UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2020

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File Number: 001-38231

Switch, Inc.

(Exact name of registrant as specified in its charter)

Nevada	**82-1883953**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
7135 S. Decatur Boulevard	
Las Vegas, NV	**89118**
(Address of principal executive offices)	(Zip Code)

(702) 444-4111
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Class A common stock, par value $0.001	**SWCH**	**New York Stock Exchange**

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☑
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☑	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☑

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

As of June 30, 2020 (the last business day of the registrant's most recently completed second fiscal quarter), the aggregate market value of the registrant's voting and non-voting common equity held by non-affiliates based on the closing price on that date as reported by the New York Stock Exchange was $1.64 billion.

As of February 4, 2021, the registrant had 127,339,012 shares of Class A common stock, 113,915,174 shares of Class B common stock, and no shares of Class C common stock outstanding.

Documents Incorporated by Reference

Portions of the registrant's definitive Proxy Statement for the 2021 annual meeting of the stockholders to be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year ended December 31, 2020 are incorporated by reference into Part III of this Annual Report on Form 10-K.

Switch, Inc.
Table of Contents

Part I.

Item 1. Business.

What We Are

As used in this Annual Report on Form 10-K (this “Form 10-K”), unless the context otherwise requires, references to “we,” “us,” “our,” the “Company,” “Switch” and similar references refer to Switch, Inc., and, unless otherwise stated, all of its subsidiaries, including Switch, Ltd., and, unless otherwise stated, all of its subsidiaries. Switch is a technology infrastructure company powering the sustainable growth of the connected world and the Internet of Everything. Our mission is to enable the advancement of humanity by creating smart, resilient and sustainable infrastructure solutions that support the most innovative technology ecosystems.

Company Overview

We believe the future of the connected world depends on the sustainable and cost-effective growth of the internet and the services it enables. Using our technology platform, we provide solutions to help enable that growth. We believe we are a pioneer in the design, construction and operation of some of the world’s most reliable, secure, resilient and sustainable data centers. Our advanced data centers reside at the center of our platform and provide power densities that exceed industry averages with efficient cooling, while being powered by 100% renewable energy. Two of our data centers are the only carrier-neutral colocation facilities in the world to be certified Tier IV Design, Tier IV Facility and Tier IV Gold in Operational Excellence. While these certifications were among the highest classifications available in the industry at the time, we are building our current facilities to our proprietary Class 5™ Platinum standards, which exceed and are more comprehensive than Tier IV standards. Our platform has powerful network effects and nurtures a rich technology ecosystem that benefits its participants. We further enhance these benefits as we innovate and expand our platform ecosystem. We currently have more than 950 customers, including some of the world’s largest technology and digital media companies, cloud, IT and software providers, financial institutions and network and telecommunications providers.

The growing nexus between internet connectivity, internet-based services, data and analytics, and the advancement of computational processing power is rapidly expanding the amount of data that enterprises can access and manage. At the same time, the Internet of Everything is exponentially expanding the available data sources, as utility grids, automobiles, aircraft, home appliances, wearable devices and numerous other sources are all connecting to the internet. The compute capacity necessary to manage and analyze this data is also advancing and demanding increasing amounts of power to operate. We believe that traditional technology infrastructure is not capable of supporting the growing wave of mission critical data and increasingly powerful IT equipment.

The vast majority of our data centers are greenfield construction, and our critical infrastructure components are purpose-built to satisfy customers’ needs, drive efficiency and enable the deployment of highly advanced computing technologies. We build our facilities using Switch Modularly Optimized Designs (“Switch MODs”). These designs allow us to rapidly deploy or replace infrastructure to meet our customers’ current and future data storage and compute requirements. Additionally, our patented designs have redefined traditional data center space and cooling, allowing our customers to achieve significantly higher power densities than are available in traditional data centers. We believe the combination of these design elements reduces our operational costs, minimizes investment risk and positions us to adapt as the Internet of Everything continues to evolve. Our technologies were all designed and invented by our founder, Rob Roy, and are protected by over 500 issued and pending patent claims. Since the opening of our first colocation facility, we have delivered 100% uptime across all of our facilities. During the years ended December 31, 2020, 2019, and 2018, we derived 81%, 80%, and 80% of our revenue, respectively, from colocation services.

During 2020, we operated four primary campus locations, called Primes, which encompass 12 colocation facilities with an aggregate of up to 4.7 million gross square feet (“GSF”) of space. These facilities have up to 490 megawatts (“MW”) of power available to them. Additional data centers are currently under development at three of our Primes. Our Primes consist of The Core Campus in Las Vegas, Nevada; The Citadel Campus near Reno, Nevada; The Pyramid Campus in Grand Rapids, Michigan; and The Keep Campus in Atlanta, Georgia. Our Primes are strategically located in geographies that combine a low risk of natural disaster, favorable tax policies for customers deploying computing infrastructure and low latency connectivity to major metropolitan markets, such as Los Angeles, San Francisco, Silicon Valley, Chicago, New York, Northern Virginia and Miami. As a result, customers in these metropolitan markets can access our advanced colocation facilities while reducing exposure to the higher taxes, higher cost of power and higher risk of natural disaster that might be prevalent in other markets. In addition to our Primes, SUPERNAP International, S.A. (“SUPERNAP International”), our international joint venture through December 31, 2020, has deployed facilities in Italy and Thailand that collectively provide up to approximately 904,000 GSF of space, with up to 100 MW of power available to these facilities. In February 2021, we acquired SUPERNAP International’s 30% ownership interest in SUPERNAP (Thailand) Company Limited (“SUPERNAP Thailand”), the entity which has deployed the facility in Thailand, and sold our 50% ownership interest in SUPERNAP International, thus disposing of our interest in the facility in Italy. We can also use our Switch MOD technology to build single-user facilities, and we are considering opportunities to deploy this technology in a build-to-suit offering for our enterprise customers.

We have fostered the development of a robust technology ecosystem around our platform that consists of enterprises and service providers that include cloud and managed services providers and telecommunications carriers. Both our platform and our ecosystem have self-reinforcing network effects that benefit participants as both our platform and our ecosystem grows. As our platform and customer base expands, we continue to realize growing efficiencies of scale, which allows us to provide higher value services to our customers.

We believe our advanced platform, high level of service and competitive pricing create a disruptive offering with a powerful customer value proposition that differentiates us from many other existing solutions. Our advanced data centers are designed for efficiency and allow our customers to achieve higher than average power densities per cabinet with appropriate cooling, which we believe improves the performance and increases the life of our customers’ equipment. We located our data centers in areas with tax benefits, such as low or no sales tax on equipment, and access to competitively priced renewable power, both of which help further lower our customers’ total cost of ownership. Finally, our Combined Ordering Retail Ecosystem (“CORE”) service aggregates our customers’ buying power, and can significantly lower many of our customers’ connectivity costs. We believe the power of our customer value proposition is evidenced by our customer loyalty and low annual churn rate, which we define as the reduction in recurring revenue attributed to customer terminations or non-renewal of expired contracts, divided by revenue at the beginning of the period. Our average annual churn rate was 0.6% over the three years ended December 31, 2020 and 0.9% for the year ended December 31, 2020.

We believe that our technologies enable attractive cash flow yields on invested capital. Our modular expansion and vertically integrated development approach allows us to deploy capital efficiently as our facilities are completed and utilized, which further increases our yields. Across our current facilities, we generated on average a 16.6% cash flow yield on invested capital in 2020. We define cash flow yield on invested capital as Adjusted EBITDA less income taxes and maintenance capital expenditures, divided by property and equipment, net, less construction in progress.

Our Opportunity

Industry Background

Computational processing power continues to advance, and the amount of data that enterprises must manage, analyze and monitor is dramatically increasing. The rapid rise in data traffic and the world’s reliance on the internet to deliver services and information is making the collection, storage and transfer of data one of the largest challenges created by the internet. The power requirements and financial costs to support this growth in data, traffic and storage are massive and growing. At the same time, service provider data centers are only beginning to penetrate the data center market.

Industry Limitations

Despite the continued growth of traditional data center infrastructure and the continued demand for the public cloud due to its cost-effectiveness and pay-as-you-go scalability, we believe that traditional data center infrastructure and the public cloud are not optimally suited to support the growing wave of mission critical enterprise data applications and increasingly powerful IT equipment for several reasons, including the following:

First, we believe that increases in server density are beginning to strain the current power and cooling capacity of traditional colocation data centers. As IT hardware advances, servers increase in power but decrease in size, generating more heat and requiring more cooling per cabinet. Chip feature sizes have been repeatedly scaled down to fit more transistors in smaller chips. The nodes on a chip shrank from 30,000 nanometers (“nm”) in 1963 to 5 nm in 2020, and are expected to reach 2 nm by 2024. We expect these trends will require many traditional data center companies and enterprise-built data center facilities to attempt to retrofit their existing infrastructure to accommodate the additional weight of denser cabinets and the additional equipment necessary to power and cool those cabinets. Current designs typically include raised floors and cooling equipment installed on the ceiling or roof. Retrofitting these designs, even if possible, would be time-consuming, expensive and highly disruptive to existing customers, and may still not allow a data center to keep pace with technological advances.

Second, we believe that the public cloud is not an ideal solution for certain business critical data storage and computing needs. Large or sophisticated workloads may be expensive to run in the public cloud or may require higher availability and reliability than the public cloud provides. Enterprises with sensitive or regulated data, such as financial institutions and healthcare companies, may be unwilling or unable to use the public cloud for security-related or compliance reasons. In addition, some workloads require an active-active environment, which necessitates two physical environments in close proximity to each other. Further, the public cloud's shared servers are not an efficient computing environment to run analytics such as advanced machine-learning algorithms, analyze sensitive medical device data or manage autonomous vehicle networks.

Third, given the limitations of both the public cloud and the enterprise-built facilities, we expect enterprises to increasingly deploy IT equipment across hybrid cloud and colocation environments, with mission critical data stored at a colocation facility. As a result, the resiliency and security of the colocation facilities will take on even greater importance. There are significant business risks and potential costs associated with running mission-critical applications in a physical environment that is not 100% resilient and secure. These costs include lost revenue, damage to mission critical data, damage to equipment, legal and regulatory impact, and decline in brand value and reputation. In some instances, the costs can be significantly higher.

Finally, we believe that enterprises are beginning to recognize significant value from environments that encourage and facilitate interaction among their various constituents. The deeper and broader the participation that occurs within the environment, the greater the value to the various participants. As a result, data centers can add significant additional value by bringing together enterprises, cloud and managed services providers and telecommunications carriers in an environment that fosters communication, collaboration and innovation. We believe these elements will be difficult to find among traditional colocation data centers.

We believe a significant opportunity exists for data centers that can address the shortcomings of traditional colocation facilities, enterprise-built facilities and public cloud offerings.

Our Competitive Strengths

We believe we distinguish ourselves from typical colocation providers and other technology infrastructure companies through our competitive strengths, which include:

Purpose-Built, Highly-Resilient, Patented Solutions

Our critical infrastructure components are purpose-built to satisfy customers' needs, drive efficiency and enable the deployment of highly advanced computing technologies, and our designs are protected by over 500 issued and pending patent claims. Our Switch MODs allow us to rapidly deploy or replace infrastructure as our customers' needs evolve. We believe this reduces operational costs, minimizes investment risk and facilitates our ability to adapt as the Internet of Everything continues to evolve.

We have redefined data center space and cooling, allowing our customers to achieve higher power densities than they can in traditional data centers. Our power densities enable our customers to include more IT equipment per cabinet than in typical data center environments, which can reduce space requirements and the associated monthly costs and set-up costs and drive down in-cabinet latency. Additionally, we believe our ability to run more powerful cabinets at the appropriate temperature improves performance and extends the life of our customers' equipment. This results in lower total cost of ownership for our customers.

We have the only carrier-neutral colocation facilities in the world to be certified Tier IV Design, Tier IV Facility and Tier IV Gold in Operational Excellence, all of which were among the highest classifications available in the industry at the time. This requires fully redundant systems and total fault tolerance. We utilize the most stringent operational protocols to ensure our customers' infrastructure is always on. As such, we have delivered 100% uptime across all of our facilities since the opening of our first colocation facility. In an effort to increase transparency and enhance the reliability of data center rating standards, we also introduced a proprietary Class 5™ Platinum standard. This standard exceeds the Tier IV Gold certifications and incorporates more than 30 additional elements critical to data center design and constant operation. These elements include even more stringent parameters regarding long-term power system capabilities, the number of available carriers, zero roof penetrations, the location of cooling system lines in or above the data center, physical and network security and 100% use of renewable energy. We currently build our facilities to this Class 5™ Platinum standard.

Differentiated Technology Ecosystem Underscored by Powerful Network Effects

We operate a dynamic technology ecosystem that brings together a wide variety of parties. Many of the participants in our ecosystem collaborate and engage in commerce with one another to enhance their own businesses. As we continue to innovate, we believe our customer value proposition strengthens, attracting new customers and encouraging existing customers to grow with us. This expanding, diverse mix of enterprise customers attracts cloud service providers, managed services providers and telecommunications carriers. This growing base of service providers, in turn, attracts other new enterprise customers seeking an environment with diverse, high-quality service providers and other innovative companies with which to collaborate.

The powerful Switch technology ecosystem creates value for our enterprise customers in the form of telecommunications purchasing, robust service provider access, private interconnection alternatives among enterprise customers and the opportunity to collaborate with other participants in our ecosystem. For example, our CORE service aggregates our customers’ buying power and can significantly lower customers’ connectivity costs. The ecosystem yields intrinsic value for us by lowering our customer acquisition costs and enhancing our customer value proposition, which we believe drives further customer loyalty. In addition, because many of our customers choose to run mission-critical and advanced applications within our facilities, we gain exposure to emerging technologies. We believe this provides us with unique visibility into future trends and bolsters our ability to plan for evolving needs.

Commitment to Sustainability and Water Conservation

We believe that while data runs the planet, it should not ruin the planet. Sustainability is central to our business philosophy and is the guiding principle to our data center designs. We believe our commitment to sustainability leadership and 100% renewable energy is not only a social and environmental imperative, but would also provide us significant competitive advantages and cost savings.

One of our opportunities to impact global climate change is reducing the greenhouse gas emissions associated with the electricity used for our data centers. Our primary focus in reducing our greenhouse gas emissions is to ensure each of our data centers continues to be 100% renewably powered. Since January 2016, our data centers in all Prime campus locations have run on 100% renewable energy. Greenhouse gas emissions from our electricity use would have represented more than 98% of our greenhouse gas footprint had we not committed to renewable energy.

We were the only company recognized by Greenpeace in its most recent Clicking Clean report (2017) to achieve a 100% clean energy index, and our overall “A” grade outperformed all of the other data center operators, including Equinix, which received a clean energy index of 20% and a “B” grade, and Digital Realty Trust, which received a clean energy index of 21% and a “C” grade. Additionally, we were the only colocation data center provider to be named in the most recent Solar Means Business Report (2019) as one of the top 10 industry-leading global technology companies for our investment in solar energy. We believe that many technology and infrastructure companies, as well as their customers and clients, evaluate progress towards achieving clean energy goals by reference to the company scorecards and rankings included in the Greenpeace and Solar Means Business reports. In January 2021, we received an ENERGY STAR certification for our LAS VEGAS 8 facility, which will require recertification annually, and are in the process of certifying our other facilities.

While we are proud of our achievements in safeguarding the future of our planet, we believe our leadership in sustainability also drives customer demand. More than ever, enterprises are searching for solutions to address their own clean energy goals. Our data centers help customers achieve their green energy objectives, reduce their carbon footprint, and meet their corporate sustainability goals by providing 100% renewable energy.

We also recognize water as an important resource that requires preservation. We have implemented a proprietary water processing technology that allows us to reuse our water while eliminating chemicals from our cooling systems. Additionally, in 2021, we expect to commence the development of a 4,000 acre-foot effluent water pipeline in Northern Nevada, enabling The Citadel Campus to run on 100% recycled/effluent water.

Our Strong and Trusted Brand

Trust, innovation and perfection are hallmarks of the Switch brand.

We recognize the level of trust customers place in us to house and protect their IT equipment. We operate under the slogan “Truth in Technology,” which embodies the notion that the product should be so amazing that nothing more than the truth is necessary to sell it. We endeavor to further safeguard our customers’ trust by striving to deliver perfection in all that we do, and we are proud to have delivered 100% uptime across all of our facilities. However, we are never satisfied, and we continually strive to innovate and deliver novel solutions for the emerging challenges our customers face as technology and business needs evolve.

We have grown our customer base primarily through industry and customer referrals, and our customers tend to increase their spending with us over time, demonstrating the power of our brand and the quality of our solutions.

Visionary and Experienced Leadership Underscored by a Culture of Innovation and Execution

Rob Roy is a serial “inventrepreneur” who is a recognized expert in advanced end-to-end solutions for mission-critical facilities. Rob Roy first invented his design for the Switch MOD more than a decade ago and since then has added numerous inventions and corresponding patent claims to the Switch portfolio. The designs of our data center facilities are protected by over 500 issued and pending patent claims.

Rob Roy has instilled in us the practice of “Switchful Thinking”— the state of constant willingness to change and adapt and to produce the best solutions through innovation and invention. We were built and are led by a management team of technology futurists who believe that everything is possible through listening, intellectualizing, forming a plan and executing.

We have a deep and experienced senior management team who collectively have over 150 years of experience at Switch and a majority of whom have been with Switch for more than five years.

Our goal is to enable the current and future compute needs of our customers and to facilitate technological advancement through smart and sustainable infrastructure solutions designed to support the most innovative technology ecosystems in the world. To accomplish this, we plan to:

- ***Continue to Grow Our Existing Prime Campus Locations.*** During 2020, we operated The Core Campus, The Citadel Campus, The Pyramid Campus, and The Keep Campus in or near Las Vegas, Reno, Grand Rapids, and Atlanta, respectively. These Primes currently encompass 12 data centers with an aggregate of up to 4.7 million GSF of space and up to 490 MW of power available to these facilities. We plan to continue to expand these Primes and actively pursue additional customers with strategic fit for our ecosystem, as well as sell additional solutions to existing customers. Each of our Primes has room for expansion.
- ***Expand into New Geographies in the United States.*** We opened The Keep Campus in Atlanta, Georgia during the first quarter of 2020 to expand geographically into the southeast and mid-Atlantic United States. Additionally, our partnership in development of multi-cloud edge infrastructure services will enable deployment into additional geographies. We believe this approach, combined with our modular design that enables us to deploy capital efficiently as our facilities are completed and utilized, reduces the risks associated with our geographic expansion and enhances the strategic value of our new locations.
- ***Leverage Our Unique Technology Ecosystem to Drive Interconnection Growth.*** Our ecosystem connects more than 950 customers, including over 250 cloud, IT and software providers and more than 90 network and telecommunications providers, which creates an important hub for the Internet of Everything. We plan to support our customers’ interconnection needs by continuing to increase our cross connect and external broadband offerings.
- ***Maintain and Extend Our Technological Leadership.*** We have a long history of innovation and are a dynamically inventive organization. We plan to continue to invest in the development of new technologies in order to continue improving our standards for security, availability and scalability. Additionally, we intend to leverage our patented technologies and designs to strategically pursue new, adjacent market opportunities outside our core business. By leveraging our technology and leadership in data center design, we believe we can solve new problems created by the rapid expansion of the internet, data storage and analytics.

- ***Pursue Strategic Partnerships.*** We may enter into strategic relationships with a variety of partners that contribute to our business. For example, rather than simply offering our customers connectivity to public cloud environments, frequently referred to as being an "on ramp" to the cloud, we may partner with public cloud providers to address that portion of their customers' needs that require higher density and reliability than is typically available from public cloud offerings. To facilitate these potential partnerships, we may expand in locations alongside hyperscale cloud deployments enabling us to provide colocation for cloud customers' mission critical needs. In 2020, we entered into a partnership with leaders in the transportation and logistics and cloud, IT and software industries to develop multi-cloud edge infrastructure services. This partnership will allow us to deploy services into additional geographies and create new potential revenue streams.

Our Technology

Our Solution

We design, construct and operate exascale data centers that address the growing challenges facing the data center industry. Key elements of our data centers include:

Modularly Optimized Design

The modular design of our data centers is enabled by our patented Switch MOD products. The Switch MOD architecture allows us to build colocation data centers of various sizes by combining multiple Switch MODs into a single structure. For example, at The Core Campus, each of our LAS VEGAS 8, LAS VEGAS 9, LAS VEGAS 10 and LAS VEGAS 11 facilities were constructed by combining multiple Switch MODs. Combining Switch MODs allows for shared power sources and increased operational efficiency.

We can also build any of our Switch MODs in a single-user configuration. This provides an alternative to traditional colocation for customers with large, dedicated compute and data storage needs. Regardless of whether they are used for colocation or single-user purposes, we design, manufacture and operate our Switch MODs to meet our proprietary Class 5™ Platinum standard.

The Switch POWER SPINE is an innovative adaptation allowing increased modularity in data center architecture. The Switch POWER SPINE provides the structure and pathway to provision power from any power room to any cabinet within the data center. This allows for the delivery of additional circuits to any cabinet over many years in an efficient and organized fashion. The POWER SPINE also reduces construction costs by placing the overhead weight of the heavy power conduits on the concrete steel-reinforced slab on grade floor, reducing the roof load and infrastructure needed to support that load. Placing the POWER SPINE on the grade floor also increases the seismic integrity of the facility.

The Switch Power Distribution Units ("PDUs") are part of our system-plus-system color-coded power components, which provide modular power and allow the data center to deliver 100% power uptime.

Power Density and Cooling Capacity

One of the most significant challenges faced by traditional colocation facilities is the need to increase their power density and cooling capacity to keep pace with the increases in IT equipment power requirements and heat exhaustion. Traditional data centers are designed with a raised floor and internal Computer Room Air Conditioner ("CRAC") units that take up valuable floor space. In these traditional environments, the hot air exhausted by IT equipment blends with the cold air provided by the CRAC units, which causes the temperature to rise. As customers add more equipment, the data center operator must install additional internal CRAC units. Customers in these traditional data centers are required to leave portions of the cabinets empty to reduce the amount of heat coming out of each cabinet, which forces the customer to buy additional space for their equipment to accommodate these cooling restrictions. We expect many traditional colocation facilities will be required to attempt to retrofit their infrastructure, if possible, to accommodate the additional weight of denser cabinets and the additional equipment necessary to power and cool those cabinets. Without these retrofitting changes, we believe these traditional colocation facilities will not be able to accommodate the newer servers or the higher densities required by customers who want to run them.

We have developed patented technologies that have redefined data center space and cooling, allowing customers to deploy high density and scalable IT architectures to support demanding and mission critical workloads. Our data centers are designed to enable us to adapt to customers' needs for increased power and densities without retrofitting our existing facilities. These technologies include:

- ***100% Hot Aisle Containment Rows*****.** We refer to our patented 100% Hot Aisle Containment Row technology as the Switch Thermal Separate Compartment in Facility ("T-SCIF") or the Chimney Pod. As depicted in the figure below, the T-SCIF (Chimney Pod) creates a fully contained hot aisle between parallel rows of cabinets. The heat from the customers' equipment exhausts into the hot aisle, where it vents up into a hot-air plenum and out of the data center via extraction fans. Simultaneously, cold air is released from the overhead vents in the cold room into the intakes of the IT equipment in the cabinets, which cools the equipment. The exhausted hot air is never allowed to blend back into the cold room, which helps ensure that our customers' IT equipment operates in the correct environmental conditions. Using this cooling method, we are able to cool power levels that significantly exceed those of traditional data centers. Our ability to support these increased densities enables our customers to use and buy less cabinet space to house their equipment, which reduces the cost of their deployment. Similarly, the ability to handle these increased densities allows us to deploy more power on less space, driving a higher return on capital.

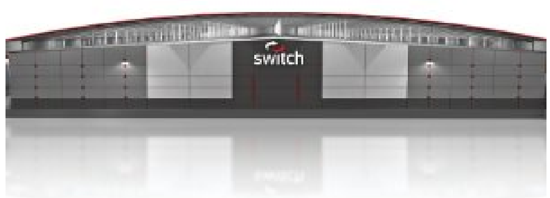
- ***Exterior Wall Penetrating Multi-Mode HVAC Units*****.** We provide cooling to the T-SCIFs using our patented Exterior Wall Penetrating Multi-Mode heating, ventilation and air conditioning ("HVAC") units that we refer to as the TSC 500, TSC 600 and TSC 1000. The units are attached to the exterior wall of the Switch MOD, which alleviates the cost of reinforcing the data center floor or roof to support the weight of HVAC equipment, while also enabling complete segregation of hot and cold air in the data center. The exterior location of our TSC units eliminates the need to bring water into the data center, frees up valuable IT space for cabinet deployments and allows us to repair or replace any single TSC without disrupting the data center environment. Each of our TSC 500, TSC 600 and TSC 1000 units can take advantage of multiple modes of cooling depending on the environment, which enables us to construct facilities that can be cooled entirely without water. We believe this combination of cooling methods makes our facilities the most efficient and resilient large-scale commercial data centers ever constructed.

- ***Hot and Cold Containment Segregation Structure.*** The Switch BLACK IRON FOREST is the framework that supports the weight of the 100% Hot Aisle Containment Rows within a T-SCIF, the ceiling for the heat containment chamber, the power delivery pathways for each uninterruptible power system ("UPS") and cabinet system-plus-system PDU. This increases the stability and integrity of our facilities by distributing all overhead weight to a concrete steel-reinforced slab on grade floor. This structure is also connected horizontally across the facility, which increases the physical stability of the facility. In addition, this structure's thermal qualities help efficiently maintain the temperature within the data center because all of this metal gets cold from all the cold air blowing on it all the time, and stays cold, radiating cold air through the room and helping to keep the room cold.

Resiliency

Another challenge faced by all data centers is the ability to assure customers that their IT equipment remains operational despite utility power outages or other unplanned occurrences. Since the opening of our first colocation facility, we have delivered 100% uptime to our customers. To accomplish this, we have implemented a tri-redundant design, consisting of three separate power systems with no single points of failure. Additionally, each power system contains its own generators and UPSs. Effectively, one entire system can experience a failure without our customers experiencing any downtime. Other proprietary elements that contribute to our resiliency include:

- ***Redundant Data Center Roofing System.*** Switch SHIELD is a patented system consisting of an inner roof and outer roof that are separated by nine feet. Both roofs are solid steel, unpenetrated, watertight, airtight, and rated to withstand winds up to 200 miles per hour. If the outer roof is damaged, the inner roof still protects our customers' IT equipment. Switch SHIELD mitigates extreme weather conditions and, with its dual-roof architecture, allows the maintenance, repair or replacement of the roof components while protecting the critical system operations of the data center below, even during a full roof replacement.



- ***Multi-System Power Containers.*** The Switch Power Optimized Delivery ("POD") consists of a separate, color-coded, tri-redundant system in a system-plus-system configuration. This tri-redundant design reinforces our mission-critical focus on delivering 100% power uptime.

- ***Data Center Infrastructure Management System.*** The advanced infrastructure solutions that power, cool, connect and protect our data centers are monitored and optimized with our Living Data Center ("LDC") software. This Switch-developed and supported software monitors all the critical infrastructure of the data center macro-environment and the micro-environments for each customer. Our customers can securely access data pertaining to each of their deployments on a real-time basis as LDC dynamically updates and displays information synthesized from thousands of sensors deployed throughout each facility.

Our Campus Locations

As of December 31, 2020, we had the following Prime Campuses operating or under development at strategic locations in the United States, encompassing 12 data centers and 4.7 million GSF of space:

- ***The Core Campus.*** The Core Campus in Las Vegas, Nevada, currently encompasses nine separate data centers with up to approximately 2.3 million GSF of space and up to 315 MW of 100% renewable power available to these facilities. In 2020, we started construction on additional data centers that will provide up to approximately 1.6 million GSF of additional space and up to 120 MW of 100% renewable power available to the facilities. The Core Campus location offers approximately 5- and 6-millisecond latencies to Southern California and Phoenix, respectively.
- ***The Citadel Campus.*** The Citadel Campus near Reno, Nevada, is designed to be the world's largest data center campus. Our first data center in The Citadel Campus, which we believe will be the largest data center in the world upon completion, opened in November 2016. This data center is designed to include up to approximately 1.4 million GSF of space and have up to 130 MW of 100% renewable power available to the facility. We have plans to build seven additional data centers at The Citadel Campus that will provide up to 5.9 million GSF of additional space and have up to 520 MW of 100% renewable power available to the facilities. The Citadel Campus location offers approximately 4-millisecond latency to Northern California.
- ***The Pyramid Campus.*** The Pyramid Campus is our Northeastern Prime and is located in Grand Rapids, Michigan. It was designed to be the largest data center campus in the eastern United States. The first data center space became available in the Switch PYRAMID, an adaptive reuse of the former Steelcase Pyramid, in June 2016. The Switch PYRAMID is designed to include up to approximately 220,000 GSF of data center floorspace and have up to 10 MW of 100% renewable power available to the facility. The Pyramid Campus is planned to include up to two additional data centers that will provide up to approximately 940,000 GSF of additional space and have up to 100 MW of 100% renewable power available to the facilities. We expect to construct these facilities as necessary to meet customer demand. In addition to serving the Michigan market, The Pyramid Campus location offers approximately 4-millisecond latency to Chicago.
- ***The Keep Campus.*** The Keep Campus is our Southeastern Prime located in Atlanta, Georgia. Our first data center in The Keep Campus, which opened during the first quarter of 2020, is designed to include up to approximately 310,000 GSF of space and have up to 35 MW of 100% renewable power available to the facility. The Keep Campus is planned to include additional data centers that will provide up to approximately 1.1 million GSF of additional space and have up to 115 MW of 100% renewable power available to the facilities. The Keep Campus location offers approximately 9-millisecond latency to Orlando.

