service") for flexible use, including 5G wireless. Buyers spent a combined \$22 billion |
| Telecom Services | | | |
| Mar-22 | STC Netcom | Centerline Communications | STC Netcom is a leading provider of line and antenna services across the West Coast |
| Feb-22 | QualTek | Public Markets (SPAC) | QualTek is a turnkey provider of infrastructure services and renewable energy project solutions to the North American telecommunications and power industries |
| Feb-22 | Leaf Communications | Centerline Communications | Leaf Communications is a leading provider of site acquisition and A&E design, small cell, construction management, and inbuilding network services in the western region of the United States |
| Jan-22 | ITG Communications | Oaktree Capital Management | ITG Communications is a national provider of installation, fulfillment, construction, and project management services to the cable, telecommunications, and utility industries |
| Jan-22 | Centerline Communications | Audax Private Equity | Centerline Communications is a leading professional services organization focused on the design, build, and maintenance of wireless and wireline network infrastructure |

Q1 2022 M&A Transactions

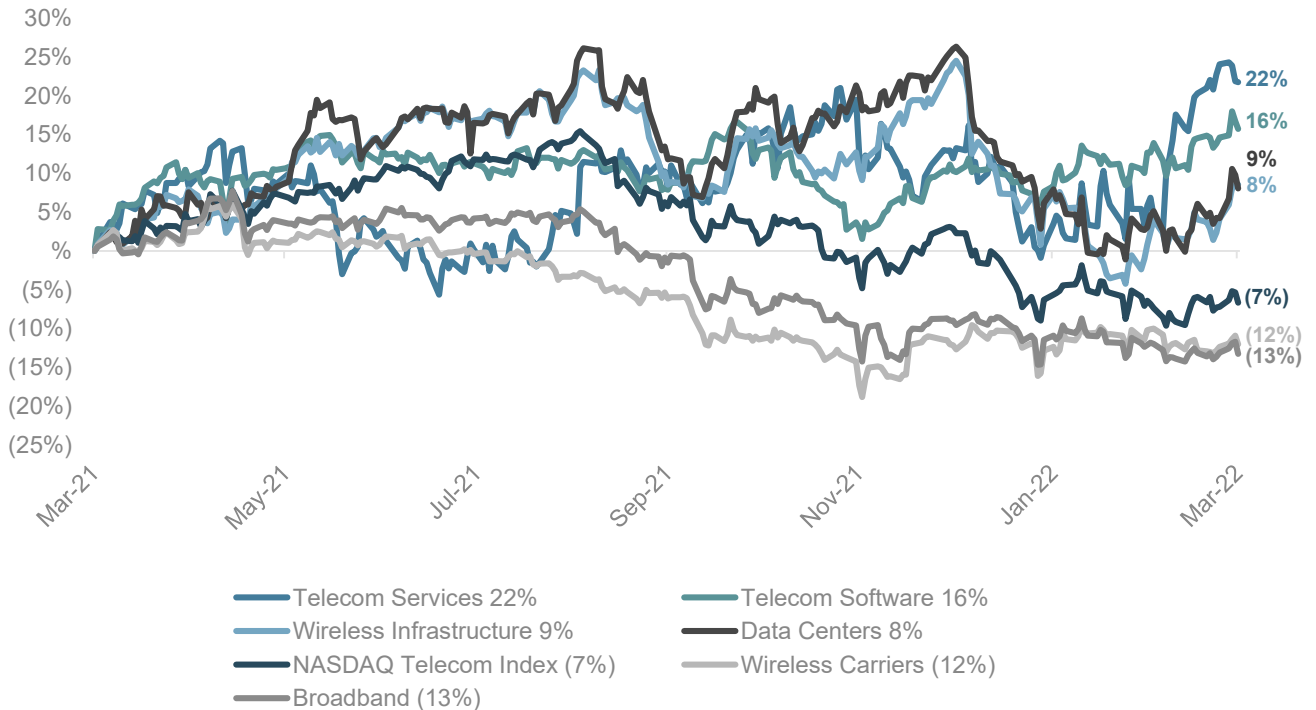
| Announced Date | Target | Acquirer | Description |
|--|--|---|--|
| Telecom Software | | | |
| Feb-22 | Robin.io | Rakuten | Developer of an application virtualization platform designed to provide data infrastructure and management services to help enterprises accelerate, consolidate, and simplify their modern data applications |
| Feb-22 | Cohere Technologies | Koch Industries Inc. | Developer of a spectrum multiplier software designed to enhance the performance of mobile and wireless networks. The company's software improves spectrum and user experience with channel detection |
| Feb-22 | Federated Wireless | Cerberus Capital Management | Federated Wireless has long led the industry in development of shared spectrum CBRS capabilities. The company's partner ecosystem includes more than 40 device manufacturers and edge partners |
| Feb-22 | Helium | Google Ventures | Decentralized machine networking technology used to build wireless infrastructure. The company's technology operates a peer-to-peer wireless network that provides a secure and cost-effective way to send data |
| Jan-22 | Mobileum Inc. | H.I.G. Technology Partners | Mobileum is a leading provider of Telecom analytics solutions for roaming, core network, security, risk management, domestic and international connectivity testing, and customer intelligence |
| Jan-22 | Blue Danube Systems | NEC | Developer of mobile wireless access systems intended to increase network capacity and enhance the quality of telecommunications service |
| Jan-22 | Wind River Systems, Inc. | Aptiv PLC (NYSE:APTIV) | Provides embedded software for intelligent connected systems. It offers Helix, a portfolio of software, technologies, tools, and services for addressing the system-level challenges and opportunities created by the Internet of Things |