The Core Campus and The Citadel Campus are connected through a fiber network known as the Switch SUPERLOOP. The Switch SUPERLOOP gives customers the advantages of a highly available yet low latency fiber network in close proximity to the major markets of California, but without the high taxes, the high cost and frequency of interruptions of power or the high risk of natural disasters associated with California. The latency between The Core Campus and The Citadel Campus locations is approximately 7 milliseconds using the Nevada portion of the SUPERLOOP. This connectivity enables customers to deploy mission-critical infrastructure and workloads in a large active-active data center configuration. It also provides geographical redundancy of data center deployments while staying within Nevada’s tax-advantaged business climate. Through our carrier partners, the Switch SUPERLOOP location also provides approximately 4-millisecond connectivity from The Citadel Campus to the Bay Area and approximately 5-millisecond connectivity from The Core Campus to Southern California (round trip).

We carefully chose the locations of our U.S. campuses based on characteristics that we believed would help drive resiliency, performance and cost efficiencies for our customers. Our Prime campus locations are located in areas with low natural disaster risk. For example, the state of Nevada boasts the lowest natural disaster rating in the Western United States. Additionally, each of these locations offers favorable tax and economic development policies that provide zero or low-tax environments for our customers to deploy IT equipment. While all of our locations offer a lower-cost source of 100% renewable power, there are additional efficiency advantages. For example, the Nevada climate is characterized by low humidity and relatively stable temperatures for most of the year. This improves cooling efficiencies and reduces power consumption. We own most of our facilities, and where the land and shell are not owned, we hold long-term leases on those assets.

In addition to our Primes, SUPERNAP International has deployed facilities in Italy and Thailand that collectively provide up to approximately 904,000 GSF of space, with up to 100 MW of power available to the facilities. In February 2021, we acquired SUPERNAP International’s 30% ownership interest in SUPERNAP Thailand, the entity which has deployed the facility in Thailand, and sold our 50% ownership interest in SUPERNAP International, thus disposing of our interest in the facility in Italy.

Our Platform Has Powerful Network Effects and Nurtures a Rich Technology Ecosystem

Our technology infrastructure platform supports a dynamic technology ecosystem bringing together enterprises and service providers, including cloud and managed services providers and telecommunications carriers. Participants benefit from the proximity to these service providers, customers and collaborators. Our platform and our ecosystem have independent but synergistic self-proliferating network effects that benefit participants as we continue to innovate, our platform evolves and our ecosystem grows.

As we continue to improve and enhance our technology, we believe our customer value proposition grows stronger. In turn, our ability to deliver increasing value to our customers attracts new customers and encourages existing customers to grow with us.

Our Technology Ecosystem Creates Significant Value and Has Powerful Network Effects

Our exascale data centers are akin to a large and dynamic digital city, which is home to a wide variety of technology citizens. These citizens engage in commerce with each other and collaborate to enhance their offerings to the world in general. All benefit from the density of our facilities, the proximity to each other and the opportunity to interact in a safe, secure and stable environment. Our ecosystem includes numerous enterprises from a wide variety of business segments, many of which are operating their most dense deployments and hosting mission-critical data and applications. These enterprises attract other participants within the ecosystem, such as cloud platform providers, managed services providers and telecommunications carriers that we refer to collectively as ecosystem service providers.

In turn, the presence of these ecosystem service providers attracts other new enterprise customers seeking to collaborate with our ecosystem service providers. This further differentiates our ecosystem by increasing customer diversity and the range of mission-critical applications run within a single campus. We proactively foster an environment where technology companies can connect and innovate on various projects, which further increases participation in the ecosystem.

The powerful Switch technology ecosystem creates value for our enterprise customers, such as:

- ***Telecommunications Purchasing.*** The scale of our campuses attracts a robust network of telecommunications carriers to our facilities that is mutually beneficial to our customers and the carriers. The size and diversity of customers in our campuses generate significant demand for connectivity, while at the same time providing a cost effective entry point for carriers. Switch can fit a significantly larger number of customers into each data center campus; therefore, on-net telecommunications carriers can sell large quantities of services to this ecosystem of customers. Our CORE purchasing cooperative aggregates the buying power of our customers, enabling us to provide significant cost-savings on connectivity, while also maintaining a flexible and expansive carrier partner ecosystem from which our customers can choose. Customers can use CORE to acquire connectivity services outside of our campuses.

- ***Service Provider Access.*** Our Switch CLOUD ecosystem provides our customers with direct access to more than 250 cloud, IT and software providers and the flexibility to leverage the right mix of on- and off-premise public and private cloud services. By establishing these connections within our facility, our customers enjoy low-latency, highly secure and flexible access to multiple cloud providers to meet their unique business requirements.
- ***Interconnectivity.*** Our ecosystem connects more than 950 customers, including over 250 cloud, IT and software providers and more than 90 network and telecommunications providers, which enhances our customers' ability to inter- and cross-connect. The ability for customers to privately interconnect has many benefits including reducing costs, optimizing performance and satisfying regulatory requirements. Interconnecting within our data center allows customers to avoid the expense associated with long-haul dedicated connectivity and provides reduced latency and higher availability. By cross-connecting within our facilities, regulated entities can avoid the need to exchange traffic over the internet, thereby satisfying regulatory security requirements in a more cost-efficient manner.
- ***Collaborative Innovation.*** Our dedicated sales team is driven to help our customers connect, innovate and develop technologies of the future and actively works to foster collaboration amongst our ecosystem participants. Our sales force is empowered and encouraged to build positive relationships and foster interaction between our customers on a platform grounded in truth. This is part of our Truth in Technology commitment.

Our technology ecosystem also creates intrinsic value for us, such as:

- ***Visibility into Future Technologies.*** Our customers run some of their most mission-critical and advanced applications in our exascale facilities and our exposure to that technology gives us unique visibility into future trends and allows us to plan for future needs.
- ***Lower Customer Acquisition Costs.*** The power of our ecosystem attracts customers, which results in less time and money spent acquiring customers.
- ***Customer Loyalty.*** Our ecosystem helps support our strong customer value proposition, which in turn creates customer loyalty. We believe this loyalty is evidenced by our low annual churn rate, which averaged approximately 0.6% over the three years ended December 31, 2020 and 0.9% for the year ended December 31, 2020. Additionally, our customers regularly expand their deployments within our facilities. For example, approximately 88% of the increase in revenue for the year ended December 31, 2020 was attributable to growth from existing customers, while the remaining 12% of the increase in revenue was attributable to new customers initiating service after December 31, 2019.

Our Customer Scale and Density allows us to offer Collaborative Services

As our platform and customer base continues to expand, we continue to realize growing efficiencies and benefits of scale at each of our Primes. Our large and growing customer base within each Prime has provided us with the economies of scale necessary to provide our customers valuable ancillary services, such as Switch CONNECT and Switch SAFE.

- ***Switch CONNECT.*** Switch CONNECT provides telecommunications audit and agency services that help our customers evaluate network needs and purchase substantially discounted telecommunications services through CORE, our purchasing cooperative. CORE aggregates the buying power of the over $11 trillion combined market capitalization of the customers in our ecosystem. Our Switch CONNECT team has achieved savings in excess of 50% for our customers compared with their previous telecommunications spend.
- ***Switch SAFE.*** Switch SAFE provides our customers with an ultra-scalable attack mitigation platform capable of mitigating multi-vector volumetric distributed denial of service (D/DoS) attacks with no additional latency for legitimate traffic, allowing our customers to keep their mission critical services up and running.

Our customer density results in a multiplicity of technology enterprises in the same location, which creates a powerful environment for both our enterprise customers and our ecosystem service providers. We believe these customer densities and volumes enable our ecosystem service providers to earn a desirable return on their capital investment, even with the discounted rates we negotiate on behalf of our customers.

These collaborative services create even greater value for our customers and ecosystem service providers alike, creating a self-reinforcing feedback loop.

Our Customers

We have more than 950 customers, including some of the world's largest technology and digital media companies, cloud, IT and software providers, financial institutions and network and telecommunications providers. Our customer base is meaningfully diversified across key industries, including approximately 24% in cloud, IT and software, 15% in e-commerce, 13% in digital media and entertainment, 12% in finance and banking, and 8% in healthcare as of December 31, 2020. In each of these industries we have marquee customers who have grown with us over time. We believe that we have a significant opportunity to both grow penetration of existing customers as well as attract new customers. For the years ended December 31, 2020 and 2019, our top 10 customers collectively accounted for approximately 36.9% and 36.5% of revenue, respectively.

We provide our customers with a consistent experience and high level of service at low cost, which enables us to maintain one of the lowest churn rates in the industry and the lowest of any publicly reporting data center company that reports churn rate metrics. From 2018 to 2020, our annual churn rate averaged 0.6%. Our early customers remain loyal to us today.

Sustainability

Since January 1, 2016, we have powered all of our U.S. data centers with 100% clean and renewable energy. We are the largest data center operator in the United States to be 100% renewably powered, and we support local and new renewable facilities. We have successfully accomplished this goal through a combination of technological innovation, capital investment, industry partnerships and public advocacy. Many of our customers and potential customers are looking for ways to achieve their "green" goals and reach desired levels of sustainability, which other colocation solutions cannot provide. By locating their IT equipment with us, they are able to advance on those goals and improve on their current level of sustainability. Elements of our sustainability efforts include the following:

- ***Clicking Clean Scorecard.*** In recognition of our efforts, Greenpeace awarded us "A" grades in all five categories measured by Greenpeace in its most recent Clicking Clean Company Scorecard (2017). We were the only company in the United States that received all "A" grades, and we were recognized as the leader among colocation data centers evaluated in the study. We believe that many technology and infrastructure companies, as well as their customers and clients, evaluate progress towards achieving "clean energy" goals by reference to the company scorecards included in this report.
- ***Leading Power and Cooling Efficiency.*** Our technology results in significant efficiencies enabling annual Power Usage Effectiveness ("PUE") of 1.28. We do not believe other colocation data center providers are able to maintain such a low PUE while simultaneously allowing customers to operate at very high power densities. We accomplish all of this without compromising our adherence to industry best standards. Our facilities are 100% green and operate at a level that exceeds the standards of IEEE, ANSI, ASHRAE, 24/7, ISO 9001, SAS 70/SSAE-16, BICSI and the Green Grid Association.
- ***Supporting New and Local Solar.*** In 2016, we partnered with the local Nevada utility to construct Switch Station 1 and Switch Station 2, which are two solar power stations in Las Vegas, Nevada having a combined 179 MW of nameplate capacity. In 2019, we also partnered with Capital Dynamics in the construction of Gigawatt 1, the single largest solar project portfolio in the United States. We have secured long-term power purchase and sale agreements under a solar project part of Gigawatt 1 with 180 MW of nameplate capacity and a 90 MW energy storage facility, which are expected to commence during 2022. Additionally, as part of the Solar Energy Industries Association's most recent Solar Means Business Report (2019), we were named in the top 10 of industry-leading, global technology companies and the only colocation data center technology ecosystem for our investment in utilizing solar energy.
- ***Leading Water Preservation.*** Our proprietary water processing technology allows us to reuse our water while eliminating chemicals from our cooling systems and increasing our water efficiency. Additionally, in 2021, we expect to commence the development of a 4,000 acre-foot effluent water pipeline in Northern Nevada, enabling The Citadel Campus to run on 100% recycled/effluent water.
- ***Energy Market Direct Access.*** We were the first entity since 2005 to seek the right to unbundle from the electric monopoly in Nevada. By leaving the monopoly and being able to purchase power from the broader electric market, we have greater freedom to control the energy we use, including the ability to lock in our commodity pricing for longer periods, purchase renewable energy from economical resources and effectuate broader national policy change. Since June 1, 2017, we have been buying our power directly

from the national market, as opposed to buying it from the incumbent electrical power utility. We have seen savings from this direct national energy market participation.

Our Values

Our core values govern how every Switch employee executes on our mission to power the sustainable growth of the connected world and include:

- ***Truth in Technology.*** Our customers place a significant level of trust in us to provide them the best technology solutions for their business.
- ***Sustainable by Design.*** Sustainably running the internet has been a core value since our founding. Our commitment does not stop there. We thoughtfully pursue the advancement of new, innovative policies that expand access to smart water, clean energy and the technological advances that are changing the way the world is powered. We focus on sustainability on multiple levels and have adopted internal policies focused on reducing plastic bottle waste, utilizing biodegradable tableware and recycling.
- ***Leading the Industry and beyond in Gender Equality and Veteran Placement.*** We believe our workforce is richly diverse in its total composition at all levels and outpaces our industry in the number of women executives. Women hold high-level technical positions throughout our company, including chief responsibility for construction, information and solutions architecture, branding and customer operations. Veterans provide another critical backbone of our workforce. We honor their service and actively recruit veterans to our mission-critical environment.
- ***Supporting Interdisciplinary Education Blending Technology and the Arts*.** We believe that combining education, technology and the arts creates a powerful platform for the future of our country and its market competitiveness. We have collaborated with universities to bring about improvements in research through our donations of supercomputers and connectivity to help accelerate their standing in the critical world of higher education research. We are also passionate about funding programs that build school gardens to connect youth to science through hands-on experiential learning. We bring financial commitment and thought leadership to preparing the next generation of whole-mind thinkers through an unwavering commitment to interdisciplinary Science, Technology, Engineering, the Arts and Mathematics (STEAM) education programs in Nevada, Michigan, Georgia and expect to do the same in any other states where we may operate in the future. Switch proudly supports First Robotics winning teams in Nevada and Michigan, the STEAM Education Village at Art Prize in Grand Rapids, the Nevada Museum of the Arts STEAM School, and the Smith Center for Performing Arts STEAM Programs. We believe that the best creative problem solvers who can integrate form and function with equal mastery through science, technology, engineering, arts and math education platforms will run the internet of absolutely everything with both form and function in mind.
- ***Karma: Our culture is grounded in the philosophy of doing the right thing.*** Innovation, detail and excellence drives everything from the interior architecture of our environments to our delivery of 100% uptime. We do it all with dedication to providing world-renowned facilities, superior service for our customers, the best working experience in the industry, true technology leadership and deep caring for the communities where we operate and the planet where we live. Our logo mark was designed to put the power of karma at the center of our company. We believe that if you put good energy out, you will get good energy back.

Sales and Marketing

Our sales strategy is built around “Truth in Technology.” Our team works closely with each customer to identify that customer’s needs and to design a solution tailored to meet those needs. They also help to integrate each customer into our ecosystem, which provides access to Switch CONNECT and Switch CLOUD and potentially the ability to connect directly with their existing and potential customers. Many of our customers encourage their customers, suppliers and business partners to place IT equipment in our data centers, which has created a network effect resulting in additional customer acquisitions. In addition, large network providers, cloud providers or managed services providers may refer customers to us as part of their total customer solution. These processes have resulted in significant customer growth with limited spend on sales and marketing. Selling and marketing expenses include sales and marketing labor costs, direct branding and selling expenses, as well as administrative and travel and entertainment expenses for our marketing and sales departments. Selling and marketing expenses exclude sponsorships, contributions and lobbying expenses.

We use a direct sales force and selected partner relationships to market our offerings to global enterprises, content providers, financial companies and mobile and network service providers. We have a robust colocation sales team who combined offer over 70 years of experience as members of our team. Our culture is one which fosters a team environment and allows our sales representatives to offer the customer the solution they need without artificial sales pressure. We believe that the strength of our product and market reputation are the biggest reasons for increased sales activity.

To support our sales efforts and to promote our brand proactively, we have active and experienced branding and marketing teams. Our marketing strategies include active public relations and ongoing customer communications programs. We also regularly measure customer satisfaction levels and host key customer forums to identify and address customer needs. We believe our brand is one of our most valuable assets, and we strive to build recognition through our website, external blog and social media channels, by sponsoring or leading industry technical forums, by participating in internet industry standard-setting bodies and through advertising and online campaigns.

Competition

We offer a broad range of data center services and, as a result, we may compete with a wide range of data center service providers for some or all of the services we offer. We face competition from numerous developers, owners and operators in the data center industry, including managed services providers and real estate investment trusts ("REITs") such as CoreSite Realty Corporation, CyrusOne Inc., Digital Realty Trust, Inc., Equinix, Inc. and QTS Realty Trust, Inc., some of which own or lease data centers, or may do so in the future, in markets in which our properties are located. Additionally, we are aware of other companies that may compete against us in various geographies or that may be developing additional data center capabilities to compete with us. Our current and future competitors may vary by size and service offerings and geographic presence.

Competition is primarily centered on reputation and track record, quality and availability of data center space, quality of service, technical expertise, security, reliability, functionality, geographic coverage, financial strength and price. Some of our current and future competitors may have greater brand recognition, longer operating histories, stronger marketing, technical and financial resources and access to less expensive power than we do. As a result, some of our competitors may be able to:

- offer space at prices below current market rates or below the prices we currently charge our customers;
- bundle colocation services with other services or equipment they provide at reduced prices;
- develop superior products or services, gain greater market acceptance and expand their service offerings more efficiently or rapidly;
- adapt to new or emerging technologies and changes in customer requirements more quickly;
- take advantage of acquisition and other opportunities more readily; and
- adopt more aggressive pricing policies and devote greater resources to the promotion, marketing and sales of their services.

We operate in a competitive market and we face pricing pressure for our services. Prices for our services are affected by a variety of factors, including supply and demand conditions and pricing pressures from our competitors. We may be required to lower our prices to remain competitive, which may decrease our margins and adversely affect our business prospects, financial condition and results of operations.

Human Capital Resources

As of December 31, 2020, we had 759 employees. We recognize that it is critical to hire the right people and do our best to provide the resources, incentives, leadership, and upward mobility to ensure positive, long-term relationships with our valued employees. Through this, we manage our employee turnover rate and maintain a strong track record of retention among our senior leadership team. We collaborate with the local unions where applicable, such as construction and the trades; however, none of our direct employees are represented by a labor union or covered by a collective bargaining agreement. We believe our employee relations are good and we have not experienced any work stoppages.

Employee Programs and Training

We recognize that our team members are our greatest asset. As we continue the pursuit of designing, building and operating the world's most advanced data centers and leading through innovation in technology infrastructure, we know that our continued success depends on the sustained contributions of bright, energetic, talented people who share our mission-critical mindset. Our recruitment and hiring efforts result in a diverse workforce mirroring the communities in which we do business. We provide our team members comprehensive technical, safety, and professional development training. Through our Switch University, we have pioneered strategic partnerships with community colleges to develop a work force that is prepared for the careers that run the Internet of Everything in our data centers.

Human and Workforce Rights

We recognize the importance of human rights, diversity and offering a workplace free of unlawful discrimination, harassment and retaliation. Our expectation is that all customers, employees, agents and business partners will be treated with respect and dignity, and that our interactions with others will be free from abuse, discrimination and corruption. We do not tolerate forced or child labor, human trafficking, or slavery in any form, and are committed to the protection of minority groups and women's rights. We are also dedicated to working with partners and service providers who share these fundamental values and demonstrate their own commitment to promoting individual human rights. We require our partners and service providers to fully comply with all applicable labor, health and safety, anti-discrimination, anti-retaliation and other workplace laws, including those addressing equal pay, child labor, forced labor, slavery and human trafficking, and wage and hour laws.

Diversity, Equity and Inclusion

We embrace and encourage our employees' differentiated insights, including those enriched by gender, gender expression, age, race, religion, color, ethnicity, disability, family or marital status, national origin, physical or mental ability, political affiliation, sexual orientation, socio-economic status, veteran status, and all other characteristics that make our employees unique. We have established a Diversity Council that oversees ongoing initiatives that promote these values and raise awareness of the value of a diverse workforce.

Regulation

General

Data centers in our markets are subject to various laws, ordinances and regulations. We believe that each of our properties has the necessary permits and approvals for us to operate our business.

Americans with Disabilities Act

Our properties must comply with Title III of the Americans with Disabilities Act of 1990 (the "ADA") to the extent that such properties are "public accommodations" or "commercial facilities" as defined by the ADA. The ADA may require, for example, removal of structural barriers to access by persons with disabilities in certain public areas of our properties where such removal is readily achievable. We believe that our properties are in substantial compliance with the ADA and that we will not be required to make substantial capital expenditures to address the requirements of the ADA. However, noncompliance with the ADA could result in imposition of fines or an award of damages to private litigants. The obligation to make readily achievable accommodations is an ongoing one, and we will continue to assess our properties and to make alterations as appropriate in this respect.

Environmental Matters

We are required to obtain a number of permits from various government agencies to construct a data center facility, including the customary zoning, land use and related permits, and are also subject to laws and regulations relating to the protection of the environment, the storage, management and disposal of hazardous materials, emissions to air and discharges to water, the cleanup of contaminated sites and health and safety matters. These include various regulations promulgated by the Environmental Protection Agency and other federal, state and local regulatory agencies and legislative bodies relating to our operations, including those involving power generators, batteries, and fuel storage to support colocation infrastructure. While we believe that our operations are in substantial compliance with environmental, health and human safety laws and regulations, as an owner or operator of property and in connection with the current and historical use of hazardous materials and other operations at its sites, we could incur significant costs, including fines, penalties and other sanctions, cleanup costs and third-party claims for property damages or personal injuries, as a result of violations of or liabilities under environmental laws and regulations. Fuel storage tanks are present at many of our properties, and if releases were to occur, we may be liable for the costs of cleaning up resulting contamination. Some of our sites also have a history of previous commercial operations, including past underground storage tanks.

Some of the properties may contain asbestos-containing building materials. Environmental laws require that asbestos-containing building materials be properly managed and maintained, and may impose fines and penalties on building owners or operators for failure to comply with these requirements.

Environmental consultants have conducted, as appropriate, Phase I or similar non-intrusive environmental site assessments on recently acquired properties and if appropriate, additional environmental inquiries and assessments on recently acquired properties. Nonetheless, we may acquire or develop sites in the future with unknown environmental conditions from historical operations. Although we are not aware of any sites at which we currently have material remedial obligations, the imposition of remedial obligations as a result of spill or the discovery of contaminants in the future could result in significant additional costs to us.

Our operations also require us to obtain permits and/or other governmental approvals and to develop response plans in connection with the use of our generators or other operations. These requirements could restrict our operations or delay the development of data centers in the future. In addition, from time to time, federal, state or local government regulators enact new or revise existing legislation or regulations that could affect us, either beneficially or adversely. As a result, we could incur significant costs in complying with environmental laws or regulations that are promulgated in the future.

Intellectual Property

Intellectual property is an important aspect of our business, and we actively seek protection for our intellectual property. To establish and protect our proprietary rights, we rely upon a combination of patent, trade secret, trademark and copyright laws. We also utilize contractual means such as confidentiality agreements, licenses and intellectual property assignment agreements. We maintain a robust policy requiring our employees, contractors, consultants and other third parties to enter into confidentiality and proprietary rights agreements to control access to our proprietary information. These laws, procedures and restrictions provide only limited protection, and any of our intellectual property rights may be challenged, invalidated, circumvented, infringed or misappropriated. Furthermore, the laws of certain countries do not protect proprietary rights to the same extent as the laws of the United States, and we therefore may be unable to protect our proprietary technology in certain jurisdictions.

As of December 31, 2020, we have 24 granted or allowed U.S. patents and patent applications by the United States Patent and Trademark Office comprising 382 granted or allowed claims. We also have 25 pending U.S. patent applications comprising 405 patent pending claims. The first of our patents begin expiring on or around June 13, 2028 subject to our ability to extend the term under applicable law. In addition to capturing additional innovations and inventions generated by us, we continually review our development efforts to assess the existence and patentability of new intellectual property. We actively pursue the registration of our domain names, trademarks and service marks in the United States, including new generic top-level domains, and in certain locations outside the United States. To protect our brand, we file trademark registrations in some international jurisdictions, and actively monitor online activities of others. As of December 31, 2020, we also had more than 210 trademark class registrations, more than 215 trademark class applications for more than 425 trademarks in the United States, and over 65 pending and registered trademarks in foreign countries. We have also registered more than 1,100 domain names, including www.switch.com, www.switch.net, and www.switch.org.

We have engaged in limited licensing of our intellectual property and there is the potential to further monetize our intellectual property in this manner in the future. Currently, we deploy our intellectual property for our own benefit and leverage our registrations to prevent mimicry by others.

Table of Contents

Our Portfolio

The following chart provides various metrics relative to our portfolio as of December 31, 2020:

Campus[(1)]	Year Operational	Gross Square Feet (up to)[(2)]	Utilization % - By Campus[(3)]	Utilization % - By Open Sector[(3)]	Power Capacity (up to)[(4)]
The Core Campus[(5)]					
Current: 9 Facilities[(6)]	2003-2019	2,340,000	88%	89%	315 MW
Future: 5 Facilities	2021+	1,600,000			120 MW
The Citadel Campus					
Current: TAHOE RENO 1	2016	1,360,000	79%	93%	130 MW
Future: 7 Facilities	2021+	5,890,000			520 MW
The Pyramid Campus					
Current: Switch PYRAMID	2016	430,000			
		(Office)			
		220,000	74%	96%	10 MW
		(Data Center)			
Future: 2 Facilities	2021+	940,000			100 MW
The Keep Campus					
Current: ATLANTA 1	2020	310,000	19%	38%	35 MW
Future: 2 Facilities	2021+	1,100,000			115 MW
U.S. Total (Current)		**4,660,000**			**490 MW**
U.S. Total (Future)		**9,530,000**			**855 MW**

(1) SUPERNAP International has also deployed two additional data centers in Milan, Italy and Bangkok, Thailand that collectively provide up to approximately 904,000 GSF of space, with up to 100 MW of power available to these facilities. We held a 50% ownership interest in SUPERNAP International through December 31, 2020. In February 2021, we acquired SUPERNAP International's 30% ownership interest in SUPERNAP Thailand, the entity which has deployed the data center in Thailand, and sold our ownership interest in SUPERNAP International, thus disposing of our interest in the data center in Italy.

(2) Estimated square footage of all enclosed space at full build out.

(3) Utilization numbers are based on available cabinets. The Citadel Campus, The Pyramid Campus, and The Keep Campus, which opened during the first quarter of 2020, are in the first phase of development. Additional capital investment will be required to reach full build out.

(4) Defined as total power delivered to the data center at full build out.

(5) We lease a data center building, the underlying land for three of our data centers, and land currently under development at The Core Campus that have non-cancellable terms expiring in 2033 through 2069.

(6) Current facilities at The Core Campus include LAS VEGAS 2, LAS VEGAS 4, LAS VEGAS 5, LAS VEGAS 7, LAS VEGAS 8, LAS VEGAS 9, LAS VEGAS 10, LAS VEGAS 11, and LAS VEGAS 12.

Organizational Structure and Corporate Information

Switch, Inc. is a Nevada corporation formed on June 13, 2017. We are a holding company and our principal asset is our equity interest in Switch, Ltd. Our principal executive offices are located at 7135 S. Decatur Boulevard, Las Vegas, Nevada 89118, and our telephone number is (702) 444-4111. Our website address is www.switch.com.

As of December 31, 2020, we owned 49.8% of Switch, Ltd. and the noncontrolling interest holders owned the remaining 50.2% of Switch, Ltd.

Although we have a minority economic interest in Switch, Ltd., we have the sole voting interest in, and control the management of, Switch, Ltd. Accordingly, we consolidate the financial results of Switch, Ltd. and report a noncontrolling interest on our consolidated statements of comprehensive income, representing the portion of net income or loss and comprehensive income or loss attributable to the direct and certain indirect owners of interest in Switch, Ltd. ("Members"), each of which own the single class of issued common membership interests of Switch, Ltd. ("Common Units") and who may exchange their Common Units for shares of our Class A common stock, including certain of our named executive officers, certain members of our board of directors, certain other current and former non-executive employees, and the respective successors, assigns and transferees of such Members permitted under the Fifth Amended and Restated Operating Agreement of Switch, Ltd. (“Switch Operating Agreement”) adopted in connection with our initial public offering (“IPO”) and our amended and restated articles of incorporation.

Additional Information

We make available free of charge on our website at investors.switch.com our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, Proxy Statements on Schedule 14A and amendments to those materials filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), as soon as reasonably practicable after we electronically file such materials with, or furnish it to the Securities and Exchange Commission (“SEC”). The information found on, or otherwise accessible through, our website is not incorporated by reference into, nor does it form a part of, this Form 10-K, or any other document that we file with the SEC.

Item 1A. Risk Factors.

Investing in our Class A common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information included in this Form 10-K, including "Management's Discussion and Analysis of the Financial Condition and Results of Operations" and the consolidated financial statements and the related notes. We cannot assure you that any of the events discussed below will not occur. Our business, financial condition and results of operations could be materially and adversely affected by any of these risks or uncertainties. In that case, the trading price of our Class A common stock could decline, and you may lose all or part of your investment. All forward-looking statements made by us or on our behalf are qualified by the risks described below.

Summary of Risk Factors

We are subject to a number of risks, including risks that may prevent us from achieving our business objectives or that may adversely affect our business, financial condition, results of operations and prospects. The following is a summary of the principal risk factors described in this section:

Risks Related to Our Operations

- A slowdown in the demand for data center resources and other market and economic conditions.
- Inability to manage our growth.
- Operating results may fluctuate.
- Ability to license the space in our existing data centers.
- Long selling and implementation cycle for our services requiring significant time and resource commitments prior to recognizing revenue.
- Increased power costs and limited availability of power resources.
- Significance of revenue from data centers located in one location.
- Delays in the expansion of existing data centers or the construction of new data centers.
- Ability to compete effectively against our current and future competitors.
- A catastrophic event or a prolonged disruption in excess of our insurance coverage.
- Early termination or non-renewal of our existing leases and agreements.
- The loss of key personnel.
- Our inability to attract and retain qualified and skilled employees.
- The failure of our joint ventures, strategic collaborations and other similar arrangements.
- Difficulties in identifying and consummating future acquisitions, alliances or joint ventures.
- Suitability of our properties for other uses.

Risks Related to Our Customer Base

- Continued investment in expansion efforts without sufficient customer demand.
- A significant portion of our revenue is highly dependent on a limited number of customers.
- Our customer contract commitments are subject to reduction and potential cancellation.
- Our customers or potential customers may design or develop their own data centers.
- Our churn rate may increase, or we may be unable to achieve high contract renewal rates.
- Failure to attract new customers for our services or to grow revenue from existing customers.
- Future consolidation and competition in our customers' industries.
- Risk of early termination, audits, investigations, sanctions or penalties in connection with our government customers.

Risks Related to Technology and Intellectual Property

- Any failure in the critical systems of the data center facilities we operate or services we provide.
- Failure to protect our current and future proprietary intellectual property rights.
- Large-scale malfunctions in the proper and efficient functioning of computer and data-processing systems.
- Security breaches, including cyber security breaches, could disrupt our operations.
- Misappropriation of our or our customers' proprietary intellectual property or confidential information.

- Migration from colocation data centers to the public cloud.
- Inherently risky investments in new offerings and technologies.
- Inability to adapt to evolving technologies and customer demands.
- Dependence on third parties to provide internet, telecommunication and fiber optic network connectivity to our customers.

Risks Related to Our Liquidity and Indebtedness

- Our capacity to generate capital may be insufficient to meet our anticipated capital requirements.
- Our outstanding indebtedness may limit our operational and financial flexibility.
- We may not generate sufficient cash flow to meet our debt service and working capital requirements.
- Changes in the method of determining or replacing the London Interbank Offered Rate.

Risks Related to Legal, Governmental Regulation and Tax Matters

- Unanticipated changes in the tax rates and policies of the states in which we operate.
- Environmental problems are possible and can be costly.
- Future domestic or international legislation and regulation concerning networking, data privacy or other aspects of Internet business.
- Costs of complying with regulations.
- Fluctuations in our tax obligations and effective tax rate and realization of our deferred tax assets.
- Possibility of being deemed to be an investment company subject to the Investment Company Act of 1940.

Risks Related to Our Organizational Structure

- Our dependence on distributions from Switch, Ltd. to pay our taxes and expenses, including payments under the Tax Receivable Agreement (“TRA”).
- Required cash payments to the Members under the TRA in respect of certain tax benefits.
- Our organizational structure, including the TRA, confers certain benefits upon the Members that will not benefit holders of Class A common stock to the same extent as it will benefit the Members.
- In certain cases, payments under the TRA to the Members may be accelerated or significantly exceed the actual benefits we realize in respect of the tax attributes subject to the TRA.
- We will not be reimbursed for any payments made to the Members under the TRA in the event that any tax benefits are disallowed.

Risks Related to Ownership of Our Class A Common Stock

- The right of Members to have their Common Units redeemed or exchanged into Class A common stock.
- Failure to sustain an active trading market for our Class A common stock.
- The failure of our performance in any given period to meet the guidance that we provide to the public.
- Securities analysts’ publication, or failure to publish, research or reports about our business.
- Anti-takeover provisions in our organizational documents and Nevada law.
- Future issuances of shares of preferred stock, which could impede our acquisition by another company or otherwise adversely affect holders of our Class A common stock.
- Existing or future class-action securities litigation.
- Substantial future sales of our Class A common stock, including such stock received upon redemption or exchange of Common Units, or the perception in the public markets that such sales may occur.
- Costs as a result of being a public company and the administration of our complex organizational structure.
- Failure to maintain an effective system of internal control over financial reporting.
- The ability to pay dividends on our Class A common stock is subject to the discretion of our board of directors and our debt agreements as well as future agreements.

General Risks

- Impact of epidemics, pandemics or other outbreaks.
- Uncertainty about the economic environment.

Risks Related to Our Operations

A slowdown in the demand for data center resources and other market and economic conditions could have a material adverse effect on us.

Adverse developments in the data center market or in the industries in which our customers operate could lead to a decrease in the demand for data center resources, which could have a material adverse effect on us. We face risks including:

- a decline in the technology industry, such as a decrease in the use of mobile or web-based commerce, business layoffs or downsizing, relocation of businesses, increased costs of complying with existing or new government regulations and other factors;
- a slowdown in the growth of the internet generally as a medium for commerce and communication;
- a downturn in the market for data center space generally, which could be caused by an oversupply of or reduced demand for data center space;
- any transition by our customers of data center storage from third-party providers like us to customer-owned and operated facilities;
- the rapid development of new technologies or the adoption of new industry standards that render our or our customers' current products and services obsolete or unmarketable and, in the case of our customers, that contribute to a downturn in their businesses, increasing the likelihood of a default under their service agreements or that they become insolvent;
- the migration from colocation data centers to the public cloud; and
- technological advancements that result in less data center space being required.

To the extent that any of these or other adverse conditions occurs, they are likely to impact market demand and pricing for our services.

Additionally, we and our customers are affected by general business, economic and geopolitical conditions in the United States and globally. These conditions include short-term and long-term interest rates, inflation, money supply, tax and trade policies, political issues, legislative and regulatory changes, fluctuations in both debt and equity capital markets and broad trends in industry and finance, all of which are beyond our control. Macroeconomic conditions that affect the economy and the economic outlook of the United States and the rest of the world could adversely affect our customers and vendors, which could adversely affect our results of operations and financial condition.

Any inability to manage our growth could disrupt our business and reduce our profitability.

Our annual revenue grew from $405.9 million in 2018 to $511.5 million in 2020. As we continue to grow, significant demands may be placed on our management and our administrative, operational and financial systems. Continued expansion increases the challenges we face in:

- managing a large and growing customer base;
- obtaining suitable land to build new data centers;
- establishing new operations at additional data centers and maintaining efficient use of the data center facilities we operate;
- expanding our service portfolio to cover a wider range of services;
- creating and capitalizing on economies of scale;
- obtaining additional capital to meet our future capital needs;
- recruiting, training and retaining a sufficient number of skilled technical, sales and management personnel;
- maintaining effective oversight over personnel and multiple data center locations;
- coordinating work among sites and project teams; and
- developing and improving our internal systems, particularly for managing our continually expanding business operations.

If we fail to manage the growth of our operations effectively, our businesses and prospects may be materially and adversely affected.

Our operating results may fluctuate.

We have experienced fluctuations in our results of operations on a quarterly and annual basis. The fluctuations in our operating results may cause the market price of our Class A common stock to be volatile. We may experience significant fluctuations in our operating results in the foreseeable future due to a variety of factors, including:

- the timing and magnitude of depreciation and interest expense or other expenses related to the acquisition, purchase or construction of additional data centers or the upgrade of existing data centers;
- demand for space, power and services at our data centers;
- changes in general economic conditions, such as an economic downturn, or specific market conditions in the telecommunications and internet industries, both of which may have an impact on our customer base;
- the duration of the sales cycle for our business offerings;
- the timing and logistics required for customer implementation of new programs such as our hybrid cloud solution;
- acquisitions or dispositions we may make or be a part of;
- the financial condition and credit risk of our customers;
- the provision of customer discounts and credits;
- the mix of current and proposed products and offerings and the gross margins associated with our products and offerings;
- the timing required for new and future data centers to open or become fully utilized;
- competition in the markets in which we operate;
- conditions related to international operations;
- increasing repair and maintenance expenses in connection with our data centers;
- lack of available capacity in our existing data centers to generate new revenue or delays in opening new or acquired data centers that delay our ability to generate new revenue in markets which have otherwise reached capacity;
- the timing and magnitude of other operating expenses, including taxes, expenses related to the expansion of sales, marketing, operations and acquisitions, if any, of complementary businesses and assets;
- the cost and availability of adequate public utilities, including power;
- changes in employee stock-based compensation;
- overall inflation;
- increasing interest expense due to any increases in interest rates and/or potential additional debt financings;
- changes in our tax planning strategies or failure to realize anticipated benefits from such strategies;
- changes in income tax benefit or expense; and
- changes in or new accounting principles generally accepted in the United States (“GAAP”) as periodically released by the Financial Accounting Standards Board.

Any of the foregoing factors, or other factors discussed elsewhere in this report, could have a material adverse effect on our business, results of operations and financial condition. Although we have experienced recent revenue growth, this growth rate is not necessarily indicative of future operating results. We may not be able to generate net income on a quarterly or annual basis in the future. In addition, a relatively large portion of our expenses is fixed in the short term, particularly with respect to lease and personnel expenses, depreciation and amortization and interest expenses. Therefore, our results of operations are particularly sensitive to fluctuations in revenue. As such, comparisons to prior reporting periods should not be relied upon as indications of our future performance, and our results of operations for any quarter may not be indicative of the results that may be achieved for a full fiscal year. In addition, our operating results in one or more reporting periods may fail to meet the expectations of securities analysts or investors.

Our success depends on our ability to license the space in our existing data centers. The failure to license the space in our data centers may harm our growth prospects, future business, financial condition and results of operations.

Our growth depends on our ability to license the space in our existing data centers. We may not be able to attract customers for the space in our data centers for a number of reasons, including if we:

- fail to provide competitive pricing terms;
- provide space that is deemed by existing and potential customers to be inferior to those of our competitors, based on factors, including available power, preferred design features, security considerations, location and connectivity; or
- are unable to provide services that our existing and potential customers desire.

If we are unable to license available space on a timely basis or at favorable pricing terms, it could have a material adverse effect on our business, results of operations and growth prospects.

We face risks associated with having a long selling and implementation cycle for our services that requires us to make significant time and resource commitments prior to recognizing revenue for those services.

We often have a long selling cycle for our largest transactions, which can range from a few months to up to a year or more. This can require our customers and us to invest significant capital, human resources and time prior to receiving any revenue. A customer's decision to utilize our colocation services or our other services often involves time-consuming contract negotiations and substantial due diligence on the part of the customer regarding the adequacy of our infrastructure and attractiveness of our resources and services. Macroeconomic conditions, including economic and market downturns, may further impact this long sales cycle by making it difficult for customers to accurately forecast and plan future business activities. This could cause customers to slow spending or delay decision-making on our products and services, which would delay and lengthen our sales cycle. Furthermore, we may expend significant time and resources in pursuing a particular sale or customer, and we do not recognize revenue for our services until we provide the services under the terms of the applicable contract. Our efforts in pursuing a particular sale or customer may not be successful, and we may not always have sufficient capital on hand to satisfy our working capital needs between the date on which we sign an agreement with a new customer and when we first receive revenue for services delivered to the customer. If our efforts in pursuing sales and customers are unsuccessful, or our cash on hand is insufficient to cover our working capital needs over the course of our long selling cycle, our financial condition could be negatively affected.

Increased power costs and limited availability of power resources may adversely affect our results of operations.

We are a large consumer of power. The cost of power accounts for a significant portion of our cost of revenue. We require power supply to provide many services we offer, such as powering and cooling our customers' servers and network equipment and operating critical data center plant and equipment infrastructure.

The amount of power our customers require may increase as they adopt new technologies, such as virtualization of hardware resources. As a result, the average amount of power used per server may increase, which in turn would increase power consumption required to cool the data center facilities. Pursuant to our service agreements, we provide our customers with a committed level of power supply availability. Historically, our energy costs have been seasonal, with increased costs primarily in the summer months that have affected our results of operations. Additionally, we have also committed to operating our data centers with 100% clean and renewable energy. While we are currently able to obtain 100% clean and renewable energy at costs that we believe are reasonable, a significant increase in the cost of clean and renewable energy or a decrease in its availability could have materially adverse consequences. These consequences could include placing us at a cost disadvantage if we are forced to increase our fees for providing, or damaging our brand and reputation if we are unable to provide, 100% clean and renewable energy. Although we aim to improve the energy efficiency of the data center facilities that we operate, there can be no assurance such data center facilities will be able to deliver sufficient power to meet the growing needs of our customers. Moreover, we may not be able to address those customers' needs with 100% clean and renewable energy. We may lose customers or our customers may reduce the services purchased from us due to increased power costs and limited availability of power resources, including clean and renewable power resources, or we may incur costs for data center space which we cannot utilize, which would reduce our revenue and have a material and adverse effect on our cost of revenue and results of operations.

We attempt to manage our power resources and limit exposure to system downtime due to power outages from the electric grid by having redundant power feeds from the grid and by using backup generators and battery power. However, these protections may not limit our exposure to power shortages or outages entirely. Any system downtime resulting from insufficient power resources or power outages could damage our reputation and lead us to lose current and potential customers, which would harm our financial condition and results of operations.

We generate significant revenue from data centers located in one location and a significant disruption to this location could materially and adversely affect our operations.

We generate significant revenue from data centers located at The Core Campus in Las Vegas, and a significant disruption to this location could materially and adversely affect our operations. While The Pyramid Campus in Grand Rapids and The Citadel Campus near Reno opened in 2016, and The Keep Campus in Atlanta opened during the first quarter of 2020, all three locations are in development and will require additional capital investment to reach full build out and the revenue contribution from these locations is relatively small in comparison to The Core Campus in Las Vegas. Our data centers located in Las Vegas comprised 84.2% of our revenue during the year ended December 31, 2020. The occurrence of a catastrophic event, or a prolonged disruption in this region could materially and adversely affect our operations.

Delays in the expansion of existing data centers or the construction of new data centers could involve significant risks to our business.

In order to meet customer demand and the continued growth of our business, we need to expand existing data centers or obtain suitable land to build new data centers. Expansion of existing data centers and construction of new data centers are currently underway or being contemplated, and such expansion and construction requires us to carefully select and rely on the experience of one or more designers, general contractors and subcontractors during the design and construction process. If a designer or contractor experiences financial or other problems during the design or construction process, we could experience significant delays and incur increased costs to complete the projects, resulting in negative impacts on our results of operations.

In addition, we need to work closely with the local power suppliers, and sometimes local governments, where we propose to locate our data centers. Delays in actions that require the assistance of such third parties, or delays in receiving required permits and approvals from such parties, may also affect the speed with which we complete data center projects or result in their not being completed at all. For example, we have experienced such delays in receiving approvals and permits due to the COVID-19 pandemic, resulting in construction delays. If delays continue, we may not be able to manage the growth of our operations effectively and our business may be materially and adversely affected.

If we experience significant delays due to weather or supply of power required to support the data center expansion or new construction, either during the design or construction phases, the progress of the data center expansion and construction could deviate from our original plans, which could cause material and negative effects to our revenue growth, profitability and results of operations.

We may not be able to compete effectively against our current and future competitors.

We offer a broad range of data center services and, as a result, we may compete with a wide range of data center service providers for some or all of the services we offer. We face competition from numerous developers, owners and operators in the data center industry, including cloud and managed service providers and REITs, some of which own or lease properties similar to ours, or may do so in the future, in the same submarkets in which our properties are located. In 2018, we introduced our new hybrid cloud solution to our existing customers, however, these customers may choose other cloud offerings and move workloads to cloud providers, which may reduce the services our customers obtain from us. Our current and future competitors may vary by size and service offerings and geographic presence.

Competition is primarily centered on reputation and track record, quality and availability of data center space, quality of service, technical expertise, security, reliability, functionality, breadth and depth of services offered, geographic coverage, scale, financial strength and price. Some of our current and future competitors may have greater brand recognition, longer operating histories, stronger marketing, technical and financial resources and access to greater and less expensive power than we do. In addition, many companies in the industry are consolidating, which could further increase the market power of our competitors. As a result, some of our competitors may be able to:

- offer space at pricing below current market rates or below the pricing we currently charge our customers;
- bundle colocation services with other services or equipment they provide at reduced prices;
- develop superior products or services, gain greater market acceptance and expand their service offerings more efficiently or rapidly;
- adapt to new or emerging technologies and changes in customer requirements more quickly;
- take advantage of acquisition and other opportunities more readily; and

- adopt more aggressive pricing policies and devote greater resources to the promotion, marketing and sales of their services.

We operate in a competitive market, and we face pricing pressure for our services. Prices for our services are affected by a variety of factors, including supply and demand conditions and pricing pressures from our competitors. We may be required to lower our prices to remain competitive, which may decrease our margins and adversely affect our business prospects, financial condition and results of operations.

The occurrence of a catastrophic event or a prolonged disruption may exceed our insurance coverage by significant amounts.

Our operations are subject to hazards and risks normally associated with the daily operations of our data center facilities. Currently, we maintain various insurance policies for business interruption for lost profits, property and casualty, public liability, commercial employee insurance, worker's compensation, personal property and auto liability. Our business interruption insurance for lost profits includes coverage for business interruptions, our property and casualty insurance includes coverage for equipment breakdowns and our commercial employee insurance includes employee group insurance. We are self-insured for medical insurance. We believe our insurance coverage adequately covers the risks of our daily business operations. However, our current insurance policies may be insufficient in the event of a prolonged or catastrophic event. The occurrence of any such event that is not entirely covered by our insurance policies may result in interruption of our operations and subject us to significant losses or liabilities and damage our reputation as a provider of business continuity services. In addition, any losses or liabilities that are not covered by our current insurance policies may have a material adverse effect on our business, financial condition and results of operations.

Our leases for self-developed data centers could be terminated early and we may not be able to renew our existing leases and agreements on commercially acceptable terms or our rent or payment under the agreements could increase substantially in the future, which could materially and adversely affect our operations.

A few of our facilities are located on properties for which we have long term operating and finance leases. In some instances, we may elect to exercise an option to purchase the leased premises and facilities, or in other instances, elect to extend the term of certain leases, in each case, according to the terms and conditions under the relevant lease agreements. However, upon the expiration of such leases (including any extension terms), we may not be able to renew these leases on commercially reasonable terms, if at all. Even though the lessors for most of our data centers generally do not have the right of unilateral early termination unless they provide the required notice of a breach of the lease and opportunity to cure (as applicable), the lease may nonetheless be terminated early if we are in material breach of the lease agreements. We may assert claims for compensation against the landlords if they elect to terminate a lease agreement early and without due cause. If the leases for our data centers were terminated early prior to their expiration date, notwithstanding any compensation we may receive for early termination of such leases, or if we are not able to renew such leases, we may have to incur significant costs related to relocation. Our leased facilities are located in properties that are subject to master ground leases. If the landlords under such master ground leases elect to terminate the respective master leases in case of default or breach by the master lessees thereunder or otherwise pursuant to the terms and conditions of the relevant master lease, we may not be able to protect our leasehold interest, and may be ordered to vacate the affected premises. Any relocation could also affect our ability to provide continuous uninterrupted services to our customers and harm our reputation. As a result, our business and results of operations could be materially and adversely affected.

The loss of one or more of our key personnel, or our failure to attract and retain other highly qualified personnel in the future, could seriously harm our business.

We depend to a significant degree on the continuous service and performance of Rob Roy and our experienced senior management team and other key personnel, any of whom could resign or be terminated for any reason at any time. Mr. Roy has been responsible for our company's strategic vision and the development of our technology and business. If he stopped working for us for any reason, it is unlikely that we would be able to find a suitable replacement immediately. The loss of Mr. Roy, a member of our senior management team or any other key employee could disrupt our business operations and create uncertainty as we search for and integrate a replacement. If any member of our senior management or key employee leaves us to join a competitor or to form a competing company, any resulting loss of existing or potential customers to any such competitor could have a material adverse effect on our business, financial condition and results of operations. In addition, we do not maintain key man life insurance for any of the senior members of our management team or our key personnel.

Competition for employees is intense, and we may not be able to attract and retain the qualified and skilled employees needed to support our business.

We believe our success depends on the efforts and talent of our employees, including data center design, construction management, operations, engineering, IT, risk management, and sales and marketing personnel. Our future success depends on our continued ability to attract, develop, motivate and retain qualified and skilled employees. Competition for highly skilled personnel is frequently intense. We may not be able to hire and retain these personnel at compensation levels consistent with our existing compensation and salary structure. Some of the companies with which we compete for experienced employees have greater resources than we have and may be able to offer more attractive terms of employment.

In addition, we invest significant time and expenses in training our employees, which increases their value to competitors who may seek to recruit them. If we fail to retain our employees, we could incur significant expenses in hiring and training their replacements, and the quality of our services and our ability to serve our customers could diminish, resulting in a material adverse effect to our business.

We have entered, and expect to continue to enter, into joint venture, strategic collaborations and other similar arrangements, and these activities involve risks and uncertainties. A failure of any such relationship could have a material adverse effect on our business and results of operations.

We have entered, and expect to continue to enter, into joint venture, strategic collaborations and other similar arrangements. These activities involve risks and uncertainties, including the risk of the joint venture or applicable entity failing to satisfy its obligations, which may result in certain liabilities to us for guarantees and other commitments, the challenges in achieving strategic objectives and expected benefits of the business arrangement, the risk of conflicts arising between us and our partners and the difficulty of managing and resolving such conflicts, and the difficulty of managing or otherwise monitoring such business arrangements. A failure of our business relationships could have a material adverse effect on our business and results of operations.

Any difficulties in identifying and consummating future acquisitions, alliances or joint ventures may expose us to potential risks and have an adverse effect on our business, results of operations or financial condition.

We may seek to make strategic acquisitions and enter into alliances and joint ventures to further expand our business. If we are presented with appropriate opportunities, we may acquire additional businesses, services, resources, or assets, including data centers that are complementary to our primary business. Our integration of the acquired entities or assets into our business may not be successful and may not enable us to expand into new services, customer segments or operating locations as well as we expect. This would significantly affect the expected benefits of these acquisitions. Moreover, the integration of any acquired entities or assets into our operations could require significant attention from our management. The diversion of our management's attention and any difficulties encountered in any integration process could have an adverse effect on our ability to manage our business. In addition, we may face challenges trying to integrate new operations, services and personnel with our existing operations. Our possible future acquisitions may also expose us to other potential risks, including risks associated with unforeseen or hidden liabilities, the diversion of resources from our existing businesses and technologies, our inability to generate sufficient revenue to offset the costs, expenses of acquisitions and potential loss of, or harm to, relationships with employees and customers as a result of our integration of new businesses. The occurrence of any of these events could have a material and adverse effect on our ability to manage our business, our financial condition and our results of operations.

Our current international operations through our joint venture, or future international operations, may expose us to certain operating, legal and other risks, which could adversely affect our business, results of operations and financial condition.

Our joint venture's international operations, or any future international operations, may expose us to risks that we have not generally faced in the United States. These risks include:

- challenges caused by distance, language, cultural and ethical differences and the competitive environment;
- heightened risks of unethical, unfair or corrupt business practices, actual or claimed, in certain geographies and of improper or fraudulent sales arrangements that may impact financial results and result in restatements of, and irregularities in, financial statements;
- foreign exchange restrictions and fluctuations in currency exchange rates;
- application of multiple and conflicting laws and regulations, including complications due to unexpected changes in foreign laws and regulatory requirements;

- new and different sources of competition;
- different pricing environments, longer sales cycles and longer accounts receivable payment cycles and collections issues;
- management communication and integration problems resulting from cultural differences and geographic dispersion;
- adverse tax consequences, including multiple and possibly overlapping tax structures, the complexities of foreign value-added tax systems, restrictions on the repatriation of earnings and changes in tax rates;
- greater difficulty in enforcing contracts, accounts receivable collection and longer collection periods;
- the uncertainty and limitation of protection for intellectual property rights in some countries;
- increased financial accounting and reporting burdens and complexities;
- lack of familiarity with local laws, customs and practices, and laws and business practices favoring local competitors or partners;
- public health emergencies, including the global COVID-19 pandemic; and
- political, social and economic instability abroad, terrorist attacks and security concerns in general.

The occurrence of any one of these risks could harm our international business and, consequently, our results of operations. Additionally, operating in international markets requires significant management attention and financial resources. We cannot be certain that the investment and additional resources required to operate in other countries will produce desired levels of revenue or profitability.

Our facilities may not be suitable for uses other than as data centers, which could make it difficult to sell or reposition them and could materially adversely affect our business, results of operations and financial condition.

Our data centers are designed primarily to house and run IT equipment and, therefore, contain extensive electrical and mechanical systems and infrastructure. As a result, our facilities may not be suitable for uses other than as data centers, or may require major renovations and expenditures before they can be re-leased or sold for uses other than as data centers.

Risks Related to Our Customer Base

We are continuing to invest in our expansion efforts but may not have sufficient customer demand in the future to realize expected returns on these investments.

We expect to continue to expand our data center footprint. In connection with our expansion plans, we may be required to commit significant operational and financial resources, but there can be no guarantee we will have sufficient customer demand in those markets to support data centers once built. This risk may be greater in a market where we have not operated previously. Once development of a data center facility is complete, we incur certain operating expenses even if there are no customers occupying any space. Consequently, if any of our properties have significant vacancies for an extended period of time, our results of operations and business and financial condition will be affected adversely, the impact of which could be material. In addition, unanticipated technological changes could affect customer requirements for data centers, and we may not have built such requirements into our new data centers. If any of these developments or contingencies were to occur, it could make it difficult for us to realize expected or reasonable returns on our investments.

A significant portion of our revenue is highly dependent on a limited number of customers, and the loss of, or any significant decrease in business from, these customers could adversely affect our financial condition and results of operations.

Our top 10 customers accounted for approximately 36.9% of our revenue for the year ended December 31, 2020.

A number of factors could cause us to lose customers. For instance, because many of our contracts involve services that are mission-critical to our customers, any failure by us to meet a customer's expectations could result in cancellation or non-renewal of the contract. Our service agreements usually allow our customers to terminate their agreements with us before the end of the contract period under certain specified circumstances, including our failure to deliver services as required under such agreements, and in some cases without cause as long as sufficient notice is given. In addition, our customers may decide to reduce spending on our services or demand price reductions due to a challenging economic environment or other factors, both internal and external, relating to their business such as corporate restructuring or changing their outsourcing strategy by moving more facilities in-house or outsourcing to other service providers. In addition, our reliance on any individual customer for a significant portion of our revenue may give that customer a degree of pricing leverage against us when negotiating contracts and terms of services with us.

The loss of any of our major customers, or a significant decrease in the extent of the services that they outsource to us or the price at which we sell our services to them, could materially and adversely affect our financial condition and results of operations.

Additionally, if any customer becomes a debtor in a case under the U.S. Bankruptcy Code, applicable bankruptcy laws may limit our ability to terminate our contract with such customer solely because of the bankruptcy or recover any amounts owed to us under our agreements with such customer. In addition, applicable bankruptcy laws could allow the customer to reject and terminate its agreement with us, with limited ability for us to collect the full amount of our damages. Our business could be adversely affected if any of our significant customers were to become bankrupt or insolvent.

Our customer contract commitments are subject to reduction and potential cancellation.

Some of our customer contracts allow for early termination, subject to payment of specified costs and penalties, which may be less than the revenue we would expect to receive under such contracts. Our customer contract commitments could significantly decrease if any of the customer contracts are terminated either pursuant to, or in violation of, the terms of such contract. In addition, our customer contract commitments during a particular future period may be reduced for reasons outside of our customers' control, such as general current economic conditions. If our customer contract commitments are significantly reduced, our results of operations could be materially and adversely affected.

Even if our current and future customers have entered into a binding contract with us, they may choose to terminate such contract prior to the expiration of its terms. Any penalty for early termination may not adequately compensate us for the time and resources we have expended in connection with such contract, or at all, which could have a material adverse effect on our results of operations and cash flows.

Our customer base may decline if our customers or potential customers develop their own data centers or expand their own existing data centers.

Some of our customers have in the past, and may in the future, develop their own data center facilities. Other customers with their own existing data centers may choose to expand their data center operations in the future. One of our business strategies is to sell or lease our single-user data centers. In the event that any of our key customers were to develop or expand their own data centers, we may lose business, fail to execute on our strategy of our single-user data centers or face pressure as to the pricing of our services. In addition, if we fail to offer services that are cost-competitive and operationally advantageous as compared with services provided in-house by our customers, we may lose customers or fail to attract new customers. If we lose a customer, there is no assurance that we would be able to replace that customer at the same or a higher rate, or at all, and our business and results of operations would suffer.

Our churn rate may increase or we may be unable to achieve high contract renewal rates.

We seek to renew customer contracts when those contracts are due for renewal. We endeavor to provide high levels of customer service, support and satisfaction to maintain long-term customer relationships and to secure high rates of contract renewals for our services. Nevertheless, we may not be able to renew service contracts with our existing customers or re-commit space relating to expired service contracts to new customers if our current customers do not renew their contracts. In the event of a customer's termination or non-renewal of expired contracts, our ability to enter into service contracts so that new or other existing customers utilize the expired existing space in a timely manner will affect our results of operations.