| Jan-22 | Marketing division of Evolving Systems | Partner One Capital | Activation and Marketing Businesses of Evolving Systems, Inc. comprises all of the assets of its Customer Acquisition and Network Services division and CVML and Loyalty Business. The asset is located in the United States |
| Jan-22 | Aarna Networks | Silicon Valley Quad | Developer of a critical open-source platform intended for fully automated orchestration and management of 5G and edge computing workloads |
| International | | | |
| Broadband | | | |
| Jan-22 | FibreStream | Beanfield Metroconnect | Beanfield Metroconnect, fiber network operator in Toronto and Montreal, acquired FibreStream, a fiber service provider in Toronto, Ottawa, and Vancouver |
| Data Centers and Managed Services | | | |
| Jan-22 | VNET Group | Blackstone | \$250 million convertible notes investment, following a \$150 million preferred investment in 2020 to accelerate the growth of VNET's data center footprint in high-demand locations across China's Tier I cities |
| Jan-22 | TeraCo | Digital Realty | DLR acquires a majority stake in Teraco, the largest South Africa provider (7 facilities) with a focus on connectivity services in addition to retail and wholesale colocation offerings |
| Jan-22 | M247 Limited - (Manchester) | Pulsant | 6,500 sq. ft. data center with around 1MW of power with further investment planned to expand and upgrade the facility |
| Jan-22 | Bracknell U.K. Data Center | Keppel DC Reit | 4.7 acre plot of land with nearly 95,000 sq. ft. of gross floor space across three interlinked two-story buildings |
| Wireless Infrastructure | | | |
| Mar-22 | Telenet | Digital Bridge | All-cash transaction valued at €745 million, or \$820 million for nationwide footprint of 3,322 sites in Belgium, including 2,158 owned sites and 1,164 third-party sites |
| Mar-22 | Phoenix Tower International | Cellnex Telecom | 1,226 telecommunications sites in very dense areas in France |
| Telecom Software | | | |
| Mar-22 | OXIO | ParaFi Capital | Developer of a connectivity-as-a-service platform intended for brands or enterprises to become mobile operators by leveraging any and all wireless networks available |
| Feb-22 | Clickatell | Arrowroot Capital, Kennedy Lewis Investment | Industry-first ability to combine communication and commerce in one comprehensive Chat Commerce proposition and introduced one of the world's first chat banking solutions on WhatsApp, the world's largest chat platform |
| Feb-22 | Simfony Mobile | Tofane Global | Developer of mobile virtual network enabler platform focused on machine learning and predictive modeling. The company offers Internet of Things connectivity, network enablers, business portal, and network interface layer |

Public Markets Overview

Median EV/EBITDA



12-Month Indexed Stock Price Performance



Source: S&P Capital IQ.

Note: Calendar year consensus estimates used unless otherwise noted. Components of each sector are broken out on the following pages. All data as of March 31, 2022.