If we do not succeed in attracting new customers for our services and growing revenue from existing customers, we may not achieve our anticipated revenue growth.

Our ability to attract new customers and grow revenue from existing customers depends on a number of factors, including our ability to offer high quality services at competitive prices, the strength of our competitors and the capabilities of our marketing and sales teams to attract new customers. If we fail to attract new customers or grow revenue from existing customers, we may not be able to grow our revenue as quickly as we anticipate or at all.

Future consolidation and competition in our customers' industries could reduce the number of our existing and potential customers and make us dependent on a more limited number of customers.

Mergers or consolidations in our customers' industries in the future could reduce the number of our existing and potential customers and make us dependent on a more limited number of customers. If our customers merge with or are acquired by other entities that are not our customers, they may discontinue or reduce the use of our data centers in the future. Additionally, some of our customers may compete with one another in various aspects of their businesses, which places additional competitive pressures on our customers. Any of these developments could have a material adverse effect on us.

We have government customers, which subjects us to risks including early termination, audits, investigations, sanctions and penalties.

We derive some revenue from contracts with U.S., state and local governments. Some of these customers may terminate all or part of their contracts at any time, without cause. There is increased pressure for governments and their agencies to reduce spending. Some of our contracts at the state and local levels are subject to government funding authorizations, which may be adversely affected by a U.S. federal government shut-down or budget sequestration.

Additionally, government contracts are generally subject to audits and investigations that could result in various civil and criminal penalties and administrative sanctions, including termination of contracts, refund of a portion of fees received, forfeiture of profits, suspension of payments, fines and suspensions or exclusion from future government business.

Risks Related to Technology and Intellectual Property

Any failure in the critical systems of the data center facilities we operate or services we provide could lead to disruptions in our customers' businesses and could harm our reputation and result in financial penalty and legal liabilities, which would reduce our revenue and have a material adverse effect on our results of operation.

The critical systems of the data center facilities we operate and the services we provide are subject to failure. Any failure in the critical systems of any data center facility we operate or services that we provide, including a breakdown in critical plant, equipment or services, such as the cooling equipment, generators, backup batteries, routers, switches, or other equipment, power supplies, or network connectivity, whether or not within our control, could result in service interruptions and data losses for our customers as well as equipment damage, which could significantly disrupt the normal business operations of our customers and harm our reputation and reduce our revenue. Any failure or downtime in one of the data center facilities that we operate could affect many of our customers. The total destruction or severe impairment of any of the data center facilities we operate could result in significant downtime of our services and loss of customer data. Since our ability to attract and retain customers depends on our ability to provide highly reliable service, even minor interruptions in our service could harm our reputation and cause us to incur financial penalties. The services we provide are subject to failures resulting from numerous factors, including:

- power loss;
- equipment failure;
- human error or accidents;
- theft, sabotage and vandalism;
- failure by us or our suppliers to provide adequate service or maintenance to our equipment;
- network connectivity downtime and fiber cuts;
- security breaches to our infrastructure;
- improper building maintenance by us;
- physical, electronic and cyber security breaches;
- fire, earthquake, hurricane, tornado, flood and other natural disasters;
- extreme temperatures;
- water damage;
- public health emergencies, including pandemics such as the spread of COVID-19 (coronavirus); and
- terrorism.

We provide service level commitments to our customers. As a result, service interruptions or equipment failures in our data centers could result in credits to these customers. We cannot provide assurances that our customers will accept these credits as compensation for service interruptions and equipment failures. Service interruptions and equipment failures may also damage our brand image and reputation. Significant or frequent service interruptions could reduce the confidence of our customers and cause our customers to terminate or not renew their licenses. In addition, we may be unable to attract new customers if we have a reputation for significant or frequent service disruptions or equipment failures in our data centers.

Moreover, service interruptions and equipment failures may expose us to legal liability. As our services are critical to many of our customers' business operations, any disruption in our services could result in lost profits or other indirect or consequential damages to our customers. Although our customer contracts typically contain provisions that limit our liability for breach of the agreement, including failing to meet our service level commitments, there is always a risk that a court may decline to enforce such contractual limitations on our liability in the event that a customer brings a lawsuit against us as the result of a service interruption that it may ascribe to us. The outcome of any such lawsuit would depend on the specific facts of the case and any legal and policy considerations that we may not be able to mitigate. In such cases, we could be liable for substantial damage award which may have a material adverse effect on our revenue.

If we fail to protect our proprietary intellectual property rights adequately, our competitive position could be impaired, and we may lose valuable assets, generate reduced revenue and incur costly litigation to protect our rights.

Our success depends, in part, on our ability to protect our proprietary intellectual property rights, including certain methodologies, practices, tools, technologies and technical expertise we use in designing, developing, implementing and maintaining applications and processes used in providing our services. We rely on a combination of patent, trademark, trade secrets and other intellectual property laws, non-disclosure agreements with our employees, consultants, customers and other relevant persons, and other measures to protect our intellectual property, including our brand identity. However, the steps we take to protect our intellectual property may be inadequate, and we may choose not to pursue or maintain protection for our intellectual property in the United States or foreign jurisdictions. We will not be able to protect our intellectual property if we are unable to enforce our rights or if we do not detect unauthorized use of our intellectual property. Despite our precautions, it may be possible for unauthorized third parties to copy our technology and use information that we regard as proprietary to create technology that competes with ours. In addition, the laws of some countries do not protect proprietary rights to the same extent as the laws of the United States, and mechanisms for enforcement of intellectual property rights in some foreign countries may be inadequate. To the extent we expand our international activities, our exposure to unauthorized copying and use of our technologies and proprietary information may increase. Accordingly, despite our efforts, we may be unable to prevent third parties from infringing upon or misappropriating our technology and intellectual property.

We rely in part on trade secrets, proprietary know-how and other confidential information to maintain our competitive position. Although we enter into non-disclosure and invention assignment agreements with our employees, enter into non-disclosure agreements with our customers, consultants and other parties with whom we have strategic relationships and business alliances and enter into intellectual property assignment agreements with our consultants and vendors, no assurance can be given that these agreements will be effective in controlling access to and distribution of our technology and proprietary information. In addition, these agreements do not prevent our competitors from independently developing technologies that are substantially equivalent or superior to our products.

To protect our intellectual property rights, we may be required to spend significant resources to monitor and protect these rights. Litigation may be necessary in the future to enforce our intellectual property rights and to protect our trade secrets. Such litigation could be costly, time consuming and distracting to management and could result in the impairment or loss of portions of our intellectual property. Furthermore, our efforts to enforce our intellectual property rights may be met with defenses, counterclaims and countersuits attacking the validity and enforceability of our intellectual property rights. Our inability to protect our proprietary technology, as well as any costly litigation or diversion of our management's attention and resources, could disrupt our business, as well as have a material adverse effect on our financial condition and results of operations.

We may in the future be subject to intellectual property disputes, which are costly to defend and could harm our business and operating results.

We may from time to time face allegations that we have infringed the patents, copyrights, trademarks and other intellectual property rights of third parties, including from our competitors. We may be unaware of the intellectual property rights that others may claim cover some or all of our technology or services. Patent and other intellectual property litigation may be protracted and expensive, and the results are difficult to predict and may require us to stop using certain technologies or offering certain services or may result in significant damage awards or settlement costs.

Even if these matters do not result in litigation or are resolved in our favor or without significant cash settlements, these matters, and the time and resources necessary to litigate or resolve them, could divert the time and resources of our management team and harm our business, our operating results and our reputation.

We rely on the proper and efficient functioning of computer and data-processing systems, and a large-scale malfunction could have a material adverse effect on us.

Our ability to keep our data centers operating depends on the proper and efficient functioning of computer and data-processing systems. Since computer and data-processing systems are susceptible to malfunctions and interruptions, including those due to equipment damage, power outages, computer viruses and a range of other hardware, software and network problems, we cannot guarantee that our data centers will not experience such malfunctions or interruptions in the future. Additionally, expansions and developments in the products and services that we offer could increasingly add a measure of complexity that may overburden our data center and network resources and human capital, making service interruptions and failures more likely. A significant or large-scale malfunction or interruption of one or more of any of our data centers' computer or data-processing systems could adversely affect our ability to keep such data centers running efficiently. If a malfunction results in a wider or sustained disruption to business at a property, it could have a material adverse effect on us.

We may be vulnerable to security breaches, including cyber security breaches, which could disrupt our operations and have a material adverse effect on our financial condition and results of operations.

We face risks associated with unauthorized access to our computer systems, loss or destruction of data, computer viruses, malware, distributed denial-of-service attacks, or other malicious activities. These threats may result from human error, equipment failure, or fraud or malice on the part of employees or third parties. A party who is able to compromise the security measures on our networks, or the systems of our third-party service providers, could misappropriate either our proprietary information or the personal information of our customers or our employees, or cause interruptions or malfunctions in our operations or our customers' operations. Additionally, we provide the infrastructure and physical security for our customers' IT equipment, which often contains highly confidential and mission critical data. A party who is able to compromise the physical security measures protecting our data center facilities could misappropriate our or our customers' proprietary information or cause interruptions or malfunctions in our operations. As we provide assurances to our customers that we provide the highest level of security, such a compromise could be particularly harmful to our brand and reputation and result in potential liability. We may be required to expend significant capital and resources to protect against such threats or to alleviate problems caused by breaches in security. As techniques used to breach security change frequently and are often not recognized until launched against a target, we may not be able to implement new security measures in a timely manner or, if and when implemented, we may not be certain whether these measures could be circumvented. Any breaches that may occur could expose us to increased risk of lawsuits, regulatory penalties, loss of existing or potential customers, harm to our reputation and increases in our security costs, which could have a material adverse effect on our financial condition and results of operations.

In addition, any assertions of alleged security breaches or systems failure made against us, whether true or not, could harm our reputation, cause us to incur substantial legal fees and have a material adverse effect on our business, reputation, financial condition and results of operations. Whether or not any such assertion actually proceeds to litigation, we may be required to devote significant management time and attention to its resolution (through litigation, settlement or otherwise), which would detract from our management's ability to focus on our business. Any such resolution could involve the payment of damages or expenses by us, which may be significant. In addition, any such resolution could involve our agreement with terms that restrict the operation of our business.

If our or our customers' proprietary intellectual property or confidential information is misappropriated or disclosed by us or our employees in violation of applicable laws and contractual agreements, we could be exposed to protracted and costly legal proceedings, lose customers and our business could be seriously harmed.

Our employees could disclose or use our technical knowledge, practices or procedures without authorization. We have entered into confidentiality agreements with our employees that contain nondisclosure covenants that survive indefinitely as to our trade secrets. Pursuant to these confidentiality agreements, our employees are required to assign any of their inventions that are developed or reduced to practice during their employment with us that pertain to any of our lines of business activity, that are aided by the use of our time, materials or facilities, or that relate to any of their work with us. However, we may not be able to enforce the confidentiality agreements we have with our personnel.

Additionally, our customers occasionally provide us and our employees access to proprietary intellectual property and confidential information, including technology, software products, business policies and plans, trade secrets and personal data. Many of our customer contracts require us not to use or disclose such intellectual property or information and to indemnify our customers for any loss they may suffer as a result of any unauthorized use or disclosure. We use security technologies and other methods to prevent employees from making unauthorized copies, or using or disclosing such intellectual property and confidential information without authorization. The confidentiality agreements we enter into with our employees limit access to and distribution of our customers' intellectual property and other confidential information as well as our own. However, these steps may not be adequate to safeguard our and our customers' intellectual property and confidential information. Moreover, some of our customer contracts do not include any limitation on our liability with respect to breaches of our obligation to keep the intellectual property or confidential information we receive from them confidential. In addition, we may not always be aware of intellectual property registrations or applications relating to source codes, software products or other intellectual property belonging to our customers. As a result, if we or our employees misappropriate our customers' proprietary rights, our customers may consider us liable for such act and seek damages and compensation from us.

Assertions of infringement of intellectual property or misappropriation of confidential information against us, if successful, could have a material adverse effect on our business, financial condition and results of operations. Protracted litigation could also result in existing or potential customers deferring or limiting their purchase or use of our services until resolution of such litigation. Even if such assertions against us are unsuccessful, they may cause us to lose existing and future business and incur reputational harm and substantial legal fees.

The migration from colocation data centers to the public cloud may have a material adverse effect on our results of operations.

In response to rapidly growing demand for public cloud solutions, we have introduced a hybrid cloud ecosystem service with the anticipation of a continuously strong demand for colocation data centers. If our assumptions prove to be incorrect, the migration from colocation data centers to the public cloud could harm our financial condition and results of operations.

Our investments in new offerings and technologies are inherently risky and may not succeed.

We plan to grow through the development of new offerings such as multi-cloud edge infrastructure services, physically secured cloud storage environments and autonomous security robots. To be successful, we need to cultivate new industry relationships with customers and partners. The development of these offerings requires significant investment, does not always grow as projected or at all, and we may not realize an adequate return on our investments. There is no guarantee that we will achieve or maintain market demand or acceptance for our offerings. If we fail to realize an adequate return on our investments, we may not be able to grow our revenue as quickly as we anticipate or at all.

If we are unable to adapt to evolving technologies and customer demands in a timely and cost-effective manner, our ability to sustain and grow our business may suffer.

The markets for the data centers we own and operate, as well as certain of the industries in which our customers operate, are characterized by rapidly changing technology, evolving industry standards, frequent new service introductions, shifting distribution channels and changing customer demands. As a result, our data center infrastructure may become less marketable due to demand for new processes and technologies, including, without limitation: (i) new processes to deliver power to, or eliminate heat from, IT equipment; (ii) customer demand for additional redundancy capacity; (iii) new technology that permits higher levels of critical load and heat removal than our data centers are currently designed to provide; and (iv) an inability of the power supply to support new, updated or upgraded technology. In addition, the systems that connect our data centers to the internet and other external networks may become insufficient, including with respect to latency, reliability and diversity of connectivity. We may not be able to adapt to changing technologies or meet customer demands for new processes or technologies in a timely and cost-effective manner, if at all, which would adversely impact our ability to sustain and grow our business.

In addition, new technologies have the potential to replace or provide lower cost alternatives to our services. The adoption of such new technologies could render some or all of our services obsolete or unmarketable. We cannot guarantee that we will be able to identify the emergence of all of these new service alternatives successfully, modify our services accordingly, or develop and bring new services to market in a timely and cost-effective manner to address these changes. If and when we do identify the emergence of new service alternatives and introduce new services to market, those new services may need to be made available at lower profit margins than our then-current services. Failure to provide services to compete with new technologies or the obsolescence of our services could lead us to lose current and potential customers or could cause us to incur substantial costs, which would harm our operating results and financial condition. Our introduction of new alternative services that have lower price points than our current offerings may also result in our existing customers switching to the lower cost products, which could reduce our revenue and have a material adverse effect on our results of operation.

Potential future regulations that apply to industries we serve may require customers in those industries to seek specific requirements from their data centers that we are unable to provide. These may include physical security requirements applicable to the defense industry and government contractors and privacy and security regulations applicable to the financial services and health care industries. If such regulations were adopted or such extra requirements demanded by certain customers, we could lose some customers or be unable to attract new customers in certain industries, which would have a material and adverse effect on our operations.

We depend on third parties to provide internet, telecommunication and fiber optic network connectivity to our customers, and any delays or disruptions in service could have a material adverse effect on us.

Our products and infrastructure rely on third-party service providers. In particular, we depend on third parties to provide internet, telecommunication and fiber optic network connectivity to the customers in our data centers, and we have no control over the reliability of the services provided by these suppliers. Our customers may in the future experience difficulties due to service failures unrelated to our systems and services. Any internet, telecommunication or fiber optic network failures may result in significant loss of connectivity to our data centers. A significant loss of connectivity to our data centers could reduce the confidence of our customers and impair our ability to retain existing customers or attract new customers, which could have a material adverse effect on us.

Similarly, we depend upon the presence of internet, telecommunications and fiber optic networks serving the locations of our data centers in order to attract and retain customers. The construction required to connect multiple carrier facilities to our data centers is complex, requiring a sophisticated redundant fiber network, and involves matters outside of our control, including regulatory requirements and the availability of construction resources. Each new data center that we develop requires significant amounts of capital for the construction and operation of a sophisticated redundant fiber network. We believe that the availability of carrier capacity affects our business and future growth. We cannot guarantee that any carrier will elect to offer its services within our data centers or that once a carrier has decided to provide connectivity to our data centers that it will continue to do so for any period of time. Furthermore, some carriers are experiencing business difficulties or have announced consolidations or mergers. As a result, some carriers may be forced to downsize or terminate connectivity within our data centers, which could adversely affect our customers and could have a material adverse effect on us.

Risks Related to Our Liquidity and Indebtedness

The data center business is capital-intensive, and our capacity to generate capital may be insufficient to meet our anticipated capital requirements. Failure to obtain the necessary capital when needed may force us to delay, limit or terminate our expansion efforts or other operations.

The costs of constructing, developing, operating and maintaining data centers and growing our operations are substantial. While we strive to match the growth of our facilities to the demand for services, we still must spend significant amounts before we receive any revenue. Moreover, the anticipated demand may not materialize and we could be left with over-capacity. In addition, we may encounter development delays, excess development costs, or delays in developing space for our customers. Moreover, the costs of constructing, developing, operating and maintaining data centers and growing our operations may increase in the future, which may make it more difficult for us to expand our business and to operate our data centers profitably. We are required to fund the costs of constructing, developing, operating and maintaining our data centers and growing our operations with cash. We may also need to raise additional funds through equity or debt financings in the future in order to meet our operating and capital needs. Additional debt or equity financing may not be available when needed or, if available, may not be available on satisfactory terms. Our access to external sources of capital depends, in part, on general economic and financial market conditions, the market’s perception of our growth potential, our then current debt level, our historical and expected future earnings, cash flow and cash distributions and the market price per share of our common stock. In addition, our ability to access additional capital may be limited by the terms of our existing indebtedness. Our inability to generate sufficient cash from operations or to obtain additional debt or equity financing may require us to prioritize projects or curtail capital expenditures and could adversely affect our results of operations. If we cannot generate sufficient capital to meet our anticipated capital requirements, our financial condition, business expansion and future prospects could be materially and adversely affected.

If we raise additional funds through further issuances of equity or equity-linked securities, our existing stockholders could suffer significant dilution in their percentage ownership of our company, and any new equity securities we issue could have rights, preferences and privileges senior to those of holders of our Class A common stock. In addition, any debt financing that we may obtain in the future could have restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions.

Our outstanding indebtedness may limit our operational and financial flexibility.

As of December 31, 2020, we had total indebtedness of $1.06 billion under our senior unsecured notes and credit facilities (excluding debt issuance costs and original issue discount) and we had $500.0 million in availability under our revolving credit facility. Our leveraged position could have important consequences, including:

- impairing our ability to obtain additional financing for working capital, capital expenditures, acquisitions or general corporate purposes;
- requiring us to dedicate a substantial portion of our operating cash flow to paying principal and interest on our indebtedness, thereby reducing the funds available for operations;
- limiting our ability to grow and make capital expenditures due to the financial covenants contained in our debt arrangements;
- impairing our ability to adjust rapidly to changing market conditions, invest in new or developing technologies, or take advantage of significant business opportunities that may arise;
- making us more vulnerable if a general economic downturn occurs or if our business experiences difficulties; and
- making us more vulnerable to increases in interest rates because of the variable interest rates on our borrowings.

Additionally, our credit facilities are secured by a first-priority security interest in substantially all of the assets of Switch, Ltd. and its wholly-owned material domestic subsidiaries. Both our amended and restated credit agreement and indenture governing our senior unsecured notes also contain a number of covenants that, among other things, restrict our ability to incur additional debt, incur additional liens or contingent liabilities, make investments in other persons or property, or sell or dispose of our assets.

We may not generate sufficient cash flow to meet our debt service and working capital requirements, which may expose us to the risk of default under our debt obligations.

We will need to implement our business strategy successfully on a timely basis to meet our debt service and working capital needs. We may not successfully implement our business strategy, and even if we do, we may not realize the anticipated results of our strategy and generate insufficient operating cash flow to meet our debt service obligations and working capital needs.

In the event our cash flow is inadequate to meet our debt service and working capital requirements, we may be required, to the extent permitted under our amended and restated credit agreement, our indenture governing our senior unsecured notes, and any other credit facilities, to seek additional financing in the debt or equity markets, refinance or restructure all or a portion of our indebtedness, sell selected assets or reduce or delay planned capital or operating expenditures. However, any insufficient cash flow may make it more difficult for us to obtain financing on terms that are acceptable to us, or at all. We could also face substantial liquidity problems. If we are unable to generate sufficient cash flow or otherwise obtain funds needed to make required payments under our indebtedness, or if we breach any covenants under our indebtedness, we would be in default under its terms and the holders of such indebtedness may be able to accelerate the maturity of such indebtedness, which could cause defaults under our other indebtedness.

Changes in the method of determining the London Interbank Offered Rate ("LIBOR") or the replacement of LIBOR with an alternative reference rate, may adversely affect our financial condition and results of operations.

Certain of our financial obligations and instruments, including our credit facility and interest rate swap agreements, are calculated by reference to LIBOR. LIBOR is the subject of recent national, international and other regulatory guidance and proposals for reform. These reforms and other pressures may cause LIBOR to disappear entirely or to perform differently than in the past. The potential consequences cannot be fully predicted and may result in, among other things, increased volatility and illiquidity in markets for instruments that currently rely on LIBOR, increased borrowing costs, reductions in the value of certain instruments or the effectiveness of related transactions such as interest rate swaps, difficulty and costly processes to amend applicable contracts and instruments and difficulties, complications or delays in connection with future financing and hedging efforts. Any of these consequences could materially and adversely affect our results of operations, cash flows, and liquidity.

Risks Related to Legal, Governmental Regulation and Tax Matters

Unanticipated changes in the tax rates and policies of the states in which we operate could materially and adversely affect our results of operations.

We strategically choose the locations of our U.S. campuses. One of the factors we consider is the favorable tax rates and policies that provide zero or low-tax environments for our customers to deploy IT equipment. If the tax rates and policies of the states in which our data centers are located expose us or our customers to higher taxes, our results of operations could be materially and adversely affected directly or by making our data centers less attractive to our existing and potential customers.

Environmental problems are possible and can be costly.

Environmental liabilities could arise on the land that we own or lease and have a material adverse effect on our financial condition and performance. Federal, state and local laws and regulations relating to the protection of the environment may require a current or previous owner or operator of real estate to investigate and remediate hazardous or toxic substances or petroleum product releases at or from the property. In addition, we could incur costs to comply with such laws and regulations, the violation of which could lead to substantial fines and penalties.

We may have to pay governmental entities or third parties for property damage and for investigation and remediation costs that they incurred in connection with any contamination at our current and former properties without regard to whether we knew of or caused the presence of the contaminants. Even if more than one person may have been responsible for the contamination, each person covered by these environmental laws may be held responsible for all of the clean-up costs incurred.

Some of the properties may contain asbestos-containing building materials. Environmental laws require that asbestos-containing building materials be properly managed and maintained, and may impose fines and penalties on building owners or operators for failure to comply with these requirements.

Future legislation and regulation, either domestic or international, concerning networking, data privacy or other aspects of Internet business could have an adverse effect on our business operations.

Various laws and governmental regulations, both in the United States and international, governing internet related services, related communications services and information technologies remain largely unsettled, even in areas where there has been some legislative action. For example, in 2018, the Federal Communications Commission (the "FCC") overturned network neutrality rules, which may result in material changes in the regulations and contribution regime affecting us and our customers. Furthermore, the U.S. Congress and state legislatures are reviewing and considering changes to the new FCC rules making the future of network neutrality and its impact on us uncertain. There may also be forthcoming regulation in the United States in the areas of cybersecurity, data privacy and data security, any of which could affect us and our customers. Similarly, data privacy regulations outside of the United States continue to evolve. Future legislation could impose additional costs on our business or require us to make changes in our operations, which could adversely affect our operations.

We may incur significant costs complying with other regulations.

Our properties are subject to various federal, state and local regulations, such as state and local fire and safety regulations. If one of our properties is not in compliance with these various regulations, we may be required to pay fines or private damage awards. We do not know whether existing regulations will change or whether future regulations will require us to make significant unanticipated expenditures that may adversely affect our business, financial condition and results of operations.

Fluctuations in our tax obligations and effective tax rate and realization of our deferred tax assets may result in volatility of our operating results.

We are subject to taxes by the U.S. federal, state, local and foreign tax authorities, and our tax liabilities will be affected by the allocation of expenses to differing jurisdictions. We record tax expense based on our estimates of future payments, which may include reserves for uncertain tax positions in multiple tax jurisdictions, and valuation allowances related to certain net deferred tax assets. At any one time, multiple tax years may be subject to audit by various taxing jurisdictions. The results of these audits and negotiations with taxing authorities may affect the ultimate settlement of these matters. We expect that throughout the year there could be ongoing variability in our quarterly tax rates as events occur and exposures are evaluated. Our future effective tax rates could be subject to volatility or adversely affected by a number of factors, including:

- changes in the valuation of our deferred tax assets and liabilities;
- expected timing and amount of the release of any tax valuation allowances;

- tax effects of stock-based compensation; or
- changes in tax laws, regulations or interpretations thereof.

In addition, a variety of factors could materially affect our effective tax rate in a given financial statement period, including changes in the mix and level of earnings, varying tax rates in the different jurisdictions in which we operate, fluctuations in valuation allowances, deductibility of certain items, or changes to existing accounting rules or regulations. In addition, tax legislation may be enacted in the future, which could negatively affect our current or future tax structure and effective tax rates. We may be subject to audits of our income, sales, and other transaction taxes by U.S. federal, state, local, and foreign taxing authorities. Outcomes from these audits could have an adverse effect on our operating results and financial condition.

If we were deemed to be an investment company under the Investment Company Act of 1940, as amended (the "1940 Act") as a result of our ownership of Switch, Ltd., applicable restrictions could make it impractical for us to continue our business as contemplated and could have a material adverse effect on our business.

Under Sections 3(a)(1)(A) and (C) of the 1940 Act, a company generally will be deemed to be an "investment company" for purposes of the 1940 Act if (i) it is, or holds itself out as being, engaged primarily, or proposes to engage primarily, in the business of investing, reinvesting or trading in securities or (ii) it engages, or proposes to engage, in the business of investing, reinvesting, owning, holding or trading in securities and it owns or proposes to acquire investment securities having a value exceeding 40% of the value of its total assets (exclusive of U.S. government securities and cash items) on an unconsolidated basis. We do not believe that we are an "investment company," as such term is defined in either of those sections of the 1940 Act.

As the manager of Switch, Ltd., we will control and operate Switch, Ltd. On that basis, we believe that our interest in Switch, Ltd. is not an "investment security" as that term is used in the 1940 Act. However, if we were to cease participation in the management of Switch, Ltd., our interest in Switch, Ltd. could be deemed an "investment security" for purposes of the 1940 Act.

We and Switch, Ltd. intend to conduct our operations so that we will not be deemed an investment company. However, if we were to be deemed an investment company, restrictions imposed by the 1940 Act, including limitations on our capital structure and our ability to transact with affiliates, could make it impractical for us to continue our business as contemplated and could have a material adverse effect on our business.

Risks Related to Our Organizational Structure

Our principal asset is our interest in Switch, Ltd., and, accordingly, we depend on distributions from Switch, Ltd. to pay our taxes and expenses, including payments under the TRA. Switch, Ltd.'s ability to make such distributions may be subject to various limitations and restrictions.

We are a holding company and have no material assets other than our ownership of Common Units. We have no independent means of generating revenue or cash flow. We have determined that Switch, Ltd. is a variable interest entity ("VIE") and that we are the primary beneficiary of Switch, Ltd. Accordingly, pursuant to the VIE accounting model, we have consolidated Switch, Ltd. in our consolidated financial statements. In the event of a change in accounting guidance or amendments to the Switch Operating Agreement resulting in us no longer having a controlling interest in Switch, Ltd., we may not be able to consolidate its results of operations with our own, which would have a material adverse effect on our results of operations. Moreover, our ability to pay our taxes and operating expenses or declare and pay dividends in the future, if any, is dependent upon the financial results and cash flows of Switch, Ltd. and its subsidiaries and distributions we receive from Switch, Ltd. There can be no assurance that Switch, Ltd. and its subsidiaries will generate sufficient cash flow to distribute funds to us or that applicable state law and contractual restrictions, including negative covenants in our debt instruments, will permit such distributions.

Switch, Ltd. is treated as a partnership for U.S. federal income tax purposes and, as such, is not subject to any entity-level U.S. federal income tax. Instead, taxable income is allocated to holders of Common Units, including us. Accordingly, we incur income taxes on our allocable share of any net taxable income of Switch, Ltd. Under the terms of the Switch Operating Agreement, Switch, Ltd. is obligated to make tax distributions to holders of Common Units, including us. In addition to tax expenses, we will also incur expenses related to our operations, including payments under the TRA, which we expect could be significant. As the manager of Switch, Ltd., we intend to cause Switch, Ltd. to make cash distributions to the owners of Common Units in an amount sufficient to (i) fund their tax obligations in respect of taxable income allocated to them and (ii) cover our operating expenses, including payments under the TRA. However, Switch, Ltd.'s ability to make such distributions may be subject to various limitations and restrictions, such as restrictions on distributions that would either violate any contract or agreement to which Switch, Ltd. is then a party, including debt agreements, or any applicable law, or that would have the effect of rendering

Switch, Ltd. insolvent. If we do not have sufficient funds to pay tax or other liabilities or to fund our operations, we may have to borrow funds, which could materially adversely affect our liquidity and financial condition and subject us to various restrictions imposed by any such lenders. To the extent that we are unable to make payments under the TRA for any reason, such payments generally will be deferred and will accrue interest until paid; provided, however, that nonpayment for a specified period may constitute a material breach of a material obligation under the TRA and therefore accelerate payments due under the TRA. In addition, if Switch, Ltd. does not have sufficient funds to make distributions, our ability to declare and pay cash dividends will also be restricted or impaired. See “Risks Related to Ownership of Our Class A Common Stock.”

The TRA with the Members requires us to make cash payments to them in respect of certain tax benefits to which we may become entitled, and we expect that the payments we are required to make will be substantial.

Under the TRA we have entered into with Switch, Ltd. and the Members, we are required to make cash payments to the Members equal to 85% of the tax benefits, if any, that we actually realize, or in certain circumstances are deemed to realize, as a result of (i) the increases in the tax basis of assets of Switch, Ltd. resulting from any redemptions or exchanges of Common Units from the Members and (ii) certain other tax benefits related to our making payments under the TRA. Although the actual timing and amount of any payments that we make to the Members under the TRA will vary, we expect those payments will be significant. Any payments made by us to the Members under the TRA will generally reduce the amount of overall cash flow that might have otherwise been available to us. Furthermore, our future obligation to make payments under the TRA could make us a less attractive target for an acquisition, particularly in the case of an acquirer that cannot use some or all of the tax benefits that are the subject of the TRA. Payments under the TRA are not conditioned on any Member’s continued ownership of Common Units or our Class A common stock.

The actual amount and timing of any payments under the TRA will vary depending upon a number of factors, including the timing of redemptions or exchanges by the holders of Common Units, the amount of gain recognized by such holders of Common Units, the amount and timing of the taxable income we generate in the future, and the federal tax rates then applicable.

Our organizational structure, including the TRA, confers certain benefits upon the Members that will not benefit holders of Class A common stock to the same extent as it will benefit the Members.

Our organizational structure, including the TRA, confers certain benefits upon the Members that will not benefit the holders of our Class A common stock to the same extent as it will benefit the Members. We have entered into the TRA with Switch, Ltd. and the Members and it will provide for the payment by us to the Members of 85% of the amount of tax benefits, if any, that we actually realize, or in some circumstances are deemed to realize, as a result of (i) the increases in the tax basis of assets of Switch, Ltd. resulting from any redemptions or exchanges of Common Units from the Members, and (ii) certain other tax benefits related to our making payments under the TRA. Although we will retain 15% of the amount of such tax benefits, this and other aspects of our organizational structure may adversely affect the future trading market for the Class A common stock.

In certain cases, payments under the TRA to the Members may be accelerated or significantly exceed the actual benefits we realize in respect of the tax attributes subject to the TRA.

The TRA provides that upon certain mergers, asset sales, other forms of business combinations or other changes of control or if, at any time, we elect an early termination of the TRA, then our obligations, or our successor’s obligations, under the TRA to make payments thereunder would be based on certain assumptions, including an assumption that we would have sufficient taxable income to fully utilize all potential future tax benefits that are subject to the TRA.

As a result of the foregoing, (i) we could be required to make payments under the TRA that are greater than the specified percentage of the actual benefits we ultimately realize in respect of the tax benefits that are subject to the TRA, and (ii) if we elect to terminate the TRA early, we would be required to make an immediate cash payment equal to the present value of the anticipated future tax benefits that are the subject of the TRA, which payment may be made significantly in advance of the actual realization, if any, of such future tax benefits. In these situations, our obligations under the TRA could have a substantial negative impact on our liquidity and could have the effect of delaying, deferring or preventing certain mergers, asset sales, other forms of business combinations or other changes of control. There can be no assurance that we will be able to fund or finance our obligations under the TRA.

We will not be reimbursed for any payments made to the Members under the TRA in the event that any tax benefits are disallowed.

Payments under the TRA are based on the tax reporting positions that we determine. The Internal Revenue Service or another tax authority may challenge all or part of the tax basis increases, as well as other related tax positions we take, and a court could sustain such challenge. If the outcome of any such challenge would reasonably be expected to materially affect a recipient's payments under the TRA, then we will not be permitted to settle or fail to contest such challenge without the consent (not to be unreasonably withheld or delayed) of each Member that directly or indirectly owns at least 10% of the outstanding Common Units. We will not be reimbursed for any cash payments previously made to the Members under the TRA in the event that any tax benefits initially claimed by us and for which payment has been made to a Member are subsequently challenged by a taxing authority and are ultimately disallowed. Instead, any excess cash payments we make to a Member will be netted against any future cash payments that we might otherwise be required to make to such Member under the terms of the TRA. However, we might not determine that we have made an excess cash payment to a Member for a number of years following the initial time of such payment. If a taxing authority challenges any of our tax reporting positions, we will not be permitted to reduce future cash payments under the TRA until such challenge is finally settled or determined. As a result, we could make payments under the TRA in excess of the tax savings that we realize in respect of the tax attributes with respect to a Member that are the subject of the TRA.

Risks Related to Ownership of Our Class A Common Stock

The Members have the right to have their Common Units redeemed or exchanged into shares of Class A common stock, which may cause volatility in our stock price.

As of February 4, 2021, we have an aggregate of more than 600,000,000 shares of Class A common stock authorized but unissued, including 113,915,174 shares of Class A common stock issuable upon redemption or exchange of Common Units. Subject to the restrictions set forth in the Switch Operating Agreement, the Members may have their Common Units redeemed for shares of our Class A common stock. We have also entered into the Registration Rights Agreement pursuant to which the shares of Class A common stock issued to the Members upon redemption of Common Units are eligible for resale, subject to certain limitations set forth therein.

We cannot predict the timing or size of any future issuances of our Class A common stock resulting from the redemption or exchange of Common Units or the effect, if any, that future issuances and sales of shares of our Class A common stock may have on the market price of our Class A common stock. Sales or distributions of substantial amounts of our Class A common stock, including shares issued in connection with an acquisition, or the perception that such sales or distributions could occur, may cause the market price of our Class A common stock to decline.

An active trading market for our Class A common stock may not be sustained.

Our Class A common stock is listed on the NYSE under the symbol "SWCH." However, we cannot ensure that an active trading market for our Class A common stock will be sustained. In addition, we cannot ensure that the liquidity of any trading market will provide the ability to sell shares of our Class A common stock when or at desired prices.

If our operating and financial performance in any given period does not meet the guidance that we provide to the public, our stock price may decline.

We provide public guidance on our expected operating and financial results for future periods. Such guidance is comprised of forward-looking statements subject to the risks and uncertainties described in this report and in our other public filings and public statements. Our actual results may not always be in line with or exceed the guidance we have provided, especially in times of economic uncertainty. If, in the future, our operating or financial results for a particular period do not meet the guidance we provide or the expectations of investment analysts or if we reduce our guidance for future periods, the market price of our Class A common stock may decline as well.

If securities analysts do not publish research or reports about our business or if they publish negative evaluations of our Class A common stock, the price of our Class A common stock could decline.

The trading market for our Class A common stock relies in part on the research and reports that industry or financial analysts publish about us or our business. If one or more of the analysts covering our business downgrades their evaluations of our stock, the price of our Class A common stock could decline. If one or more of these analysts ceases to cover our Class A common stock, we could lose visibility in the market for our stock, which in turn could cause our Class A common stock price to decline.

The trading price of our Class A common stock may be volatile or may decline regardless of our operating performance.

Volatility in the market price of our Class A common stock may affect the ability to sell shares at or above the price paid for such shares. The market price of our Class A common stock may fluctuate significantly in response to a number of factors, most of which we cannot control, including:

- our operating performance and prospects and those of other similar companies;
- actual or anticipated variations in our financial condition, liquidity or results of operations;
- changes in financial projections we may provide to the public or our failure to meet these projections;
- change in the estimates of securities analysts relating to our earnings or other operating metrics;
- publication of research reports about us, our significant customers, our competition, data center companies generally or the technology industry;
- recruitment or departure of key personnel;
- new laws or regulations or new interpretations of existing laws or regulations applicable to our business;
- changes in market valuations of similar companies;
- announcements by us or our competitors of significant technological innovations, acquisitions, strategic partnerships, joint ventures, or capital commitments;
- actual or anticipated developments in our business or our competitors' businesses or the competitive landscape generally;
- developments or disputes concerning our intellectual property or our services, or third-party proprietary rights;
- adverse market reaction to leverage we may incur or equity we may issue in the future;
- actions by institutional stockholders;
- actual or perceived accounting issues, including changes in accounting standards, policies, guidelines, interpretations or principles;
- failure to comply with NYSE requirements;
- speculation in the press or investment community about our company or industry or the economy in general;
- adverse developments in the credit-worthiness, business or prospects of one or more of our significant customers;
- lawsuits threatened or filed against us;
- other events or factors, including those resulting from war, incidents of terrorism, or responses to these events;
- the realization of any of the other risk factors presented in this report;
- the overall performance of the equity markets; and
- general market and economic conditions.

Anti-takeover provisions in our organizational documents and Nevada law could prevent or delay a change in control of our company, even if such change in control would be beneficial to our stockholders.

Provisions of our amended and restated articles of incorporation and amended and restated bylaws, as well as provisions of Nevada law, could discourage, delay or prevent a merger, acquisition or other change in control of our company, even if such change in control would be beneficial to our stockholders. These provisions include:

- authorizing the issuance of "blank check" preferred stock that could be issued by our board of directors to increase the number of outstanding shares and thwart a takeover attempt;
- prohibiting the use of cumulative voting for the election of directors;
- removal of incumbent directors only by the vote of stockholders with not less than two-thirds of the voting power of our outstanding stock;

- prohibiting stockholders from calling special meetings;
- requiring that our board of directors adopt a resolution in order to propose any amendment to our articles of incorporation before it may be considered for approval by our stockholders;
- limiting the ability of stockholders to amend our bylaws and approve certain amendments to our articles of incorporation, in each case by requiring the affirmative vote of holders of at least two-thirds of the votes that stockholders would be entitled to cast in any annual election of directors;
- requiring all stockholder actions to be taken at a meeting of our stockholders; and
- establishing advance notice and duration of ownership requirements for nominations for election to the board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings.

These provisions could also discourage proxy contests and make it more difficult for our stockholders to elect directors of their choosing and cause us to take other corporate actions they desire. In addition, because our board of directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our stockholders to replace current members of our management team.

In addition, we are subject to Nevada's statute on combinations with interested stockholders (Sections 78.411-78.444 of the Nevada Revised Statutes), which prohibits us from entering into a "combination" with an "interested stockholder" for up to four years, unless certain conditions are met (such as, in some circumstances, approval by our board of directors before such person became an interested stockholder, or by both our board of directors and a supermajority of disinterested stockholders). Under the statute, an interested stockholder is a person who beneficially owns (or, if an affiliate or associate, did, within the prior two years, beneficially own) stock with 10% or more of the corporation's voting power. The inability of an interested stockholder to pursue the types of combinations restricted by the statute could discourage, delay or prevent a merger, acquisition or other change in control of our company.

Finally, a person acquiring a significant proportion of our voting stock could be precluded from voting all or a portion of such shares under Nevada's "control share" statute (Sections 78.378-78.3793 of the Nevada Revised Statutes), which prohibits an acquirer of stock, under certain circumstances, from voting its "control shares" of stock acquired up to 90 days prior to crossing certain ownership threshold percentages, unless the acquirer obtains approval of disinterested stockholders or unless the issuing corporation amends its articles of incorporation or bylaws within 10 days of the acquisition to provide that the "control share" statute does not apply to the corporation or the types of existing or future stockholders. If the voting rights are not approved, the statute would allow us to call all of such control shares for redemption at the average price paid for such shares.

We may issue shares of preferred stock in the future, which could make it difficult for another company to acquire us or could otherwise adversely affect holders of our Class A common stock, which could depress the price of our Class A common stock.

Our amended and restated articles of incorporation authorize us to issue one or more series of preferred stock. Our board of directors has the authority to determine the preferences, limitations and relative rights of the shares of preferred stock and to fix the number of shares constituting any series and the designation of such series, without any further vote or action by our stockholders. Our preferred stock could be issued with voting, liquidation, dividend and other rights superior to the rights of our Class A common stock. The potential issuance of preferred stock may delay or prevent a change in control of us, discourage bids for our Class A common stock at a premium to the market price, and materially and adversely affect the market price and the voting and other rights of the holders of our Class A common stock.

We are subject to securities class action litigation and may be subject to additional litigation in the future, which may harm our business and operating results.

We are, and may in the future become, subject to various legal proceedings and claims that arise in or outside the ordinary course of business. For example, in 2018, several putative class action complaints were filed against us, certain current and former officers and directors and certain underwriters of our IPO alleging federal securities law violations in connection with the IPO. In addition, certain lawsuits were filed against current and former officers and directors of Switch, Inc. alleging breaches of fiduciary duty, unjust enrichment, waste of corporate assets, abuse of control, and gross mismanagement. These plaintiffs also named Switch, Inc. as a nominal defendant. These lawsuits were brought by purported stockholders of Switch, Inc. and arise generally from the same allegations.

We may be subject to similar lawsuits in the future. We may also be called on to defend ourselves against lawsuits relating to our business operations. Some of these claims may seek significant damage amounts due to the nature of our business. Due to the inherent uncertainties of litigation, we cannot accurately predict the nature or ultimate outcome of any such proceedings.

Regardless of their merits, these lawsuits or future lawsuits could subject us to substantial costs, divert resources and the attention of management from our business and harm our business, results of operations, financial condition, reputation and cash flows. These factors may materially and adversely affect the market price of our Class A common stock.

Substantial future sales of our Class A common stock, including such stock received upon redemption or exchange of Common Units, or the perception in the public markets that such sales may occur, may depress our stock price.

Sales of substantial amounts of our Class A common stock in the public market, or the perception that these sales could occur, could adversely affect the price of our Class A common stock and could impair our ability to raise capital through the sale of additional shares. As of February 4, 2021, we had 127,339,012 shares of Class A common stock outstanding and 113,915,174 authorized but unissued shares of Class A common stock that would be issuable upon redemption or exchange of Common Units.

All of the shares of Class A common stock held by our directors, executive officers and holders of substantially all of our outstanding common stock (including shares of Class A common stock issuable upon redemption or exchange of Common Units) may be sold in the public market, subject to applicable limitations imposed under federal securities laws. Sales of a substantial number of such shares or the perception that such sales may occur, could cause our market price to fall or make it more difficult for our stockholders to sell their Class A common stock at a time and price that they deem appropriate. We have entered into a Registration Rights Agreement pursuant to which the shares of Class A common stock issued upon redemption or exchange of Common Units held by the Members will be eligible for resale, subject to certain limitations set forth therein.

In the future, we may also issue additional shares of Class A common stock, or securities convertible or exchangeable for shares of Class A common stock, to raise capital, which could constitute a material portion of our then-outstanding shares of common stock.

We cannot predict the impact our capital structure may have on our stock price.

In July 2017, S&P Dow Jones, a provider of widely followed stock indices, announced that companies with multiple share classes, such as ours, will not be eligible for inclusion in certain of their indices. As a result, our Class A common stock is not currently eligible for these stock indices. Many investment funds are precluded from investing in companies that are not included in such indices, and these funds would be unable to purchase our Class A common stock. We cannot predict whether other stock indices will take a similar approach to S&P Dow Jones in the future. Exclusion from indices could make our Class A common stock less attractive to investors and, as a result, the market price of our Class A common stock could be adversely affected.

We incur costs as a result of being a public company and in the administration of our complex organizational structure.

As a public company, we incur significant legal, accounting, insurance and other expenses, including costs associated with public company reporting requirements. We also have incurred and will continue to incur costs associated with the loss of our emerging growth company status and related exemptions from certain disclosure obligations, Sarbanes-Oxley Act and related rules implemented by the SEC that have not been reflected in our historical consolidated financial statements for periods prior to the IPO. We also incur ongoing periodic expenses in connection with the administration of our organizational structure. The expenses incurred by public companies generally for reporting and corporate governance purposes have been increasing. We expect these rules and regulations to increase our legal and financial compliance costs and to make some activities more time-consuming and costly, although we are currently unable to estimate these costs with any degree of certainty. In assessing these costs, we will take into account expenses related to insurance, legal, accounting, and compliance activities, as well as other expenses not currently incurred. These laws and regulations could also make it more difficult or costly for us to obtain certain types of insurance, including director and officer liability insurance, and we may be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. These laws and regulations could also make it more difficult for us to obtain certain types of insurance and to attract and retain qualified persons to serve on our board of directors, our board committees or as our executive officers. Furthermore, if we are unable to satisfy our obligations as a public company, we could be subject to delisting of our Class A common stock, fines, sanctions and other regulatory action and potentially civil litigation. Our organizational structure, including our TRA, is complex, and we require the expertise of various tax, legal and accounting advisers to ensure compliance with applicable laws and regulations. We have incurred and will continue to incur significant expenses in connection with the administration of our organizational structure. As a result, our expenses for legal, tax and accounting compliance may be significantly greater than other companies of our size that do not have a similar organizational structure or a tax receivable agreement in place.

We may fail to maintain an effective system of internal control over financial reporting in the future and may not be able to accurately or timely report our financial condition or results of operations, which may adversely affect investor confidence in us and the price of our Class A common stock.

As a public company, we are required to maintain internal control over financial reporting and to report any material weaknesses in such internal controls. Section 404 of the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act") requires that we evaluate and determine the effectiveness of our internal control over financial reporting and provide a management report on internal control over financial reporting.

The process of designing and implementing internal control over financial reporting required to comply with Section 404 of the Sarbanes-Oxley Act has been and will continue to be time consuming, costly and complicated. If, during the evaluation and testing process, we identify one or more material weaknesses in our internal control over financial reporting, our management will be unable to assert that our internal control over financial reporting is effective at a reasonable assurance level. Even if our management concludes that our internal control over financial reporting is effective at a reasonable assurance level, our independent registered public accounting firm may conclude that there are material weaknesses with respect to our internal controls or the level at which our internal controls are documented, designed, implemented, or reviewed. If we are unable to assert that our internal control over financial reporting is effective at a reasonable assurance level, or when required in the future, if our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our common stock could be adversely affected, and we could become subject to litigation or investigations by the NYSE on which our Class A common stock securities are listed, the SEC, or other regulatory authorities, which could require additional financial and management resources, and cause investor perceptions to be adversely affected and potentially resulting in restatement of our financial statements for prior periods and a decline in the market price of our Class A common stock.

Our ability to pay dividends on our Class A common stock is subject to the discretion of our board of directors and our debt agreements as well as future agreements.

Although we intend to pay quarterly cash dividends on our Class A common stock, the declaration, amount and payment of any future dividends on shares of Class A common stock will be at the sole discretion of our board of directors, and will depend upon results of operations, financial condition, contractual restrictions, restrictions imposed by applicable law and other factors our board of directors deems relevant. The continued operation and expansion of our business will require substantial funding. We are a holding company, and substantially all of our operations are carried out by Switch, Ltd. and its subsidiaries. Under our amended and restated credit agreement and indenture governing our senior unsecured notes, Switch, Ltd. is currently restricted from paying cash dividends or making certain other restricted payments, and we expect these restrictions to continue in the future, which may in turn limit our ability to pay dividends on our Class A common stock. Our ability to pay dividends may also be restricted by the terms of any future credit agreement or any future debt or preferred equity securities of ours or of our subsidiaries. Accordingly, realization of a gain on an investment in our Class A common stock may depend on the appreciation of the price of our Class A common stock, which may never occur.

Provisions of our articles of incorporation, limitations on director and officer liability and our indemnification of our officers and directors may have the effect of discouraging lawsuits against our directors and officers.

Our amended and restated articles of incorporation require that (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim against us or our officers, directors or employees arising pursuant to any provision of Nevada law regarding corporations, mergers, conversions, exchanges or domestications, or our amended and restated articles of incorporation or amended and restated bylaws or (iv) any action asserting a claim against us or any of our directors, officers or other employees governed by the internal affairs doctrine, will have to be brought only in the Eighth Judicial District Court of Clark County, Nevada. Although we believe this provision benefits us by providing increased consistency in the application of Nevada law in the types of lawsuits to which it applies, the provision may have the effect of discouraging lawsuits against our directors and officers.

In addition, our amended and restated articles of incorporation also provide, pursuant to Nevada corporation law, that a director or officer shall not be personally liable to us or our stockholders for damages as a result of any breach of fiduciary duty as a director or officer, except for acts or omissions which involve intentional misconduct, fraud or knowing violation of law. In addition, a director or officer will not be liable unless presumptions in his or her favor are rebutted. These provisions may discourage stockholders from bringing suit against a director or officer for breach of fiduciary duty and may reduce the likelihood of derivative litigation brought by stockholders on our behalf against a director or officer. In addition, our amended and restated articles of incorporation and bylaws require indemnification of directors and officers to the fullest extent permitted by Nevada law.

General Risks

Our business and those of our customers and suppliers may be adversely affected by epidemics, pandemics or other outbreaks.

The effects of epidemics, pandemics or other outbreaks of an illness, disease or virus are uncertain and difficult to predict. The COVID-19 pandemic is causing significant disruptions to the United States and global economies and has contributed to significant volatility and negative pressure in financial markets. The global impact of the outbreak is rapidly evolving, and any preventative or protective actions that we may take in response to COVID-19 or any other global health threat or pandemic may result in business and/or operational disruption.

Our customers' businesses could be disrupted, which would affect their ability to make payments to us, and our revenues could be negatively affected. Additionally, global economic disruptors like COVID-19 could negatively impact our supply chain and cause delays in the construction or development of our data centers due to disruptions in the supply of materials, issuance of permits, or products or the inability of our contractors to perform on a timely basis or at all. It may not be possible to find replacement products or supplies and ongoing delays could affect our business and growth.

The extent to which COVID-19 impacts our and our customers' operations will depend on future developments, which are highly uncertain and cannot be predicted, including, among others, the duration and severity of the outbreak, new information that might emerge, governmental measures, and the actions taken to contain COVID-19 or treat its impact. These and other potential impacts of epidemics, pandemics or other outbreaks of an illness, disease or virus could have a material adverse effect on our business, financial condition and results of operations.

Uncertain economic environments may have an adverse impact on our business and financial condition.

An uncertain economic environment, such as that which prevailed during much of 2020, may have an adverse effect on our business and financial condition. While we believe we have a strong customer base, if market conditions change, some of our customers may have difficulty paying us and we may experience losses in our customer base and reductions in their commitments to us. We may also be required to make allowances for doubtful accounts and our results would be negatively impacted. Our sales cycle could also be lengthened if customers reduce spending on, or delay decision-making with respect to, our services, which could adversely affect our revenue growth and our ability to recognize revenue. We could also experience pricing pressure as a result of economic conditions if our competitors lower prices and attempt to lure away our customers with lower cost solutions. Finally, our ability to access the capital markets may be severely restricted at a time when we would like, or need, to do so, which could have an impact on our flexibility to pursue additional expansion opportunities and maintain our desired level of revenue growth in the future.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

The information set forth under the captions "Our Campus Locations" and "Our Portfolio" in Part I, Item 1 of this Form 10-K is incorporated by reference herein.

Item 3. Legal Proceedings.

The information set forth in Note 9 "Commitments and Contingencies—Legal Proceedings" to our consolidated financial statements in Part II, Item 8 of this Form 10-K is incorporated by reference herein.

Item 4. Mine Safety Disclosures.

Not applicable.

Part II.

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market information

Our Class A common stock has traded on the NYSE under the symbol “SWCH” since October 6, 2017. Prior to that date, there was no public market for our Class A common stock. Our Class B common stock is neither listed nor traded on any stock exchange. As of February 4, 2021, there were no shares of Class C common stock outstanding.

Holders of record

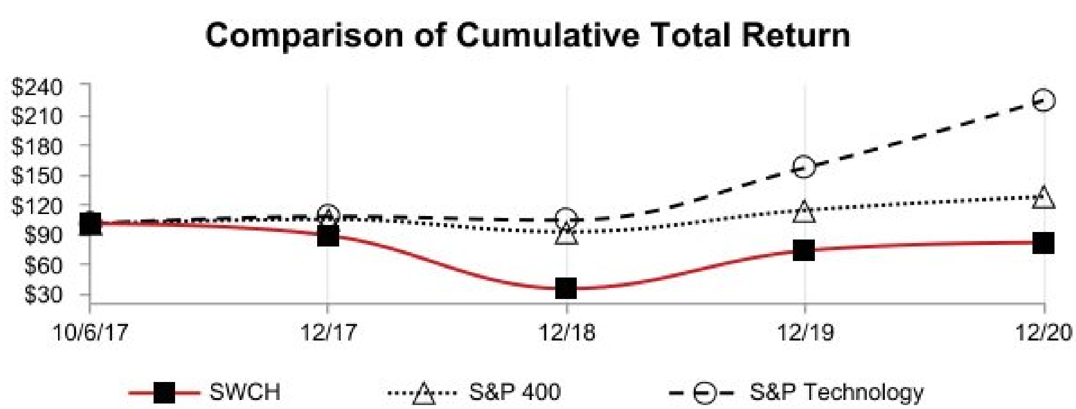
As of February 4, 2021, there were 28 holders of record of our Class A common stock. The number of record holders does not include persons who held shares of our Class A common stock in nominee or “street name” accounts through brokers. As of February 4, 2021, there were 91 holders of record of our Class B common stock. As of February 4, 2021, there were no shares of Class C common stock outstanding.

Dividends

We currently pay regular quarterly cash dividends and expect to continue paying regular cash dividends on a quarterly basis. Prior to the payment of such dividends, Switch, Ltd. makes and expects to continue making cash distributions to all of its holders of record of Common Units, including us. The declaration, amount and payment of any future dividends on shares of Class A common stock will be at the discretion of our board of directors and will depend upon many factors, including our results of operations, financial condition, capital requirements, restrictions in Switch, Ltd.’s debt agreements and other factors that our board of directors deem relevant. We are a holding company, and substantially all of our operations are carried out by Switch, Ltd. and its subsidiaries. Additionally, Switch, Ltd.’s debt agreements place certain restrictions on its ability to pay cash dividends or make certain other restricted payments, and we expect these restrictions to continue in the future, which may in turn limit our ability to pay dividends on our Class A common stock. Our ability to pay dividends may also be restricted by the terms of any future credit agreement, or any future debt or preferred equity securities of us or our subsidiaries. Holders of our Class B common stock and Class C common stock are not entitled to participate in any dividends declared by our board of directors.

Performance graph

The graph below compares the cumulative total stockholder return on our Class A common stock with the cumulative total return on the Standard and Poor’s MidCap 400 Index (the “S&P 400”) and the Standard and Poor’s Technology Select Sector Index (“S&P Technology”) for the period beginning on October 6, 2017 (the date our Class A common stock commenced trading on the NYSE) and ending on December 31, 2020, assuming an investment of $100 on October 6, 2017 and the reinvestment of dividends where applicable.



Recent sales of unregistered securities

None.

Issuer purchases of equity securities

None.

Item 6. Selected Financial Data.

Part II, Item 6 is no longer required as the Company has adopted certain provisions within the amendments to Regulation S-K that eliminate Item 301.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the audited consolidated financial statements and related notes included elsewhere in this Form 10-K. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in "Risk Factors" included elsewhere in this Form 10-K.

Overview

We are a technology infrastructure company powering the sustainable growth of the connected world and the Internet of Everything. Using our technology platform, we provide solutions to help enable that growth. Our advanced data centers are the center of our platform and provide power densities that exceed industry averages with efficient cooling, while being powered by 100% renewable energy. These exascale data centers address the growing challenges facing the data center industry. Our critical infrastructure components in our data centers are purpose-built to satisfy customers' needs, drive efficiency and enable the deployment of highly advanced computing technologies.

We presently own and operate four primary campus locations, called Primes, which encompass 12 colocation facilities with an aggregate of up to 4.7 million GSF of space. Our Primes consist of The Core Campus in Las Vegas, Nevada; The Citadel Campus near Reno, Nevada; The Pyramid Campus in Grand Rapids, Michigan; and The Keep Campus in Atlanta, Georgia, which opened during the first quarter of 2020. In addition to our Primes, we held a 50% ownership interest in SUPERNAP International through December 31, 2020, which has deployed facilities in Italy and Thailand. Until March 31, 2018, we accounted for this ownership interest under the equity method of accounting. In February 2021, we acquired SUPERNAP International's 30% ownership interest in SUPERNAP Thailand, the entity which has deployed the facility in Thailand, and sold our ownership interest in SUPERNAP International, thus disposing of our interest in the facility in Italy.

We currently have more than 950 customers, including some of the world's largest technology and digital media companies, cloud, IT and software providers, as well as financial institutions and network and telecommunications providers. Our ecosystem connects over 250 cloud, IT and software providers and more than 90 network and telecommunications providers. Our business is based on a recurring revenue model comprised of (1) colocation, which includes the licensing and leasing of cabinet space and power and (2) connectivity services, which include cross-connects, broadband services and external connectivity. We consider these services recurring because our customers are generally billed on a fixed and recurring basis each month for the duration of their contract. We generally derive more than 95% of our revenue from recurring revenue and we expect to continue to do so for the foreseeable future.