Public Comparables

Broadband, Data Centers and Managed Services, and Wireless Infrastructure

Broadband

(\$ in millions)

| Company | Stock Price | % of 52-Week High | Equity Mkt Cap | Enterprise Value | LTM Lev. (x) | EV / Revenue | | | EV / EBITDA | | |
|-----------------------------|-------------|-------------------|----------------|------------------|--------------|--------------|----------|----------|-------------|----------|----------|
| | | | | | | FY 2021A | FY 2022E | FY 2023E | FY 2021A | FY 2022E | FY 2023E |
| Broadband | | | | | | | | | | | |
| Verizon | \$50.94 | 85.1% | \$213,837 | \$391,268 | 4.0x | 2.9x | 2.9x | 2.8x | 8.6x | 7.9x | 7.6x |
| AT&T | 23.63 | 69.7% | 169,262 | 374,237 | 4.2 | 2.2 | 2.4 | 2.4 | 6.6 | 7.8 | 7.5 |
| Comcast | 46.82 | 75.8% | 212,246 | 312,711 | 3.1 | 2.7 | 2.6 | 2.5 | 9.0 | 8.4 | 8.0 |
| T-Mobile | 128.35 | 85.5% | 160,346 | 262,532 | 4.1 | 3.3 | 3.2 | 3.1 | 10.0 | 9.7 | 8.9 |
| Charter | 545.52 | 66.1% | 104,463 | 201,044 | 4.5 | 3.9 | 3.7 | 3.6 | 9.8 | 9.2 | 8.8 |
| Lumen | 11.27 | 72.9% | 11,533 | 41,717 | 3.8 | 2.1 | 2.5 | 2.8 | 5.2 | 6.3 | 7.1 |
| Alltel | 12.48 | 32.7% | 5,674 | 32,365 | 6.2 | 3.2 | 3.3 | 3.3 | 7.5 | 7.9 | 7.8 |
| Cable One | 1,464.24 | 68.5% | 8,873 | 12,457 | 4.9 | 7.8 | 7.2 | 6.9 | 15.3 | 13.4 | 12.5 |
| Telephone and Data Systems | 18.88 | 71.2% | 2,163 | 7,723 | 3.4 | 1.4 | 1.4 | 1.4 | 6.5 | 6.3 | 5.9 |
| Cogent | 66.35 | 82.4% | 3,101 | 4,051 | 6.3 | 7.1 | 6.7 | 6.3 | 20.1 | 16.9 | 15.6 |
| Consolidated Communications | 5.90 | 59.7% | 670 | 2,921 | 4.9 | 2.3 | 2.5 | 2.5 | 6.5 | 7.0 | 6.9 |
| Shenandoah | 23.58 | 38.3% | 1,180 | 1,153 | 0.9 | 4.7 | 4.5 | 4.1 | 18.9 | 16.2 | 13.1 |
| Mean | | | \$74,446 | \$137,015 | 4.2x | 3.6x | 3.6x | 3.5x | 10.3x | 9.7x | 9.1x |
| Median | | | \$10,203 | \$37,041 | 4.2x | 3.1x | 3.0x | 3.0x | 8.8x | 8.1x | 7.9x |

Data Centers and Managed Services

(\$ in millions)

| Company | Stock Price | % of 52-Week High | Equity Mkt Cap | Enterprise Value | LTM Lev. (x) | EV / Revenue | | | EV / EBITDA | | |
|--|-------------|-------------------|----------------|------------------|--------------|--------------|----------|----------|-------------|----------|----------|
| | | | | | | FY 2021A | FY 2022E | FY 2023E | FY 2021A | FY 2022E | FY 2023E |
| Data Centers and Managed Services | | | | | | | | | | | |
| Equinix | \$741.62 | 83.8% | \$67,281 | \$80,736 | 6.2x | 12.9x | 11.2x | 10.3x | 33.5x | 24.3x | 21.8x |
| Digital Realty | 141.80 | 79.6% | 40,338 | 56,625 | 6.7 | 12.8 | 11.9 | 11.0 | 25.2 | 22.6 | 20.8 |
| Switch | 30.82 | 98.0% | 4,575 | 6,539 | 6.1 | 11.0 | 9.8 | 8.8 | 23.2 | 18.6 | 16.6 |
| Cytera | 12.22 | 90.3% | 2,182 | 4,014 | 9.5 | 5.7 | 5.4 | 5.1 | 20.2 | 16.5 | 14.8 |
| Mean | | | \$28,594 | \$36,979 | 7.1x | 10.6x | 9.6x | 8.8x | 25.5x | 20.5x | 18.5x |
| Median | | | \$22,456 | \$31,582 | 6.5x | 11.9x | 10.5x | 9.6x | 24.2x | 20.6x | 18.7x |

Wireless Infrastructure

(\$ in millions)

| Company | Stock Price | % of 52-Week High | Equity Mkt Cap | Enterprise Value | LTM Lev. (x) | EV / Revenue | | | EV / EBITDA | | |
|--------------------------------|-------------|-------------------|----------------|------------------|--------------|--------------|----------|----------|-------------|----------|----------|
| | | | | | | FY 2021A | FY 2022E | FY 2023E | FY 2021A | FY 2022E | FY 2023E |
| Wireless Infrastructure | | | | | | | | | | | |
| American Tower | \$251.22 | 82.7% | \$114,527 | \$168,574 | 8.8x | 18.0x | 15.9x | 15.2x | 28.6x | 25.7x | 24.2x |
| Crown Castle | 184.60 | 88.0% | 79,787 | 106,504 | 7.2 | 16.8 | 15.5 | 15.1 | 29.5 | 24.9 | 24.0 |
| SBA Communications | 344.10 | 88.0% | 37,169 | 51,341 | 9.6 | 22.2 | 20.9 | 20.0 | 33.9 | 30.4 | 28.5 |
| Mean | | | \$77,161 | \$108,807 | 8.6x | 19.0x | 17.4x | 16.7x | 30.7x | 27.0x | 25.5x |
| Median | | | \$79,787 | \$106,504 | 8.8x | 18.0x | 15.9x | 15.2x | 29.5x | 25.7x | 24.2x |

Notes:

Stock price last updated on 3/31/22.

NM in EV/EBITDA if multiple is greater than 50 or EBITDA is negative.

NA means information is not available or not applicable.

Source: S&P Capital IQ.

Public Comparables (cont.)

Wireless Carriers, Telecom Services, and Telecom Software

Wireless Carriers

(\$ in millions)

| Company | Stock Price | % of 52-Week High | Equity Mkt Cap | Enterprise Value | LTM Lev. (x) | EV/ Revenue | | | EV / EBITDA | | |
|--------------------------|-------------|-------------------|----------------|------------------|--------------|-------------|----------|----------|-------------|----------|----------|
| | | | | | | FY 2021A | FY 2022E | FY 2023E | FY 2021A | FY 2022E | FY 2023E |
| Wireless Carriers | | | | | | | | | | | |
| Verizon | \$50.94 | 85.1% | \$213,837 | \$391,268 | 4.0x | 2.9x | 2.9x | 2.8x | 8.6x | 7.9x | 7.6x |
| AT&T | 23.63 | 69.7% | 169,262 | 374,237 | 4.2 | 2.2 | 2.4 | 2.4 | 6.6 | 7.8 | 7.5 |
| T-Mobile | 128.35 | 85.5% | 160,346 | 262,532 | 4.1 | 3.3 | 3.2 | 3.1 | 10.0 | 9.7 | 8.9 |
| U.S Cellular | 30.23 | 75.7% | 2,596 | 6,216 | 4.3 | 1.5 | 1.5 | 1.5 | 5.0 | 6.1 | 5.9 |
| Mean | | | \$136,510 | \$258,563 | 4.2x | 2.5x | 2.5x | 2.4x | 7.6x | 7.9x | 7.5x |
| Median | | | \$164,804 | \$318,385 | 4.2x | 2.6x | 2.6x | 2.6x | 7.6x | 7.8x | 7.6x |

Notes:
 Stock price last updated on 3/31/22.
 Actuals reflect EBITDA after adjusting for capital leases and equity from affiliates.
 Estimate EBITDA reflect Wall St. consensus per S&P Global.
 NM in EV/EBITDA if multiple is greater than 50 or EBITDA is negative.
 NA means information is not available or not applicable.
 Source: S&P Capital IQ.

Telecom Services

(\$ in millions)