Our non-recurring revenue is primarily comprised of installation services related to a customer's initial deployment. These services are non-recurring because they are typically billed once, upon completion of the installation.

Factors that May Influence Future Results of Operations

Impact of COVID-19. In March 2020, the World Health Organization declared the outbreak of COVID-19 as a pandemic, which continues to be spread throughout the U.S. and the world. While we have not incurred significant disruptions thus far from the COVID-19 outbreak, we are unable to accurately predict the full impact that COVID-19 will have on our results of operations due to numerous uncertainties, including the severity of the disease, the duration of the outbreak, actions that may be taken by governmental authorities, the future impact to the business of our customers, partners and vendors, the future impact and functioning of the global financial markets and other factors identified in "Item 1A—Risk Factors" in Part I of this Form 10-K. We will continue to evaluate the nature and extent of the impact to our business, consolidated results of operations, and financial condition.

Market and Economic Conditions. We are affected by general business and economic conditions in the United States and globally. These conditions include short-term and long-term interest rates, inflation, money supply, political issues, legislative and regulatory changes, fluctuations in both debt and equity capital markets and broad trends in industry and finance, all of which are beyond our control. Macroeconomic conditions that affect the economy and the economic outlook of the United States and the rest of the world, including as a result of the COVID-19 pandemic, could adversely affect our customers and vendors, which could adversely affect our results of operations and financial condition.

Growth and Expansion Activities. Our future revenue growth will depend on our ability to maintain our existing revenue base while expanding and increasing utilization at our existing and developing Prime Campus locations. Our existing Prime Campus locations currently encompass 12 colocation facilities with an aggregate of up to 4.7 million GSF of space and up to 490 MW of power. As of December 31, 2020, the utilization rates at these Prime Campuses, based on currently available cabinets, were approximately 89%, 93%, 96%, and 38% at The Core Campus, The Citadel Campus, The Pyramid Campus, and The Keep Campus, respectively. Additionally, each of our existing Primes has room for further expansion. We may be unable to attract customers to our data centers or retain them for a number of reasons, including if we fail to provide competitive pricing terms, provide space that is deemed to be inferior to that of our competitors or are unable to provide services that our existing and potential customers desire.

Cost of Power. We are a large consumer of power, and the cost of energy accounts for a significant portion of our cost of revenue. We require power supply to provide many services we offer, such as powering and cooling our customers' IT equipment and operating critical data center plant and equipment infrastructure. Pursuant to our service agreements, we provide our customers with a committed level of power supply availability and we have committed to operating our data centers with 100% clean and renewable energy. Most of our customer agreements provide the ability to increase our prices in response to an increase in the cost of energy; however, our gross profit can be adversely affected by increases in our cost of energy if we choose not to pass along the increases to our customers. For instance, historically, we intentionally have not generally passed along the seasonal increase in energy costs during the summer months to the full extent permitted under our contracts in order to avoid seasonal adjustments to our customer pricing, and that practice has, therefore, resulted in a decrease in our gross profit in those periods. Nonetheless, as an unbundled purchaser of energy in Nevada, we are able to purchase power in the open market through long-term power contracts, which we believe reduces variability of energy costs. Additionally, our existing customers may not renew their contracts with us or may reduce the services purchased from us, or we may be unable to attract new customers, if we experience increased energy costs or limited availability of power resources, including clean and renewable energy. Our brand or reputation could be adversely affected if we are unable to operate our data centers with 100% clean and renewable energy.

Capital Expenditures. Our growth and expansion initiatives require significant capital. The costs of constructing, developing, operating and maintaining data centers, and growing our operations are substantial. While we strive to match the growth of our facilities to the demand for services, we still must spend significant amounts before we receive any revenue. If we are unable to generate sufficient capital to meet our anticipated capital requirements, our growth could slow and operations could be adversely affected. Our maintenance capital expenditures were $8.6 million for the year ended December 31, 2020.

Growth in Customers. Our results of operations could be significantly affected by the growth or reduction of our customer base. We have over 950 customers, including some of the world's largest technology and digital media companies, cloud, IT and software providers, financial institutions, and network and telecommunications providers. We believe we have significant opportunities to both grow penetration of our existing customers as well as attract new customers. Our ability to attract new customers depends on a number of factors, including our ability to offer high quality services at competitive prices and the capability of our marketing and sales team to attract new customers. Additionally, a significant portion of our revenue is highly dependent on our top 10 customers and the loss of these customers or any significant decrease in their business could adversely affect our results of operations.

Key Metrics and Non-GAAP Financial Measures

We monitor the following unaudited key metrics and financial measures, some of which are not calculated in accordance with GAAP to help us evaluate our business, identify trends affecting our business, formulate business plans and make strategic decisions.

	Years Ended December 31,		
	2020	2019	2018
	(dollars in thousands)		
Recurring revenue	$ 494,238	$ 446,966	$ 395,743
Capital expenditures	$ 347,040	$ 307,712	$ 275,524
Adjusted EBITDA	$ 268,329	$ 231,061	$ 201,700
Adjusted EBITDA margin	52.5 %	50.0 %	49.7 %

Recurring Revenue

We calculate recurring revenue as contractual revenue under signed contracts calculated in accordance with GAAP for the applicable period. Recurring revenue does not include any installation or other one-time revenue, which would be classified as non-recurring revenue. Management uses recurring revenue as a supplemental performance measure because it provides a useful measure of increases or decreases in contractual revenue from our customers and provides a baseline revenue measure on which to plan expenses.

The following table sets forth a reconciliation of recurring revenue to total revenue:

	Years Ended December 31,		
	2020	2019	2018
	(in thousands)		
Recurring revenue	$ 494,238	$ 446,966	$ 395,743
Non-recurring revenue	17,309	15,344	10,117
Revenue	$ 511,547	$ 462,310	$ 405,860

Capital Expenditures

We define capital expenditures as cash purchases of property and equipment during a particular period. We believe that capital expenditures is a useful metric because it provides information regarding the growth of our technology infrastructure platform and the potential to expand our services and add new customers.

Adjusted EBITDA and Adjusted EBITDA Margin

We define Adjusted EBITDA as net income adjusted for interest expense, interest income, income taxes, depreciation and amortization of property and equipment and for specific and defined supplemental adjustments to exclude (i) non-cash equity-based compensation expense; (ii) equity in net losses of investments; and (iii) certain other items that we believe are not indicative of our core operating performance. We define Adjusted EBITDA margin as Adjusted EBITDA divided by revenue.

Our Adjusted EBITDA and Adjusted EBITDA margin are not prepared in accordance with GAAP, and should not be considered in isolation of, or as an alternative to measures prepared in accordance with GAAP. We present Adjusted EBITDA and Adjusted EBITDA margin because we believe certain investors use them as measures of a company’s historical operating performance and its ability to service and incur debt and make capital expenditures. We believe that the inclusion of certain adjustments in presenting Adjusted EBITDA and Adjusted EBITDA margin is appropriate to provide additional information to investors because Adjusted EBITDA and Adjusted EBITDA margin exclude certain items that we believe are not indicative of our core operating performance and that are not excluded in the calculation of EBITDA. Adjusted EBITDA is also similar to the measures used under the debt covenants included in our credit facilities, except that the definition used in our credit facilities does not exclude certain cash gains or shareholder-related litigation expense. Accordingly, we believe that Adjusted EBITDA and Adjusted EBITDA margin provide useful information to investors and others in understanding and evaluating our operating results, enhancing the overall understanding of our past performance and future prospects, and allowing for greater transparency with respect to key financial metrics used by our management in its financial and operational decision-making.

Our non-GAAP financial measures have limitations as analytical tools and you should not consider them in isolation or as a substitute for an analysis of our results under GAAP. There are a number of limitations related to the use of these non-GAAP financial measures versus their nearest GAAP equivalents. Non-GAAP financial measures may not provide information directly comparable to measures provided by other companies in our industry, as those other companies may calculate their non-GAAP financial measures differently. In addition, the non-GAAP financial measures exclude certain recurring expenses that have been and will continue to be significant expenses of our business.

The following table sets forth a reconciliation of our net income to Adjusted EBITDA:

	Years Ended December 31,		
	2020	2019	2018
	(in thousands)		
Net income	$ 38,375	$ 31,542	$ 29,318
Interest expense	29,774	29,236	26,370
Interest income[(1)]	(156)	(704)	(2,383)
Income tax expense	4,530	2,713	1,943
Depreciation and amortization of property and equipment	142,738	119,945	106,666
Loss on disposal of property and equipment	362	586	1,206
Equity-based compensation	28,733	29,524	35,733
Shareholder-related litigation expense[(2)]	239	3,302	2,516
Loss on interest rate swaps	23,489	14,917	—
Loss on extinguishment of debt	245	—	—
Equity in net losses of investments	—	—	331
Adjusted EBITDA	$ 268,329	$ 231,061	$ 201,700

(1) Interest income is included in the “Other” line of other income (expense) in our consolidated statements of comprehensive income.
(2) Shareholder-related litigation expense is included in the “Selling, general and administrative expense” line in our consolidated statements of comprehensive income.

Components of Results of Operations

Revenue

During each of the years ended December 31, 2020, 2019, and 2018, we derived more than 95% of our revenue from recurring revenue streams, consisting primarily of (1) colocation, which includes the licensing and leasing of cabinet space and power and (2) connectivity services, which include cross-connects, broadband services and external connectivity. The remainder of our revenue is from non-recurring revenue, which primarily includes installation services related to a customer’s initial deployment. The majority of our revenue contracts are classified as licenses, with the exception of certain contracts that contain lease components. Based on the current growth stage of our business, we expect increases in revenue to be driven primarily by increases in volume, rather than changes in the prices we charge to our customers.

We recognize revenue when control of these goods and services is transferred to our customers in an amount that reflects the consideration we expect to be entitled to in exchange for those goods and services. Revenue from recurring revenue streams is generally billed monthly and recognized using a time-based measurement of progress as customers receive service benefits evenly throughout the term of the contract. Contracts with our customers generally have terms of three to five years. Non-recurring installation fees, although generally paid in a lump sum upon installation, are deferred and recognized ratably over the contract term, determined using a portfolio approach. Revenue is generally recognized on a gross basis as a principal versus on a net basis as an agent, largely because we are primarily responsible for fulfilling the contract, take title to services, and bear credit risk.

Cost of Revenue

Cost of revenue consists primarily of depreciation and amortization expense, expenses associated with the operations of our facilities, including electricity and other utility costs and repairs and maintenance, data center employees’ salaries and benefits, including equity-based compensation, connectivity costs, and rental payments related to our leased buildings and land used in data center operations. A substantial portion of our cost of revenue is fixed in nature and may not vary significantly from period to period, unless we expand our existing data centers or open new data centers. However, there are certain costs that are considered more variable in nature, including utilities and supplies that are directly related to growth in our existing and new customer base. The largest portion of our utility costs is fixed and a smaller portion is variable with market conditions.

Gross Profit and Gross Margin

Gross profit, or revenue less cost of revenue, and gross margin, or gross profit as a percentage of revenue, has been and will continue to be affected by various factors, including customer growth, the expansion of our existing data centers or opening of new data centers, and the cost of our utilities, specifically electricity. Our gross margin may fluctuate from period to period depending on the interplay of these factors.

Operating Expenses

Selling, General and Administrative Expense

Selling, general and administrative expense consists primarily of salaries and related expenses, including equity-based compensation, accounting, legal and other professional service fees, real estate and personal property taxes, rental payments related to our corporate office lease, marketing and selling expenses, including sponsorships, commissions paid to partners, travel, depreciation and amortization expense, insurance, and other facility and employee related costs. This expense classification may not be comparable to those of other companies. We expect to incur additional selling, general and administrative expenses as we continue to scale our operations to invest in sales and marketing initiatives to further increase our revenue and support our growth. We also expect to continue to incur general and administrative expenses as a result of operating as a public company, including expenses related to compliance with the rules and regulations of the SEC and those of the NYSE, additional expenses related to the loss of our emerging growth company status as of December 31, 2019, additional insurance expenses, investor relations activities, and other administrative and professional services. Further, we expect to continue to incur general and administrative expenses in the form of equity-based compensation as a result of the continued vesting of Common Unit awards granted to certain of our executives in 2017 and other equity awards. As a result, we expect that our selling, general and administrative expense will continue to increase in absolute dollars, but may fluctuate as a percentage of our revenue from period to period.

Other Income (Expense)

Interest Expense

Interest expense consists primarily of interest on our credit facilities and senior unsecured notes and amortization of debt issuance costs and original issue discount, net of amounts capitalized.

Loss on Interest Rate Swaps

Loss on interest rate swaps consists of changes in the fair value of interest rate swaps used to mitigate our exposure to interest rate risk, inclusive of periodic net settlement amounts.

Loss on Extinguishment of Debt

Loss on extinguishment of debt consists of losses resulting from certain lenders exiting our revolving credit facility in connection with amending our credit agreement.

Other

Other primarily consists of other items that have impacted our results of operations such as interest income on our cash equivalents and gains and losses resulting from other transactions.

Income Taxes

We are the sole manager of Switch, Ltd., which is treated as a partnership for U.S. federal and most applicable state and local income tax purposes. As a partnership, Switch, Ltd. is not subject to U.S. federal and certain state and local income taxes. Any taxable income or loss generated by Switch, Ltd. is passed through to, and included in the taxable income or loss of, its members, including us, on a pro rata basis. We are subject to U.S. federal income taxes, in addition to state and local income taxes with respect to our allocable share of any taxable income or loss generated by Switch, Ltd.

Noncontrolling Interest

As the sole manager of Switch, Ltd., we operate and control all of the business and affairs of Switch, Ltd. and its subsidiaries. Although we have a minority economic interest in Switch, Ltd., we have the sole voting interest in, and control the management of, Switch, Ltd. Accordingly, we consolidate the financial results of Switch, Ltd. and report a noncontrolling interest on our consolidated statements comprehensive income, representing the portion of net income or loss and comprehensive income or loss attributable to the noncontrolling interest. The weighted average ownership percentages during the period are used to calculate the net income or loss and other comprehensive income or loss attributable to Switch, Inc. and the noncontrolling interest.

Results of Operations

The following table sets forth our results of operations:

	Years Ended December 31,		
	2020	**2019**	**2018**
		(in thousands)	
Consolidated Statements of Income Data:			
Revenue	$ 511,547	$ 462,310	$ 405,860
Cost of revenue	279,475	242,679	224,413
Gross profit	232,072	219,631	181,447
Selling, general and administrative expense	136,659	142,704	126,768
Income from operations	95,413	76,927	54,679
Other income (expense):			
Interest expense, including amortization of debt issuance costs and original issue discount	(29,774)	(29,236)	(26,370)
Loss on interest rate swaps	(23,489)	(14,917)	—
Loss on extinguishment of debt	(245)	—	—
Equity in net losses of investments	—	—	(331)
Other	1,000	1,481	3,283
Total other expense	(52,508)	(42,672)	(23,418)
Income before income taxes	42,905	34,255	31,261
Income tax expense	(4,530)	(2,713)	(1,943)
Net income	38,375	31,542	29,318
Less: net income attributable to noncontrolling interest	22,836	22,625	25,266
Net income attributable to Switch, Inc.	$ 15,539	$ 8,917	$ 4,052

The following table sets forth the consolidated statements of income data presented as a percentage of revenue. Amounts may not sum due to rounding.

	Years Ended December 31,		
	2020	2019	2018
Consolidated Statements of Income Data:			
Revenue	100 %	100 %	100 %
Cost of revenue	55	52	55
Gross profit	45	48	45
Selling, general and administrative expense	27	31	31
Income from operations	19	17	13
Other income (expense):			
Interest expense, including amortization of debt issuance costs and original issue discount	(6)	(6)	(6)
Loss on interest rate swaps	(5)	(3)	—
Loss on extinguishment of debt	—	—	—
Equity in net losses of investments	—	—	—
Other	—	—	1
Total other expense	(10)	(9)	(6)
Income before income taxes	8	7	8
Income tax expense	(1)	(1)	—
Net income	8	7	7
Less: net income attributable to noncontrolling interest	4	5	6
Net income attributable to Switch, Inc.	3 %	2 %	1 %

Comparison of the Years Ended December 31, 2020 and 2019

Revenue

	Years Ended December 31,		Change	
	2020	2019	Amount	%
	(dollars in thousands)			
Colocation	$ 413,791	$ 370,682	$ 43,109	12 %
Connectivity	91,885	85,009	6,876	8 %
Other	5,871	6,619	(748)	(11)%
Revenue	$ 511,547	$ 462,310	$ 49,237	11 %

Revenue increased by $49.2 million, or 11%, for the year ended December 31, 2020, compared to the year ended December 31, 2019. The increase was primarily attributable to an increase of $43.1 million in colocation revenue. Of the overall increase, 12% was attributable to revenue from new customers initiating service after December 31, 2019, and the remaining 88% was attributable to increased revenue from existing customers.

Cost of Revenue and Gross Margin

	Years Ended December 31,		Change	
	2020	2019	Amount	%
	(dollars in thousands)			
Cost of revenue	$ 279,475	$ 242,679	$ 36,796	15 %
Gross margin	45.4 %	47.5 %		

Cost of revenue increased by $36.8 million, or 15%, for the year ended December 31, 2020, compared to the year ended December 31, 2019. The increase was primarily attributable to increases of $21.7 million in depreciation and amortization expense due to additional property and equipment being placed into service, $8.7 million in facilities costs due to increased utility rates, and $2.4 million in costs related to sales-type lease transactions. Accordingly, gross margin decreased by 210 basis points for the year ended December 31, 2020, compared to the year ended December 31, 2019.

Selling, General and Administrative Expense

	Years Ended December 31,		Change	
	2020	2019	Amount	%
	(dollars in thousands)			
Selling, general and administrative expense	$ 136,659	$ 142,704	$ (6,045)	(4)%

Selling, general and administrative expense decreased by $6.0 million, or 4%, for the year ended December 31, 2020, compared to the year ended December 31, 2019. The decrease was primarily attributable to a decrease of $7.7 million in accounting, legal, and other professional service fees, which was partially offset by an increase of $1.7 million in salaries and related employee expenses largely due to an increase in headcount.

Other Income (Expense)

	Years Ended December 31,		Change	
	2020	2019	Amount	%
	(dollars in thousands)			
Other income (expense):				
Interest expense	$ (29,774)	$ (29,236)	$ (538)	2 %
Loss on interest rate swaps	(23,489)	(14,917)	(8,572)	57 %
Loss on extinguishment of debt	(245)	—	(245)	NM
Other	1,000	1,481	(481)	(32)%
Total other expense	$ (52,508)	$ (42,672)	$ (9,836)	23 %

NM - Not meaningful

Interest Expense

Interest expense increased by $0.5 million, or 2%, for the year ended December 31, 2020, compared to the year ended December 31, 2019. The increase was primarily due to an increase in our weighted average debt outstanding during the year ended December 31, 2020, primarily from borrowings on our revolving credit facility and the issuance of our senior unsecured notes, a decrease of $1.5 million in capitalized interest, and an increase of $1.0 million in interest expense from our finance leases, partially offset by a decrease in our weighted average interest rate from 4.45% during the year ended December 31, 2019 to 2.97% during the year ended December 31, 2020.

Loss on Interest Rate Swaps

Loss on interest rate swaps increased by $8.6 million, or 57%, for the year ended December 31, 2020, compared to the year ended December 31, 2019. The increase was driven by changes in the fair value of interest rate swaps largely from the fluctuation in market interest rates.

Income Tax Expense

	Years Ended December 31,		Change	
	2020	2019	Amount	%
	(dollars in thousands)			
Income tax expense	$ (4,530)	$ (2,713)	$ (1,817)	67 %

Income tax expense was $4.5 million for the year ended December 31, 2020, compared to $2.7 million for the year ended December 31, 2019. The increase in income tax expense was driven by increases in our ownership of Switch, Ltd., and in income before income taxes of Switch, Ltd. and, therefore, in our allocable share of such taxable income.

Net Income Attributable to Noncontrolling Interest

	Years Ended December 31,		Change	
	2020	2019	Amount	%
	(dollars in thousands)			
Net income attributable to noncontrolling interest	$ 22,836	$ 22,625	$ 211	1 %

Net income attributable to noncontrolling interest was $22.8 million for the year ended December 31, 2020, compared to $22.6 million for the year ended December 31, 2019. The change was the result of an increase in net income during the year ended December 31, 2020, partially offset by a decrease in ownership by noncontrolling interest holders.

For a discussion related to the results of operations and changes in financial condition for the years ended December 31, 2019 and 2018, refer to Part II, Item 7 in our Annual Report on Form 10-K for the year ended December 31, 2019, which was filed with the SEC on March 2, 2020.

Liquidity and Capital Resources

Switch, Inc. is a holding company and has no material assets other than its ownership of Common Units. As such, we have no independent means of generating revenue or cash flow, and our ability to pay our taxes or declare and pay dividends in the future, if any, will be dependent upon the financial results and cash flows of Switch, Ltd. and its subsidiaries and any distributions we receive from Switch, Ltd. The terms of the amended and restated credit agreement and the indenture governing our senior unsecured notes limit the ability of Switch, Ltd., among other things, to incur additional debt, incur additional liens, encumbrances or contingent liabilities, and pay distributions or make certain other restricted payments.

As of December 31, 2020, we had $90.7 million in cash and cash equivalents. As of December 31, 2020, our total indebtedness was approximately $1.06 billion (excluding debt issuance costs and original issue discount) consisting of (i) $600.0 million principal from our senior unsecured notes, (ii) $400.0 million principal from our term loan facility, and (iii) $57.5 million from our finance lease liabilities. As of December 31, 2020, we had access to $500.0 million in additional liquidity from our revolving credit facility. For the year ending December 31, 2021, we expect to incur $330 million to $370 million in capital expenditures for development and construction projects related to our expansion (excluding acquisitions of land); however, the exact amount will depend on a number of factors. We believe we have sufficient cash and access to liquidity, coupled with anticipated cash generated from operating activities, to satisfy our anticipated cash needs for working capital and capital expenditures for at least the next 12 months, including completion of our development projects. We also believe that our financial resources will allow us to manage the anticipated impact of COVID-19 on our business operations for the foreseeable future, which could include reductions in revenue and delays in payments from customers and partners. The challenges posed by COVID-19 on our business are expected to evolve. Consequently, we will continue to evaluate our financial position in light of future developments, particularly those relating to COVID-19.

In addition, we are obligated to make payments under the TRA. Although the actual timing and amount of any payments we make under the TRA will vary, we expect those payments will be significant. Any payments we make under the TRA will generally reduce the amount of overall cash flow that might have otherwise been available to us or to Switch, Ltd. and, to the extent we are unable to make payments under the TRA for any reason, the unpaid amounts generally will be deferred and will accrue interest until paid by us.

Cash Flows

The following table summarizes our cash flows:

	Years Ended December 31,		
	2020	2019	2018
	(in thousands)		
Net cash provided by operating activities	$ 236,240	$ 209,413	$ 178,330
Net cash used in investing activities	(349,064)	(309,382)	(278,095)
Net cash provided by (used in) financing activities	178,822	43,130	(83,341)
Net increase (decrease) in cash and cash equivalents	$ 65,998	$ (56,839)	$ (183,106)

Cash Flows from Operating Activities

Cash from operating activities is primarily generated from operating income from our colocation and connectivity services.

Net cash provided by operating activities for the year ended December 31, 2020 was $236.2 million, compared to $209.4 million for the year ended December 31, 2019. The increase of $26.8 million was primarily due to increased operations in our expanded data center facilities and changes in our working capital accounts.

Cash Flows from Investing Activities

During the year ended December 31, 2020, net cash used in investing activities was $349.1 million, primarily consisting of capital expenditures of $347.0 million related to the expansion of our data center facilities.

During the year ended December 31, 2019, net cash used in investing activities was $309.4 million, primarily consisting of capital expenditures of $307.7 million related to the expansion of our data center facilities.

Cash Flows from Financing Activities

During the year ended December 31, 2020, net cash provided by financing activities was $178.8 million, primarily consisting of $710.0 million in proceeds from the issuance of our senior unsecured notes and borrowings on our revolving credit facility, partially offset by $465.2 million primarily for the repayment of borrowings outstanding under our credit facilities, $21.1 million in distributions paid to noncontrolling interest, $20.0 million for the repurchase of Common Units, $17.3 million in dividends paid, and $7.1 million for the payment of debt issuance costs and original issue discount related to our senior unsecured notes and credit agreement amendment.

During the year ended December 31, 2019, net cash provided by financing activities was $43.1 million, primarily consisting of $170.0 million in proceeds from borrowings on our revolving credit facility, partially offset by $91.0 million for the repurchase of Common Units, $19.4 million in distributions paid to noncontrolling interest, $9.1 million in dividends paid, and $6.9 million in repayments of borrowings outstanding under our term loan and finance lease liabilities.

Outstanding Indebtedness

Credit Agreement

On June 27, 2017, we entered into an amended and restated credit agreement with Wells Fargo Bank, National Association, as administrative agent, and certain other lenders, consisting of a $600.0 million term loan facility, maturing on June 27, 2024, and a $500.0 million revolving credit facility, maturing on June 27, 2022. On September 17, 2020, we entered into a second amendment to the credit agreement ("Amended Credit Agreement") to, among other things, extend the maturity of our revolving credit facility to June 27, 2023, modify the ratio used for the financial covenant and certain basket availability tests, and refresh or increase certain baskets for restricted payments, investments, and junior debt payments. In connection with this amendment, certain lenders exited our revolving credit facility and, as a result of the issuance of our notes described below, a partial repayment was applied to our term loan facility to reduce its principal amount to $400.0 million, which is due upon maturity.

As of December 31, 2020, we had $500.0 million of availability under the revolving credit facility and $400.0 million outstanding under the term loan facility (excluding debt issuance costs) effectively fixed at 4.73% pursuant to interest rate swap agreements entered into in January and February 2019.

The Amended Credit Agreement contains affirmative and negative covenants customary for such financings, including, but not limited to, limitations, subject to specified exceptions and baskets, on incurring additional debt, incurring additional liens, encumbrances or contingent liabilities, making investments in other persons or property, selling or disposing of our assets, merging with or acquiring other companies, liquidating or dissolving ourselves or any of the subsidiary guarantors, engaging in any business that is not otherwise a related line of business, engaging in certain transactions with affiliates, paying dividends or making certain other restricted payments, and making loans, advances or guarantees. The terms of the Amended Credit Agreement also require compliance with the consolidated secured leverage ratio (as defined in the Amended Credit Agreement) of 4.00 to 1.00 for each fiscal quarter. We were in compliance with this and our other covenants under the Amended Credit Agreement as of December 31, 2020.

Senior Unsecured Notes Due 2028

On September 17, 2020, we issued $600.0 million aggregate principal amount of our 3.75% senior unsecured notes due 2028. The notes bear interest at the rate of 3.75% per annum and mature on September 15, 2028. Interest on the notes is payable semi-annually in cash in arrears on March 15 and September 15 of each year, beginning on March 15, 2021.

The indenture to the notes contain covenants that, subject to exceptions and qualifications, among other things, limit our ability to incur additional indebtedness and guarantee indebtedness, pay dividends or make other distributions or repurchase or redeem our capital stock, prepay, redeem or repurchase certain indebtedness, issue certain preferred stock or similar equity securities, make loans and investments, dispose of assets, incur liens, enter into transactions with affiliates, enter into agreements restricting our ability to pay dividends, and consolidate, merge or sell all or substantially all of our assets. We were in compliance with all our covenants under the indenture to the notes as of December 31, 2020.

See Note 6 "Long-Term Debt" to our consolidated financial statements for more information.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements for any of the periods presented.

Contractual Obligations

The following table summarizes our contractual obligations as of December 31, 2020:

	Payments Due by Period				
	Less than 1 Year	1 to 3 Years	3 to 5 Years	More Than 5 Years	Total
			(in thousands)		
Long-term debt, principal[1]	$ —	$ —	$ 400,000	$ 600,000	$ 1,000,000
Long-term debt, interest[2]	43,439	85,878	54,469	60,938	244,724
Finance lease liabilities[3]	4,125	8,932	10,251	134,522	157,830
Operating lease liabilities[4]	5,335	6,899	5,070	51,083	68,387
Other contractual commitments[5]	70,888	48,088	74,739	760,578	954,293
Total	$ 123,787	$ 149,797	$ 544,529	$ 1,607,121	$ 2,425,234

(1) Represents principal payments only. We will pay interest on outstanding indebtedness based on the rates and terms summarized in Note 6 "Long-Term Debt" to our consolidated financial statements.
(2) Represents interest expected to be incurred on our long-term debt based on amounts outstanding and interest rates as of December 31, 2020, including the impact of interest rate swaps, as summarized in Note 6 "Long-Term Debt" to our consolidated financial statements. Actual rates will vary.
(3) Represents principal and imputed interest. See Note 7 "Leases" to our consolidated financial statements.
(4) Represents minimum operating lease payments, excluding potential lease renewals. See Note 7 "Leases" to our consolidated financial statements.
(5) Represents primarily commitments for leases not yet commenced, construction-related purchase orders, and power purchase and portfolio energy credit agreements for our data centers. See Note 7 "Leases" and Note 9 "Commitments and Contingencies" to our consolidated financial statements.