| Company | Stock Price | % of 52-Week High | Equity Mkt Cap | Enterprise Value | LTM Lev. (x) | EV/ Revenue | | | EV / EBITDA | | |
|-------------------------|-------------|-------------------|----------------|------------------|--------------|-------------|----------|----------|-------------|----------|----------|
| | | | | | | FY 2021A | FY 2022E | FY 2023E | FY 2021A | FY 2022E | FY 2023E |
| Telecom Services | | | | | | | | | | | |
| Quanta Services | \$131.61 | 95.6% | \$18,779 | \$22,557 | 3.8x | 1.7x | 1.4x | 1.3x | 21.4x | 13.8x | 12.8x |
| MasTec | 87.10 | 71.2% | 6,505 | 8,426 | 2.7 | 1.1 | 0.9 | 0.8 | 10.0 | 8.9 | 7.6 |
| Dycom Industries | 95.26 | 90.5% | 2,821 | 3,398 | 3.9 | 1.1 | 1.1 | 1.0 | 11.4 | 13.8 | 10.2 |
| Primoris Services | 23.82 | 66.1% | 1,270 | 1,895 | 2.8 | 0.5 | 0.5 | 0.5 | 6.5 | 6.4 | 5.9 |
| Mean | | | \$7,344 | \$9,069 | 3.3x | 1.1x | 1.0x | 0.9x | 12.3x | 10.7x | 9.1x |
| Median | | | \$4,663 | \$5,912 | 3.3x | 1.1x | 1.0x | 0.9x | 10.7x | 11.3x | 8.9x |

Telecom Software

(\$ in millions)

| Company | Stock Price | % of 52-Week High | Equity Mkt Cap | Enterprise Value | LTM Lev. (x) | EV/ Revenue | | | EV / EBITDA | | |
|-------------------------|-------------|-------------------|----------------|------------------|--------------|-------------|----------|----------|-------------|----------|----------|
| | | | | | | FY 2021A | FY 2022E | FY 2023E | FY 2021A | FY 2022E | FY 2023E |
| Telecom Software | | | | | | | | | | | |
| Amdocs | \$82.21 | 97.9% | \$10,141 | \$10,194 | 1.1x | 2.4x | 2.2x | 2.1x | 12.6x | 10.6x | 9.8x |
| CSG Systems | 63.57 | 96.4% | 1,980 | 2,218 | 2.9 | 2.1 | 2.2 | 2.1 | 13.6 | 9.7 | 9.1 |
| Hansen Technologies | 4.31 | 85.8% | 865 | 907 | 1.8 | 3.9 | 4.1 | 3.9 | 14.6 | 11.8 | 11.6 |
| KORE | 6.00 | 53.8% | 457 | 774 | 11.7 | 3.1 | 3.0 | 2.7 | 22.5 | 12.3 | 10.3 |
| Enea | 19.57 | 62.3% | 421 | 481 | 3.0 | 4.3 | 4.0 | 3.7 | 15.4 | 10.1 | 8.6 |
| Tecnotree | 1.26 | 66.4% | 387 | 368 | 0.0 | 5.0 | 4.3 | 3.8 | 13.6 | 10.4 | 8.7 |
| Cerillion | 10.25 | 83.9% | 302 | 291 | 0.5 | 8.3 | 7.1 | 6.1 | 24.4 | 17.9 | 15.3 |
| Allot | 8.10 | 38.5% | 296 | 220 | (1.0) | 1.5 | 1.5 | 1.3 | NM | NM | NM |
| Mean | | | \$1,856 | \$1,932 | 2.5x | 3.8x | 3.5x | 3.2x | 16.7x | 11.8x | 10.5x |
| Median | | | \$439 | \$628 | 1.4x | 3.5x | 3.5x | 3.2x | 14.6x | 10.6x | 9.8x |

Notes:
 Stock price last updated on 3/31/22.
 NM in EV/EBITDA if multiple is greater than 50 or EBITDA is negative.
 NA means information is not available or not applicable.
 Source: S&P Capital IQ.

Digital Infrastructure Team



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Head of Digital
Infrastructure
Boston



Bill Fanning
Managing Director
Boston



Clayton Funk
Managing Director
Boston



Brian Pryor
Managing Director
Miami



Greg Widroe
Managing Director
San Francisco



Chuck Wiebe
Managing Director
Boston



Andrew Bracy
Senior Vice President
San Francisco



Sean Hew
Senior Vice President
San Francisco



Will Cooper
Vice President
Los Angeles



Wayne Harrington
Vice President
Boston



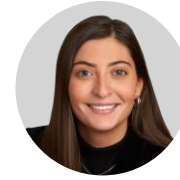
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| Boston | Minneapolis | Dubai | Munich | Fukuoka | Osaka |
| Chicago | New York | Frankfurt | Paris | Ho Chi Minh City | Shanghai |
| Dallas | San Francisco | Lausanne | Stockholm | Hong Kong SAR | Singapore |
| Houston | Washington, D.C. | London | Tel Aviv | Mumbai | Sydney |
| Los Angeles | | Madrid | Zurich | Nagoya | Tokyo |
| | | Manchester | | | |



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