As of December 31, 2020, we recorded a liability under the TRA of $278.9 million. No amounts are included in the table above as we are unable to reasonably estimate the timing of the payments of the liability; however, no amounts are expected to be paid within the next 12 months.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with GAAP. The preparation of these consolidated financial statements requires our management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, costs and expenses and related disclosures. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these judgments and estimates under different assumptions or conditions and any such differences may be material. We believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

Revenue Recognition

We derive more than 95% of our revenue from recurring revenue streams, consisting primarily of (1) colocation, which includes the licensing and leasing of cabinet space and power and (2) connectivity services, which includes cross-connects, broadband services, and external connectivity. The remainder of our revenue is from non-recurring revenue, which primarily includes installation services related to a customer's initial deployment. The majority of our revenue contracts are classified as licenses and accounted for in accordance with Accounting Standards

Codification ("ASC") 606, Revenue from Contracts with Customers with the exception of certain contracts that contain lease components and are accounted for in accordance with ASC 842, Leases.

We recognize revenue when control of these goods and services is transferred to our customers in an amount that reflects the consideration we expect to be entitled to in exchange for those goods and services. Revenue from recurring revenue streams is generally billed monthly and recognized using a time-based measurement of progress as customers receive service benefits evenly throughout the term of the contract, which is generally three to five years. Non-recurring installation fees, although generally paid in a lump sum upon installation, are deferred and recognized ratably over the contract term, determined using a portfolio approach. Non-recurring installation fees are not assessed as performance obligations as they are determined to be immaterial in the context of the contract with the customer. Revenue is generally recognized on a gross basis as a principal versus on a net basis as an agent, largely because we are primarily responsible for fulfilling the contract, take title to services, bear credit risk, and have discretion in establishing the price when selling to the customer.

For contracts with customers that contain multiple performance obligations, we account for individual performance obligations separately if they are distinct or as a series of distinct obligations if the individual performance obligations meet the series criteria. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. The transaction price of a contract is allocated to each distinct performance obligation on a relative standalone selling price basis. The standalone selling price is determined by maximizing observable inputs such as overall pricing objectives, customer credit history, and other factors. Other judgments include determining if any variable consideration should be included in the total contract value of the arrangement, such as price increases. Any variable consideration included in the total contract value of the arrangement is allocated to each distinct obligation, or series of distinct obligations, in an amount that depicts the consideration to which we expect to be entitled in exchange for transferring the underlying goods or services to the customer. We have also made the accounting policy election to exclude taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction and collected by us from a customer from our measurement of the transaction price.

Occasionally, we enter into contracts with customers for data center space and office space, which contain lease components. Our leases with customers are generally classified as operating leases and lease payments are recognized on a straight-line basis over the lease term. Lease revenue related to data center space is included within colocation revenue, while lease revenue related to office space is included within other revenue.

Contract Balances

We generally invoice customers in monthly installments payable in advance. The difference between the timing of revenue recognition, and the timing of billings and cash collections results in the recognition of accounts receivable, contract assets, and deferred revenue (contract liabilities) on our consolidated balance sheets. Receivables are recorded at invoice amounts, net of allowance for doubtful accounts, and are recognized in the period when we have transferred goods or provided services to our customers, and when our right to consideration for that transfer is unconditional. Payment terms and conditions vary by contract type, although terms generally include a requirement of payment within 15 to 30 days of the invoice date. In instances where the timing of revenue recognition differs from the timing of invoicing, our contracts generally do not include a significant financing component. We assess collectability based on a number of factors, including past transaction history with the customer and the creditworthiness of the customer.

A contract asset exists when we have transferred products or provided services to our customers, but customer payment is contingent upon future satisfaction of a performance obligation. Certain contracts include terms related to price arrangements and allocations of consideration to multiple performance obligations recognized over differing periods of time. We generally recognize revenue ratably over the contract term, which could potentially give rise to contract assets during certain periods of the contract term.

Deferred revenue represents amounts that are recognized when we have an unconditional right to a payment, and it has been either billed to, or collected from, customers prior to transferring control of the underlying good or service to the customer.

Contract Costs

Contract costs include our incremental direct costs of either obtaining or fulfilling a contract, which primarily consist of sales commissions and bonuses. Contract costs are deferred and amortized on a straight-line basis over the estimated period of benefit. We have elected to apply the practical expedient to expense contract costs when incurred if the amortization period is one year or less.

Incremental Borrowing Rate

We recognize right-of-use lease liabilities for all leases other than those with a term of 12 months or less as we have elected to apply the short-term recognition exemption. These lease liabilities represent our obligation to make lease payments arising from the lease and are measured based on the present value of fixed lease payments over the lease term.

As our lessee leases do not provide a readily determinable implicit rate, we use our incremental borrowing rate estimated based on information available at the commencement date in determining the present value of lease payments. When determining the incremental borrowing rate, we assess multiple variables such as lease term, collateral, economic conditions, and credit-worthiness. We estimate our incremental borrowing rate using a benchmark senior unsecured yield curve for debt instruments adjusted for our credit quality, market conditions, tenor of lease contracts, and collateral.

Equity-Based Compensation

Equity-based compensation includes stock options, restricted stock, and restricted stock units awarded to employees in periods subsequent to our IPO and incentive units awarded to employees and members in periods prior to our IPO. We measure equity-based compensation expense at the grant date based on the fair value of the award and recognize the expense over the requisite service period, which is generally the vesting period. We use the straight-line method to recognize compensation expense for equity awards with service conditions and the accelerated attribution method for equity awards with performance conditions.

We estimate the fair value of stock options using the Black-Scholes option-pricing model, which utilizes various inputs and assumptions, some of which are subjective. Key inputs we use in applying the Black-Scholes option-pricing model are the stock price on the date of grant, expected stock price volatility, expected term of the award, risk-free interest rate, and expected dividend yield. We estimate expected volatility by using a weighted average of the historical volatility of our common stock and the historical volatilities of a peer group comprised of publicly-traded companies in the same industry. We estimate the expected term of stock option awards using the “simplified” method, whereby, the expected term equals the arithmetic average of the vesting term and the original contractual term of the stock option. The risk-free interest rate is based on United States Treasury zero-coupon issues with remaining terms similar to the expected term of the stock option awards at the time of grant. The expected dividend yield is based on our estimate of annual dividends expected to be paid at the time of grant. Our restricted stock and restricted stock unit awards are measured based on the fair market value of the underlying common stock on the date of grant.

Equity awards prior to our IPO generally had only a service condition and certain of these awards also had a performance condition. The service-based condition of those equity awards was satisfied over a period of up to five years. We estimated the fair value of these equity-based awards using the Black-Scholes option pricing model, which requires the input of highly complex and subjective variables.

Our assumptions were as follows:

- ***Expected volatility.*** As we had not been a public company and did not have a trading history for our incentive units, the expected price volatility of the incentive units was estimated by analyzing the volatility of companies in the same industry and selecting volatility within the range.
- ***Risk-free interest rate.*** The risk-free interest rate was based on United States Treasury zero-coupon issues with remaining terms similar to the expected term of the equity awards.
- ***Expected term.*** The expected term of the equity award was calculated by analyzing the historical exercise data and obtaining the weighted average of the holding period for the equity awards.
- ***Expected dividend yield.*** The expected dividend rate was determined at the grant date for each equity award. Because the underlying incentive units were not publicly traded, the fair value of the incentive units was estimated on each grant date by a board of managers of Switch, Ltd. for historical periods prior to our IPO. In order to determine the fair value of the incentive units, the board of managers considered, among other things, contemporaneous valuations of the incentive units prepared by an unrelated third-party valuation firm in accordance with the guidance provided by the American Institute of Certified Public Accountants Practice Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation. The board of managers exercised reasonable judgment and considered several objective and subjective factors to determine the best estimate of the fair value of our incentive units including:
    - our historical and expected operating and financial performance;
    - current business conditions;

- our stage of development and business strategy;
- the likelihood of achieving a liquidity event, such as an initial public offering or sale of our company given prevailing market conditions and the nature and history of our business;
- market multiples of comparable companies in our industry;
- the lack of an active public market for our incentive units;
- the market performance of comparable publicly traded peer companies; and
- macroeconomic conditions.

In determining the fair value of the incentive units, we estimated the enterprise value of our business primarily using a weighted average approach of a combination of the following three methods: (i) publicly traded data center company multiples; (ii) data center precedent transaction multiples; and (iii) the discounted cash flow method based on our five-year forecast. The weighting of these three methods varied over time. Application of these approaches involved the use of estimates, judgment and assumptions that were highly complex and subjective, such as those regarding our expected future revenue, expenses and future cash flows, discount rates, market multiples, the selection of comparable companies and the probability of possible future events.

Income Taxes

We account for income taxes pursuant to the asset and liability method, which requires the recognition of deferred income tax assets and liabilities related to the expected future tax consequences arising from temporary differences between the carrying amounts and tax bases of assets and liabilities based on enacted statutory tax rates applicable to the periods in which the temporary differences are expected to reverse. Any effects of changes in income tax rates or laws are included in income tax expense in the period of enactment. We reduce the carrying amounts of deferred tax assets by a valuation allowance if, based on the evidence available, it is more likely than not that such assets will not be realized. In making the assessment under the more likely than not standard, appropriate consideration must be given to all positive and negative evidence related to the realization of the deferred tax assets. The assessment considers, among other matters, the nature, frequency and severity of current and cumulative losses, forecasts of future profitability, the duration of statutory carry forward periods by jurisdiction, our experience with loss carryforwards not expiring unutilized and all tax planning alternatives that may be available. A valuation allowance is recognized if under applicable accounting standards we determine it is more likely than not that our deferred tax assets would not be realized.

Tax Receivable Agreement

In connection with our IPO, we entered into a TRA with Switch, Ltd. and the Members. In the event that such parties exchange any or all of their Common Units for Class A common stock, we are contractually committed to pay such holders 85% of the tax benefits realized by us as a result of such transactions. The timing and amount of aggregate payments due under the TRA are contingent upon the taxable income we generate each year and the tax rate then applicable. We recognize obligations under the TRA after concluding that it is probable that we would have sufficient future taxable income to utilize the related tax benefits. The projection of future taxable income involves judgment and actual taxable income may differ from our estimates, which could impact the timing of payments under the TRA. If we determine in the future that we will not be able to fully utilize all or part of the related tax benefits, we would reduce the portion of the liability related to the tax benefits not expected to be utilized and record the offsetting benefit on our consolidated statements of comprehensive income. We calculate the liability under the TRA using a complex TRA model, which includes a significant assumption related to the fair market value of property and equipment.

Recent Accounting Pronouncements

See Note 2 "Summary of Significant Accounting Policies—Recent Accounting Pronouncements" to our consolidated financial statements for more information.

Cautionary Note Regarding Forward-Looking Statements

This Form 10-K contains forward-looking statements within the meaning of the federal securities laws, which statements involve substantial risks and uncertainties. Forward-looking statements generally relate to future events or our future financial or operating performance. In some cases, you can identify forward-looking statements because they contain word such as "may," "will," "should," "expects," "plans," "anticipates," "could," "intends," "target," "projects," "contemplates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of these words or other similar terms or expressions that concern our expectations, strategy, plans or intentions. Forward-looking statements contained in this Form 10-K include, but are not limited to, statements about:

- our goals and strategies;
- our expansion plans, including timing for such plans;
- our future business development, financial condition and results of operations;
- the expected growth of the data center market;
- our belief regarding the anticipated impact of COVID-19 on our business operations;
- our belief that our financial resources will allow us to manage the anticipated impact of COVID-19;
- our beliefs regarding our design technology and its advantages to our business and financial results;
- our beliefs regarding opportunities that exist in the data center market due to current industry limitations;
- our expectations regarding opportunities to grow penetration of existing customers and attract new customers;
- our beliefs regarding our competitive strengths and the value of our brand;
- our expectations regarding our revenue streams and drivers and types of future revenue;
- our expectations regarding our future expenses, including anticipated increases;
- our expectations regarding demand for, and market acceptance of, our services, including any new services;
- our expectations regarding our customer growth rate;
- our beliefs regarding the sufficiency of our cash and access to liquidity, and cash generated from operating activities, to satisfy our working capital and capital expenditures for at least the next 12 months;
- our intentions regarding sources of financing for our operations and capital expenditures;
- the network effects associated with our business;
- our plans to further invest in and grow our business, and our ability to effectively manage our growth and associated investments;
- our expectations regarding construction projects and the estimated timelines, additional floorspace, and renewable power available to such data centers;
- our ability to timely and effectively scale and adapt our existing technology;
- our ability to successfully enter new markets;
- our expectations to enter into joint ventures, strategic collaborations and other similar arrangements;
- our beliefs regarding our ability to achieve reduced variability of power costs as an unbundled purchaser of energy;
- our beliefs that we have the necessary permits and approvals to operate our business and that our properties are in substantial compliance with applicable laws;
- our ability to maintain, protect and enhance our intellectual property and not infringe upon others' intellectual property;
- our beliefs regarding the adequacy of our insurance coverage;
- our beliefs regarding the merits of pending litigation;
- our beliefs regarding the effectiveness of efforts to improve our internal control over financial reporting;
- our plans regarding our Common Unit repurchase program;
- our expectations regarding payment of dividends;
- our expectations regarding payments under the TRA, contingent upon our taxable income and the applicable tax rate; and
- our expectations regarding the impact of the provisions of the Coronavirus Aid, Relief, and Economic Security Act.

We qualify all of our forward-looking statements by these cautionary statements. The forward-looking statements in this Form 10-K are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you should not rely on these forward-looking statements as predictions of future events. Such risks and uncertainties include, among others, those discussed in "Item 1A—Risk Factors" in Part I and throughout "Item 7—Management's Discussion and Analysis of Financial Condition and Results" in Part II of this Form 10-K.

In addition, you should consult other disclosures made by us (such as in our other filings with the SEC or in company press releases) for other factors that may cause actual results to differ materially from those projected by us.

Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

We are exposed to financial market risks, primarily in interest rates related to our debt obligations.

Interest Rate Risk

Our primary exposure to market risk is interest rate risk associated with our long-term debt. We evaluate our exposure to market risk by monitoring interest rates in the marketplace. As of December 31, 2020, our only borrowings subject to variable interest rates are under our credit agreement and bear interest at a margin above LIBOR or base rate (each as defined in the amended and restated credit agreement) as selected by us. In January and February 2019, we entered into four interest rate swap agreements; whereby, we pay a weighted average fixed interest rate (excluding the applicable interest margin) of 2.48% on notional amounts corresponding to borrowings of $400.0 million in exchange for receipts on the same notional amount at a variable interest rate based on the applicable LIBOR at the time of payment. The interest rate swap agreements mature in June 2024. As of December 31, 2020, we had $400.0 million of borrowings outstanding under our credit agreement, all of which were effectively hedged by our interest rate swap agreements, thereby resulting in no interest rate risk exposure.

Item 8. Financial Statements and Supplementary Data.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Switch, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Switch, Inc. and its subsidiaries (the “Company”) as of December 31, 2020 and 2019, and the related consolidated statements of comprehensive income, of stockholders’ equity and of cash flows for each of the three years in the period ended December 31, 2020, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Changes in Accounting Principles

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for leases and the manner in which it accounts for revenues from contracts with customers in 2019.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Annual Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Tax Receivable Agreement

As described in Notes 2 and 10 to the consolidated financial statements, the Company has recorded a liability under the tax receivable agreement ("TRA") of $278.9 million as of December 31, 2020. In connection with its initial public offering, the Company entered into a TRA with Switch, Ltd. and the Members (the "Members" as defined by management). Switch, Ltd. operates as a partnership for federal, state, and local tax reporting. In the event that such parties exchange any or all of their Common Units for Class A common stock, the TRA requires the Company to make payments to such holders for 85% of the tax benefits realized, or in some cases deemed to be realized, by the Company by such exchange as a result of (i) increases in the Company's tax basis of its ownership interest in the net assets of Switch, Ltd. resulting from any redemptions or exchanges of noncontrolling interest, (ii) tax basis increases attributable to payments made under the TRA, and (iii) deductions attributable to imputed interest pursuant to the TRA. As disclosed by management, management recognizes obligations under the TRA after concluding that it is probable that it would have sufficient future taxable income to utilize the related tax benefits. The projection of future taxable income involves judgment and actual taxable income may differ from estimates, which could impact the timing of payments under the TRA. Management calculates the liability under the TRA using a complex TRA model, which includes a significant assumption related to the fair market value of property and equipment.

The principal considerations for our determination that performing procedures relating to the tax receivable agreement is a critical audit matter are (i) the significant judgment by management when determining the TRA liability; (ii) a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating audit evidence relating to the TRA liability and the significant assumption related to the fair market value of property and equipment; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls over the calculation of the TRA liability, including the significant assumption related to the fair market value of property and equipment. These procedures also included, among others (i) the involvement of professionals with specialized skill and knowledge to assist in developing an independent estimate of the TRA liability and (ii) comparing the independent estimate to management's estimate to evaluate the reasonableness of management's estimate. Developing the independent estimate involved testing the completeness and accuracy of the underlying data used in the TRA model and the use of professionals with specialized skill and knowledge to assist in evaluating the significant assumption used by management related to the fair market value of property and equipment. Evaluating the reasonableness of the significant assumption related to the fair market value of property and equipment involved (i) testing the completeness and accuracy of changes to the cost basis of property and equipment throughout the year; (ii) assessing the appropriateness of the method used to estimate the fair market value of property and equipment; and (iii) testing management's calculation of the fair market value of property and equipment on a test basis.

/s/ PricewaterhouseCoopers LLP

Las Vegas, Nevada
March 1, 2021

We have served as the Company's auditor since 2013.

Switch, Inc.
Consolidated Balance Sheets
(in thousands, except per share data)

	December 31, 2020	December 31, 2019
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 90,719	$ 24,721
Accounts receivable, net of allowance for credit losses of $792 and $309, respectively	21,723	23,365
Prepaid expenses	8,171	7,137
Other current assets, net of allowance for credit losses of $0	2,235	3,817
Total current assets	122,848	59,040
Property and equipment, net	1,737,415	1,551,117
Long-term deposit	2,626	3,429
Deferred income taxes	203,201	114,372
Other assets, net of allowance for credit losses of $87 and $0, respectively	48,366	45,785
TOTAL ASSETS	$ 2,114,456	$ 1,773,743
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Long-term debt, current portion	$ —	$ 6,000
Accounts payable	14,588	19,477
Accrued salaries and benefits	4,884	5,828
Accrued interest	7,132	467
Accrued expenses and other	9,686	10,799
Accrued construction payables	27,162	37,269
Deferred revenue, current portion	14,870	14,991
Customer deposits	12,348	10,830
Interest rate swap liability, current portion	9,418	3,464
Operating lease liability, current portion	3,512	4,805
Total current liabilities	103,600	113,930
Long-term debt, net	991,213	745,372
Operating lease liability	25,536	26,142
Finance lease liability	57,516	57,614
Deferred revenue	23,862	27,852
Liabilities under tax receivable agreement	278,865	162,076
Other long-term liabilities	22,897	13,112
TOTAL LIABILITIES	1,503,489	1,146,098
Commitments and contingencies (Note 7 and Note 9)		
STOCKHOLDERS' EQUITY:		
Preferred stock, $0.001 par value per share, 10,000 shares authorized, none issued and outstanding	—	—
Class A common stock, $0.001 par value per share, 750,000 shares authorized, 119,009 and 89,768 shares issued and outstanding, respectively	119	90
Class B common stock, $0.001 par value per share, 300,000 shares authorized, 121,640 and 151,047 shares issued and outstanding, respectively	122	151
Class C common stock, $0.001 par value per share, 75,000 shares authorized, none issued and outstanding	—	—
Additional paid in capital	266,129	204,711
Retained earnings	9	2,420
Accumulated other comprehensive income	79	79
Total Switch, Inc. stockholders' equity	266,458	207,451
Noncontrolling interest	344,509	420,194
TOTAL STOCKHOLDERS' EQUITY	610,967	627,645
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 2,114,456	$ 1,773,743

The accompanying notes are an integral part of these consolidated financial statements.

Switch, Inc.
Consolidated Statements of Comprehensive Income
(in thousands, except per share data)

	Years Ended December 31, 2020	2019	2018
Revenue	$ 511,547	$ 462,310	$ 405,860
Cost of revenue	279,475	242,679	224,413
Gross profit	232,072	219,631	181,447
Selling, general and administrative expense	136,659	142,704	126,768
Income from operations	95,413	76,927	54,679
Other income (expense):			
Interest expense, including $1,840, $1,636, and $1,636, respectively, in amortization of debt issuance costs and original issue discount	(29,774)	(29,236)	(26,370)
Loss on interest rate swaps	(23,489)	(14,917)	—
Loss on extinguishment of debt	(245)	—	—
Equity in net losses of investments	—	—	(331)
Other	1,000	1,481	3,283
Total other expense	(52,508)	(42,672)	(23,418)
Income before income taxes	42,905	34,255	31,261
Income tax expense	(4,530)	(2,713)	(1,943)
Net income	38,375	31,542	29,318
Less: net income attributable to noncontrolling interest	22,836	22,625	25,266
Net income attributable to Switch, Inc.	$ 15,539	$ 8,917	$ 4,052
Net income per share (Note 14):			
Basic	$ 0.15	$ 0.12	$ 0.09
Diluted	$ 0.14	$ 0.11	$ 0.09
Weighted average shares used in computing net income per share (Note 14):			
Basic	105,822	76,501	45,682
Diluted	243,501	246,329	45,753
Other comprehensive income:			
Foreign currency translation adjustment, net of tax of $0	—	—	331
Comprehensive income	38,375	31,542	29,649
Less: comprehensive income attributable to noncontrolling interest	22,836	22,625	25,549
Comprehensive income attributable to Switch, Inc.	$ 15,539	$ 8,917	$ 4,100

The accompanying notes are an integral part of these consolidated financial statements.

Switch, Inc.
Consolidated Statements of Stockholders' Equity
(in thousands)

	Switch, Inc. Stockholders' Equity										
	Class A Common Stock		Class B Common Stock		Class C Common Stock						
	Shares	Amount	Shares	Amount	Shares	Amount	Additional Paid in Capital	Retained Earnings	Accumulated Other Comprehensive Income	Noncontrolling Interest	Total Stockholders' Equity
Balance—December 31, 2017	35,938	$ 36	173,624	$ 174	42,945	$ 43	$ 107,008	$ 1,602	$ 31	$ 633,239	$ 742,133
Net income	—	—	—	—	—	—	—	4,052	—	25,266	29,318
Equity-based compensation expense	—	—	—	—	—	—	13,057	—	—	22,676	35,733
Issuance of Class A common stock upon settlement of restricted stock units, net of shares withheld for tax	131	—	—	—	—	—	(1,232)	—	—	—	(1,232)
Issuance of restricted stock awards	61	—	—	—	—	—	—	—	—	—	—
Dividends declared ($0.059 per share)	—	—	—	—	—	—	—	(2,961)	—	—	(2,961)
Distributions to noncontrolling interest	—	—	—	—	—	—	—	—	—	(11,617)	(11,617)
Exchanges of noncontrolling interest for Class A common stock	19,088	19	(19,088)	(19)	—	—	53,403	—	—	(53,403)	—
Repurchase of common units and cancellation of Class B common stock	—	—	(6,055)	(6)	—	—	(9,085)	—	—	(51,553)	(60,644)
Recognition of tax receivable agreement liability resulting from exchanges of noncontrolling interest for Class A common stock	—	—	—	—	—	—	(52,535)	—	—	—	(52,535)
Net deferred tax asset resulting from changes in outside basis difference on investment in Switch, Ltd.	—	—	—	—	—	—	29,512	—	—	—	29,512
Settlement of unit option loans	—	—	—	—	—	—	63	—	—	251	314
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	48	283	331
Balance—December 31, 2018	55,218	$ 55	148,481	$ 149	42,945	$ 43	$ 140,191	$ 2,693	$ 79	$ 565,142	$ 708,352

Switch, Inc.
Consolidated Statements of Stockholders' Equity (Continued)
(in thousands)

	Switch, Inc. Stockholders' Equity										
	Class A Common Stock		Class B Common Stock		Class C Common Stock						
	Shares	Amount	Shares	Amount	Shares	Amount	Additional Paid in Capital	Retained Earnings	Accumulated Other Comprehensive Income	Noncontrolling Interest	Total Stockholders' Equity
Balance—December 31, 2018	55,218	$ 55	148,481	$ 149	42,945	$ 43	$ 140,191	$ 2,693	$ 79	$ 565,142	$ 708,352
Cumulative adjustment due to adoption of new revenue recognition standard	—	—	—	—	—	—	—	224	—	940	1,164
Net income	—	—	—	—	—	—	—	8,917	—	22,625	31,542
Equity-based compensation expense	—	—	—	—	—	—	15,487	—	—	14,037	29,524
Issuance of Class A common stock upon settlement of restricted stock units, net of shares withheld for tax	484	1	—	—	—	—	(3,130)	—	—	1,711	(1,418)
Issuance of restricted stock awards	80	—	—	—	—	—	—	—	—	—	—
Dividends declared ($0.118 per share)	—	—	—	—	—	—	—	(9,414)	—	—	(9,414)
Distributions to noncontrolling interest	—	—	—	—	—	—	—	—	—	(20,106)	(20,106)
Exchanges of noncontrolling interest for Class A common stock	33,986	34	(33,986)	(34)	—	—	101,450	—	—	(101,450)	—
Repurchase of common units and cancellation of Class B common stock	—	—	(6,393)	(7)	—	—	(28,334)	—	—	(62,705)	(91,046)
Conversion of Class C common stock to Class B common stock	—	—	42,945	43	(42,945)	(43)	—	—	—	—	—
Recognition of tax receivable agreement liability resulting from exchanges of noncontrolling interest for Class A common stock	—	—	—	—	—	—	(109,541)	—	—	—	(109,541)
Net deferred tax asset resulting from changes in outside basis difference on investment in Switch, Ltd.	—	—	—	—	—	—	88,588	—	—	—	88,588
Balance—December 31, 2019	89,768	$ 90	151,047	$ 151	—	$ —	$ 204,711	$ 2,420	$ 79	$ 420,194	$ 627,645

Switch, Inc.
Consolidated Statements of Stockholders' Equity (Continued)
(in thousands)

	Switch, Inc. Stockholders' Equity										
	Class A Common Stock		Class B Common Stock		Class C Common Stock						
	Shares	Amount	Shares	Amount	Shares	Amount	Additional Paid in Capital	Retained Earnings	Accumulated Other Comprehensive Income	Noncontrolling Interest	Total Stockholders' Equity
Balance—December 31, 2019	89,768	$ 90	151,047	$ 151	—	$ —	$ 204,711	$ 2,420	$ 79	$ 420,194	$ 627,645
Cumulative adjustment due to adoption of new credit loss standard	—	—	—	—	—	—	—	(67)	—	(82)	(149)
Net income	—	—	—	—	—	—	—	15,539	—	22,836	38,375
Equity-based compensation expense	—	—	—	—	—	—	21,079	—	—	7,654	28,733
Issuance of Class A common stock upon settlement of restricted stock units, net of shares withheld for tax	708	—	—	—	—	—	(5,803)	—	—	1,381	(4,422)
Issuance of Class A common stock upon exercise of stock options	177	—	—	—	—	—	653	—	—	2,348	3,001
Issuance of restricted stock awards	75	—	—	—	—	—	—	—	—	—	—
Dividends declared ($0.159 per share)	—	—	—	—	—	—	—	(17,883)	—	—	(17,883)
Distributions to noncontrolling interest	—	—	—	—	—	—	—	—	—	(20,903)	(20,903)
Exchanges of noncontrolling interest for Class A common stock	28,281	29	(28,281)	(29)	—	—	76,677	—	—	(76,677)	—
Repurchase of common units and cancellation of Class B common stock	—	—	(1,126)	—	—	—	(7,758)	—	—	(12,242)	(20,000)
Recognition of tax receivable agreement liability resulting from exchanges of noncontrolling interest for Class A common stock	—	—	—	—	—	—	(116,789)	—	—	—	(116,789)
Net deferred tax asset resulting from changes in outside basis difference on investment in Switch, Ltd.	—	—	—	—	—	—	93,359	—	—	—	93,359
Balance—December 31, 2020	119,009	$ 119	121,640	$ 122	—	$ —	$ 266,129	$ 9	$ 79	$ 344,509	$ 610,967

The accompanying notes are an integral part of these consolidated financial statements.

Switch, Inc.
Consolidated Statements of Cash Flows
(in thousands)

	Years Ended December 31,		
	2020	2019	2018
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net income	$ 38,375	$ 31,542	$ 29,318
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization of property and equipment	142,738	119,945	106,666
Loss on disposal of property and equipment	362	586	1,206
Deferred income taxes	4,530	2,713	1,943
Amortization of debt issuance costs and original issue discount	1,840	1,636	1,636
Credit loss expense (benefit)	531	(73)	207
Unrealized loss on interest rate swaps	15,927	14,014	—
Equity in losses on investments	—	—	331
Loss on extinguishment of debt	245	—	—
Equity-based compensation	28,733	29,524	35,733
Amortization of portfolio energy credits	1,316	1,844	2,467
Cost of revenue for sales-type leases	3,436	1,082	—
Changes in operating assets and liabilities:			
Accounts receivable	15	(5,492)	(187)
Prepaid expenses	(1,034)	(775)	(1,744)
Other current assets	1,582	(545)	(231)
Other assets	1,439	3,447	(5,353)
Accounts payable	(186)	(892)	(312)
Accrued salaries and benefits	(944)	570	47
Accrued interest	6,665	153	22
Accrued expenses and other	(1,105)	2,045	3,287
Deferred revenue	(4,111)	12,437	2,196
Customer deposits	1,518	868	1,328
Operating lease liabilities	(5,193)	(4,886)	—
Other long-term liabilities	(439)	(330)	(230)
Net cash provided by operating activities	236,240	209,413	178,330
CASH FLOWS FROM INVESTING ACTIVITIES:			
Acquisition of property and equipment	(347,040)	(307,712)	(275,524)
Purchase of portfolio energy credits	(2,026)	(1,703)	(2,608)
Proceeds from sale of property and equipment	2	33	62
Acquisition of intangible asset	—	—	(25)
Net cash used in investing activities	(349,064)	(309,382)	(278,095)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from borrowings	710,000	170,000	—
Repayment of borrowings, including finance lease liabilities	(465,249)	(6,876)	(6,333)
Payment of debt issuance costs and original issue discount	(7,050)	—	—
Change in long-term deposit	1,072	921	(996)
Payment of tax withholdings upon settlement of restricted stock unit awards	(4,569)	(1,448)	(1,232)
Proceeds from exercise of stock options	3,001	—	—
Settlement of option loans	—	—	314
Repurchase of common units	(20,000)	(91,046)	(60,644)
Dividends paid to Class A common stockholders	(17,329)	(9,051)	(2,835)
Distributions paid to noncontrolling interest	(21,054)	(19,370)	(11,615)
Net cash provided by (used in) financing activities	178,822	43,130	(83,341)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	65,998	(56,839)	(183,106)
CASH AND CASH EQUIVALENTS—Beginning of year	24,721	81,560	264,666
CASH AND CASH EQUIVALENTS—End of year	$ 90,719	$ 24,721	$ 81,560

Switch, Inc.
Consolidated Statements of Cash Flows (Continued)
(in thousands)

	Years Ended December 31,		
	2020	2019	2018
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:			
Cash paid for interest, net of amounts capitalized	$ 21,764	$ 26,238	$ 24,841
SUPPLEMENTAL DISCLOSURES OF NON-CASH INVESTING AND FINANCING INFORMATION:			
(Decrease) increase in liabilities incurred to acquire property and equipment	$ (14,586)	$ 24,238	$ 8,807
Increase in property and equipment related to transfer from long-term deposit	$ 244	$ —	$ —
(Decrease) increase in accrued construction payables incurred related to long-term deposit	$ (925)	$ 993	$ —
Increase in liabilities related to purchase of portfolio energy credits	$ 298	$ —	$ —
Increase in dividends payable on unvested restricted stock units	$ 554	$ 363	$ 126
Decrease in noncontrolling interest as a result of exchanges for Class A common stock	$ (76,677)	$ (101,450)	$ (53,403)
Recognition of liabilities under tax receivable agreement	$ 116,789	$ 109,541	$ 52,535
Increase in deferred tax asset resulting from changes in outside basis difference on investment in Switch, Ltd.	$ 93,359	$ 88,588	$ 29,512
Right-of-use assets obtained in exchange for new operating lease liabilities	$ 3,294	$ 44	$ —
Right-of-use assets obtained in exchange for new finance leases	$ 138	$ 39,036	$ —
(Decrease) increase in distributions payable on unvested common units	$ (151)	$ 736	$ —
Dividends payable settled with shares of Class A common stock	$ 147	$ 30	$ —
(Decrease) increase in accounts receivable due to refund of long-term deposit	$ —	$ (24)	$ 2,543
Settlement of liability incurred upon acquisition of capital lease asset	$ —	$ —	$ (1,976)
Distributions used for payment of option loans and related interest	$ —	$ —	$ 2

The accompanying notes are an integral part of these consolidated financial statements.

Switch, Inc.
Notes to Consolidated Financial Statements

1. Organization

Switch, Inc. was formed as a Nevada corporation in June 2017 for the purpose of completing an initial public offering ("IPO") and related organizational transactions in order to carry on the business of Switch, Ltd. and its subsidiaries (collectively, "Switch," and together with Switch, Inc., the "Company"). Switch is comprised of limited liability companies that provide colocation space and related services to global enterprises, financial companies, government agencies, and others that conduct critical business on the internet. Switch develops and operates data centers in Nevada, which are Tier IV Gold certified, Michigan, and Georgia delivering redundant services with low latency and super capacity transport environments. As the manager of Switch, Ltd., Switch, Inc. operates and controls all of the business and affairs of Switch.

2. Summary of Significant Accounting Policies

Basis of Presentation and Principles of Consolidation

The accompanying consolidated financial statements are presented in accordance with accounting principles generally accepted in the United States of America ("GAAP") and include the accounts of the Company. All significant intercompany transactions and balances have been eliminated.

As the sole manager of Switch, Ltd., Switch, Inc. operates and controls all of the business and affairs of Switch, and has the sole voting interest in, and controls the management of, Switch, and has the obligation to absorb the losses of, and receive benefits from, Switch. Accordingly, Switch, Inc. identifies itself as the primary beneficiary of Switch and began consolidating Switch as of the closing date of the IPO, resulting in a noncontrolling interest related to holders of common units of Switch, Ltd. ("Common Units") other than Switch, Inc. on its consolidated financial statements.

The Company periodically evaluates entities for consolidation either through ownership of a majority voting interest, or through means other than voting interest, in accordance with the Variable Interest Entity ("VIE") accounting model. A VIE is an entity in which either (i) the equity investors as a group, if any, lack the power through voting or similar rights to direct the activities of such entity that most significantly impact such entity's economic performance or (ii) the equity investment at risk is insufficient to finance that entity's activities without additional subordinated financial support.

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. On an ongoing basis, the Company evaluates its estimates, including, but not limited to, those related to the allowance for credit losses, useful lives of property and equipment, deferred income taxes, liabilities under the tax receivable agreement, equity-based compensation, deferred revenue, incremental borrowing rate, fair value of performance obligations, and probability assessments of exercising renewal options on leases. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable. Actual results could differ from these estimates.

Cash and Cash Equivalents

The Company considers all highly liquid instruments with an original maturity of three months or less to be cash equivalents. Cash equivalents as of December 31, 2020 were comprised of money market funds totaling $60.7 million. There were no cash equivalents as of December 31, 2019.

Investments

The Company's investments in entities where it holds at least a 20% ownership interest and has the ability to exercise significant influence over, but not control, the investee are accounted for using the equity method of accounting. The Company's share of the investee's results of operations is included in equity in net losses of investments and foreign currency translation adjustment, as applicable, is included in other comprehensive income with a corresponding adjustment to its investment. The Company discontinues applying the equity method of accounting when the investment is reduced to zero. If the investee subsequently reports net income or other comprehensive income, the Company resumes applying the equity method of accounting only after its share of unrecognized net income and other comprehensive income, respectively, equals the share of losses not recognized during the period the equity method of accounting was suspended. The Company gives precedence to other comprehensive income and losses when determining whether to resume applying the equity method of accounting. Investments in entities where the Company holds less than a 20% ownership interest are generally accounted for using the cost method of accounting.

Concentration of Credit and Other Risks

Although the Company operates primarily in Nevada, realization of its receivables and its future operations and cash flows could be affected by adverse economic conditions, both regionally and elsewhere in the United States. During the years ended December 31, 2020, 2019, and 2018, the Company’s largest customer and its affiliates comprised 14%, 13%, and 11%, respectively, of the Company’s revenue. The Company’s largest customer and its affiliates accounted for 10% or more of total receivables as of December 31, 2020 and two customers, one of which was the Company’s largest customer and its affiliates, each accounted for 10% or more of total receivables as of December 31, 2019.

Accounts Receivable

Customer receivables are non-interest bearing and are initially recorded at cost. The Company generally does not request collateral from its customers; however, it usually obtains a lien or other security interest in certain customers’ equipment placed in the Company’s data center, and/or obtains a deposit. The Company maintains an allowance for current expected credit losses for its accounts receivable through a loss rate method; whereby, based on past events, such as prior write-offs, it determines expected losses while adjusting for current and forward-looking conditions, such as economic news and trends, customer concentrations, changes in customer payment terms, and customer credit-worthiness. Customer credit-worthiness is determined through indicators such as third-party credit ratings, collection experience, and other internal metrics. If a customer's credit-worthiness resulted in an impairment of their ability to make payments, greater allowances for credit losses may be required. The Company pooled its assets based on these conditions such that each asset pool reflected a homogenous set of asset risks, including characteristics such as credit ratings, customer industry, contract term, and historical credit loss patterns. For any period beyond a reasonable and supportable forecast for current and forward-looking conditions, the Company reverts to a loss rate based only on historical information. During the years ended December 31, 2020, 2019, and 2018, the Company recorded credit loss expense of $0.5 million, a credit loss benefit of $0.1 million, and credit loss expense of $0.2 million, respectively.

Leases

The Company determines if an arrangement is or contains a lease at inception or modification of the arrangement. An arrangement is or contains a lease if there are identified assets and the right to control the use of an identified asset is conveyed for a period in exchange for consideration. Control over the use of the identified assets means the lessee has both the right to obtain substantially all of the economic benefits from the use of the asset and the right to direct the use of the asset.

For lessee leases, the Company recognizes right-of-use (“ROU”) assets and lease liabilities for all leases other than those with a term of 12 months or less as the Company has elected to apply the short-term lease recognition exemption. ROU assets represent the Company’s right to use an underlying asset for the lease term. Lease liabilities represent the Company’s obligation to make lease payments arising from the lease. ROU assets and lease liabilities are classified and recognized at the commencement date of a lease. Lease liabilities are measured based on the present value of fixed lease payments over the lease term. ROU assets consist of (i) initial measurement of the lease liability; (ii) lease payments made to the lessor at or before the commencement date less any lease incentives received; and (iii) initial direct costs incurred by the Company. Lease payments may vary because of changes in facts or circumstances occurring after the commencement, including changes in inflation indices. Variable lease payments are excluded from the measurement of ROU assets and lease liabilities and are recognized in the period in which the obligation for those payments is incurred.

As the Company’s lessee leases do not provide a readily determinable implicit rate, the Company uses its incremental borrowing rate based on information available at the commencement date in determining the present value of lease payments. When determining the incremental borrowing rate, the Company assesses multiple variables such as lease term, collateral, economic conditions, and credit-worthiness. The Company estimates its incremental borrowing rate using a benchmark senior unsecured yield curve for debt instruments adjusted for its credit quality, market conditions, tenor of lease contracts, and collateral.

For income statement purposes, the Company recognizes rent expense on a straight-line basis for operating leases. For finance leases, the Company recognizes interest expense associated with the lease liability and depreciation expense associated with the ROU asset. For ROU assets held under finance leases and leasehold improvements, the estimated useful lives are limited to the shorter of the useful life of the asset or the term of the lease.

Many of the Company’s lease arrangements include options to extend the lease, which the Company does not include in its expected lease terms unless they are reasonably certain to be exercised. The Company has lease arrangements with lease and non-lease components. The Company has elected to apply the practical expedient to combine lease and related non-lease components for all classes of underlying assets and shall account for the combined component as a lease component.

Property and Equipment

Property and equipment is stated at cost. Depreciation and amortization of property and equipment is computed using the straight-line method over the estimated useful lives of the respective assets. The cost and accumulated depreciation of property and equipment retired or otherwise disposed of are eliminated from the respective accounts and any resulting gain or loss is included in operations. Costs of repairs and maintenance are expensed as incurred. For assets used in data center operations, the related depreciation and amortization are included in cost of revenue.

The Company's estimated useful lives of its property and equipment are as follows:

Assets	Estimated Useful Lives (in years)
Land improvements	20-30
Buildings, building improvements and leasehold improvements	2-40
Substation equipment	30
Data center equipment	5-10
Vehicles	7
Core network equipment	7
Fiber facilities	20, 25
Computer equipment, furniture and fixtures	3-5

The Company capitalizes certain costs incurred in connection with developing or obtaining internal use software. Capitalized software costs placed into service are included in computer equipment, furniture and fixtures and are amortized on a straight-line basis over a three-year period. Software costs that do not meet capitalization criteria are expensed immediately.

In addition, the Company capitalizes interest costs during the construction phase of data centers. Once a data center or expansion project becomes operational, these costs are allocated to certain property and equipment categories and are depreciated over the estimated useful life of the underlying assets.

Impairment of Long-Lived Assets

The Company's long-lived assets, such as property and equipment, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset or asset group may not be recoverable. Recoverability of assets to be held and used is measured by comparison of the carrying amount of an asset group to estimated undiscounted future cash flows expected to be generated by the asset group. If the carrying amount of an asset group exceeds its estimated future cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset group exceeds the fair value of the asset group.

Portfolio Energy Credits

The Company records portfolio energy credits ("PECs") at their cost when purchased as an intangible asset, subject to impairment testing, within other assets on the consolidated balance sheets. PECs are not considered outputs by the Company. Amortization of PECs is recorded within cost of revenue on the consolidated statements of comprehensive income when PECs are utilized in operations. A summary of the Company's PECs as of the end of each period presented is as follows:

	December 31,	
	2020	2019
	(in thousands)	
PECs, gross	$ 7,676	$ 5,352
Accumulated amortization	(6,668)	(5,352)
PECs, net	$ 1,008	$ —

Commitments and Contingencies

The Company accrues for commitments and contingencies when management, after considering the facts and circumstances of each matter as then known to management, has determined it is probable a liability has been incurred and the amount of the loss can be reasonably estimated. When only a range of amounts is reasonably estimable and no amount within the range is more likely than another, the low end of the range is recorded. Legal fees are expensed as incurred. Due to the inherent uncertainties surrounding gain contingencies, the Company does not recognize potential gains until realized.

Debt Issuance Costs

Costs incurred in obtaining certain debt financing are deferred and amortized over the terms of the related debt instruments using the straight line-method for bond and term debt, which approximates the interest method, and revolving debt. As of December 31, 2020 and 2019, unamortized debt issuance costs totaled $10.7 million and $5.7 million, respectively, of which $1.9 million and $2.1 million, respectively, were included within other assets on the consolidated balance sheets.

Foreign Currency Translation

SUPERNAP International, S.A. (“SUPERNAP International”), an equity method investment of the Company, has investments in foreign subsidiaries. The Company’s share of gains or losses from translation of SUPERNAP International’s foreign operations where the local currency is the functional currency is included in other comprehensive income.

Revenue Recognition

During each of the years ended December 31, 2020, 2019, and 2018, the Company derived more than 95% of its revenue from recurring revenue streams, consisting primarily of (1) colocation, which includes the licensing and leasing of cabinet space and power and (2) connectivity services, which includes cross-connects, broadband services, and external connectivity. The remainder of the Company’s revenue is from non-recurring revenue, which primarily includes installation services related to a customer’s initial deployment. The majority of the Company’s revenue contracts are classified as licenses and accounted for in accordance with Accounting Standards Codification (“ASC”) 606, Revenue from Contracts with Customers (“ASC 606”), with the exception of certain contracts that contain lease components and are accounted for in accordance with ASC 842, Leases (“ASC 842”).

The Company recognizes revenue when control of these goods and services is transferred to its customers in an amount that reflects the consideration it expects to be entitled to in exchange for those goods and services. Revenue from recurring revenue streams is generally billed monthly and recognized using a time-based measurement of progress as customers receive service benefits evenly throughout the term of the contract, which is generally three to five years. Non-recurring installation fees, although generally paid in a lump sum upon installation, are deferred and recognized ratably over the contract term, determined using a portfolio approach. Non-recurring installation fees are not assessed as performance obligations as they are determined to be immaterial in the context of the contract with the customer. Revenue is generally recognized on a gross basis as a principal versus on a net basis as an agent, largely because the Company is primarily responsible for fulfilling the contract, takes title to services, bears credit risk, and has discretion in establishing the price when selling to the customer.

For contracts with customers that contain multiple performance obligations, the Company accounts for individual performance obligations separately if they are distinct or as a series of distinct obligations if the individual performance obligations meet the series criteria. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. The transaction price of a contract is allocated to each distinct performance obligation on a relative standalone selling price basis. The standalone selling price is determined by maximizing observable inputs such as overall pricing objectives, customer credit history, and other factors. Other judgments include determining if any variable consideration should be included in the total contract value of the arrangement, such as price increases. Any variable consideration included in the total contract value of the arrangement is allocated to each distinct obligation, or series of distinct obligations, in an amount that depicts the consideration to which the Company expects to be entitled in exchange for transferring the underlying goods or services to the customer. The Company has also made the accounting policy election to exclude taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction and collected by the Company from a customer from its measurement of the transaction price.

Occasionally, the Company enters into contracts with customers for data center space and office space, which contain lease components. The Company’s leases with customers are generally classified as operating leases and lease payments are recognized on a straight-line basis over the lease term. Lease revenue related to data center space is included within colocation revenue, while lease revenue related to office space is included within other revenue.

The Company guarantees certain service levels, such as uptime, as outlined in individual customer contracts. If these standard service levels are not achieved, the Company would reduce revenue for any credits given to the customer as a result. There were no service level credits issued during the years ended December 31, 2020, 2019, and 2018.

Contract Balances

The Company generally invoices customers in monthly installments payable in advance. The difference between the timing of revenue recognition, and the timing of billings and cash collections results in the recognition of accounts receivable, contract assets, and deferred revenue (contract liabilities) on the consolidated balance sheets. Receivables are recorded at invoice amounts, net of allowance for doubtful accounts, and are recognized in the period when the Company has transferred goods or provided services to its customers, and when its right to consideration for that transfer is unconditional. Payment terms and conditions vary by contract type, although terms generally include a requirement of payment within 15 to 30 days of the invoice date. In instances where the timing of revenue recognition differs from the timing of invoicing, the Company has determined that its contracts generally do not include a significant financing component. The Company assesses collectability based on a number of factors, including past transaction history with the customer and the creditworthiness of the customer.

A contract asset exists when the Company has transferred products or provided services to its customers, but customer payment is contingent upon future satisfaction of a performance obligation. Certain contracts include terms related to price arrangements and allocations of consideration to multiple performance obligations recognized over differing periods of time. The Company generally recognizes revenue ratably over the contract term, which could potentially give rise to contract assets during certain periods of the contract term.

Deferred revenue represents amounts that are recognized when the Company has an unconditional right to a payment, which has been either billed to, or collected from, customers prior to transferring control of the underlying good or service to the customer.

The opening and closing balances of the Company's contract assets, net of allowance for credit losses, and deferred revenue are as follows:

	Contract Assets, Current Portion(1)	Contract Assets(2)	Deferred Revenue, Current Portion(3)	Deferred Revenue(4)
		(in thousands)		
December 31, 2019	$ 496	$ 3,216	$ 14,991	$ 27,852
December 31, 2020	—	3,997	14,870	23,862
Change	$ (496)	$ 781	$ (121)	$ (3,990)

(1) Amounts are included within other current assets on the Company's consolidated balance sheets.
(2) Amounts are included within other assets on the Company's consolidated balance sheets.
(3) Amounts include $1.7 million and $3.8 million of deferred revenue related to leases as of December 31, 2020 and 2019, respectively.
(4) Amounts include $2.7 million and $7.9 million of deferred revenue related to leases as of December 31, 2020 and 2019, respectively.

The differences between the opening and closing balances of the Company's deferred revenue primarily result from timing differences between the Company's satisfaction of performance obligations and the associated customer payments. Revenue recognized from the balance of deferred revenue as of December 31, 2019 was $15.0 million during the year ended December 31, 2020. For the year ended December 31, 2020, no impairment losses related to contract assets were recognized on the consolidated statement of comprehensive income.

The Company records current expected credit losses for contract assets through a loss rate method consistent with its current expected credit losses for accounts receivable.

Contract Costs

Contract costs include the Company's incremental direct costs of either obtaining or fulfilling a contract, which primarily consist of sales commissions and bonuses. Contract costs are deferred and amortized on a straight-line basis over the estimated period of benefit. The Company elected to apply the practical expedient to expense contract costs when incurred if the amortization period is one year or less.

As of December 31, 2020 and 2019, there were deferred contract costs of $4.6 million and $1.5 million, respectively, included in other assets on the Company's consolidated balance sheets. For the year ended December 31, 2020, $0.7 million of deferred contract costs were amortized to selling, general and administrative expense and no impairment losses were recognized on the Company's consolidated statement of comprehensive income.

Remaining Performance Obligations

Remaining performance obligations represent contracted revenue that has not yet been recognized, which includes deferred revenue and amounts that will be invoiced and recognized in future periods. These amounts totaled $766.3 million as of December 31, 2020, 39%, 50%, and 5% of which is expected to be recognized over the next year, one to three years, and three to five years, respectively, with the remainder recognized thereafter. The remaining performance obligations do not include estimates of variable consideration related to unsatisfied performance obligations, such as the usage of metered power, or any contracts that could be terminated without significant penalties.

Income Taxes

Switch, Inc. is taxed as a corporation and incurs U.S. federal, state, and local income taxes on its allocable share of taxable income or loss of Switch, Ltd. Switch, Ltd. operates as a partnership for federal, state, and local tax reporting. Members are liable for any income taxes resulting from their allocable portion of taxable income or loss of Switch, Ltd. as a pass-through entity.

For tax years beginning on and after January 1, 2018, Switch, Ltd. is subject to partnership audit rules enacted as part of the Bipartisan Budget Act of 2015 (the "Centralized Partnership Audit Regime"). Under the Centralized Partnership Audit Regime, any audit of Switch, Ltd. by the Internal Revenue Service ("IRS") would be conducted at the partnership level, and if the IRS determines an adjustment, the default rule is that the partnership would pay an "imputed underpayment" including interest and penalties, if applicable. Switch, Ltd. may instead elect to make a "push-out" election, in which case the partners for the year that is under audit would be required to take into account the adjustments on their own personal income tax returns. The Fifth Amended and Restated Operating Agreement of Switch, Ltd. ("Switch Operating Agreement") does not stipulate how Switch, Ltd. will address imputed underpayments. If Switch, Ltd. receives an imputed underpayment, a determination will be made based on the relevant facts and circumstances that exist at that time.

The Company accounts for income taxes pursuant to the asset and liability method, which requires the recognition of deferred income tax assets and liabilities based on temporary differences between the carrying amounts and tax bases of assets and liabilities using enacted statutory tax rates applicable to the periods in which the temporary differences are expected to reverse. Any effects of changes in income tax rates or laws are included in income tax expense in the period of enactment.

Deferred tax assets represent future tax deductions or credits. Realization of deferred tax assets ultimately depends on the existence of sufficient taxable income of the appropriate character in either the carryback or carryforward period. Each reporting period, the Company assesses the weight of all positive and negative evidence available and reduces the carrying amounts of deferred tax assets by a valuation allowance if it is more likely than not that such assets will not be realized. A comprehensive assessment of all forms of positive and negative evidence is performed on an annual basis and such assessment is updated during each interim period for significant changes.

The Company utilizes a two-step process to record uncertain income tax positions in which (1) the Company determines if the weight of available evidence indicates it is more likely than not that the tax position for recognition will be sustained on the basis of its technical merits and (2) for those tax positions meeting the more likely than not recognition threshold, the Company recognizes the largest amount of tax benefit that is more than 50% likely of being realized upon ultimate settlement with the related tax authority. The Company includes interest and penalties related to income taxes within the provision for income taxes. See Note 10 "Income Taxes" for additional information.

Tax Receivable Agreement

In connection with the IPO, the Company entered into a Tax Receivable Agreement ("TRA") with Switch, Ltd. and the holders of Common Units of Switch, Ltd. (the "Members"). In the event that such parties exchange any or all of their Common Units for Class A common stock, the TRA requires the Company to make payments to such holders for 85% of the tax benefits realized, or in some cases deemed to be realized, by the Company by such exchange as a result of (i) increases in the Company's tax basis of its ownership interest in the net assets of Switch, Ltd. resulting from any redemptions or exchanges of noncontrolling interest, (ii) tax basis increases attributable to payments made under the TRA, and (iii) deductions attributable to imputed interest pursuant to the TRA (the "TRA Payments"). The annual tax benefits are computed by calculating the income taxes due, including such tax benefits, and the income taxes due without such benefits. The Company expects to benefit from the remaining 15% of any tax benefits that it may actually realize. The TRA Payments are not conditioned upon any continued ownership interest in Switch, Ltd. or the Company. The rights of each noncontrolling interest holder under the TRA are assignable to transferees of its interest.

The timing and amount of aggregate payments due under the TRA may vary based on a number of factors, including the amount and timing of the taxable income the Company generates each year and the tax rate then applicable. The Company calculates the liability under the TRA using a complex TRA model, which includes a significant assumption related to the fair market value of property and equipment. The payment obligations under the TRA are obligations of Switch, Inc. and not of Switch, Ltd. Payments are generally due under the TRA within a specified period of time following the filing of the Company’s tax return for the taxable year with respect to which the payment obligation arises, although interest on such payments will begin to accrue at a rate of LIBOR plus 100 basis points from the due date (without extensions) of such tax return. Any late payments that may be made under the TRA will continue to accrue interest at LIBOR plus 500 basis points until such payments are subsequently made. See Note 10 “Income Taxes” for additional information.

Advertising Costs

Advertising costs are expensed when incurred and are included in selling, general and administrative expense in the accompanying consolidated statements of comprehensive income. Advertising expense was $0.9 million, $1.5 million, and $1.1 million during the years ended December 31, 2020, 2019, and 2018, respectively.

Equity-Based Compensation

Equity-based compensation cost is measured at the grant date for all equity-based awards made to employees based on the fair value of the awards and is attributed on a straight-line basis for awards with service conditions and on an accelerated attribution basis for awards with performance conditions over the requisite service period, which is generally the vesting period.

The Company used the Black-Scholes option-pricing model to determine the fair value of Switch, Ltd.’s common unit awards (“Incentive Units”) containing a hurdle amount (similar to an exercise price). The determination of the fair value of the Incentive Unit awards was affected by assumptions regarding a number of complex and subjective variables including the expected price volatility of the Incentive Units over the term of the awards and actual and projected employee purchase behaviors. The fair value of Incentive Unit awards was estimated using a weighted average approach of a combination of the following three methods: (1) publicly traded data center company multiples; (2) data center precedent transaction multiples; and (3) the discounted cash flow method based on Switch, Ltd.’s five-year forecast. The weighting of these three methods varied over time. Switch, Ltd. estimated the expected volatility by analyzing the volatility of companies in the same industry and selecting volatility within the range. The risk-free interest rate was based on United States Treasury zero-coupon issues with remaining terms similar to the expected term of the Incentive Unit awards. The expected dividend rate was determined at the grant date for each Incentive Unit award. The expected term of the Incentive Unit award was calculated by analyzing historical exercise data and obtaining the weighted average of the holding period for the Incentive Unit awards.

The Company uses the Black-Scholes option-pricing model to determine the fair value of Switch, Inc.’s stock option awards. Switch, Inc. estimates the expected volatility by using a weighted average of the historical volatility of its common stock and the historical volatilities of a peer group comprised of publicly-traded companies in the same industry. The risk-free interest rate is based on United States Treasury zero-coupon issues with remaining terms similar to the expected term of the stock option awards. The expected dividend rate is based on the Company’s estimate of annual dividends expected to be paid at the time of grant. The expected term for stock options granted is estimated using the “simplified” method; whereby, the expected term equals the arithmetic average of the vesting term and the original contractual term of the stock option due to Switch, Inc.’s lack of sufficient historical data. Switch, Inc.’s restricted stock and restricted stock unit awards are measured based on the fair market value of the underlying common stock on the date of grant.

Net Income per Share

Basic net income per share is computed by dividing net income attributable to Switch, Inc. by the weighted average number of shares outstanding during the period. Diluted net income per share is computed giving effect to all potential weighted average dilutive shares, including stock options, restricted stock units, dividend equivalent units, restricted stock awards, and Common Units convertible into shares of Class A common stock during the period. The dilutive effect of outstanding awards, if any, is reflected in diluted earnings per share by application of the treasury stock method or if-converted method, as applicable. Refer to Note 14 for further information on net income per share.

Fair Value Measurements

Information about the Company's financial assets and liabilities measured at fair value on a recurring basis is presented below:

	Balance Sheet Classification	December 31, 2020 Carrying Value	Level 1	Level 2	Level 3
		(in thousands)			
Assets:					
Cash equivalents	Cash and cash equivalents	$ 60,664	$ 60,664	$ —	$ —
Liabilities:					
Interest rate swaps	Interest rate swap liability, current portion	$ 9,418	$ —	$ 9,418	$ —
Interest rate swaps	Other long-term liabilities	$ 20,523	$ —	$ 20,523	$ —

	Balance Sheet Classification	December 31, 2019 Carrying Value	Level 1	Level 2	Level 3
		(in thousands)			
Liabilities:					
Interest rate swaps	Interest rate swap liability, current portion	$ 3,464	$ —	$ 3,464	$ —
Interest rate swaps	Other long-term liabilities	$ 10,550	$ —	$ 10,550	$ —

Transfers between levels of fair value hierarchy are recorded at the end of the reporting period during which the events or changes in circumstances that caused the transfers to occur. There were no transfers between levels of fair value hierarchy during the periods presented.

The fair value of interest rate swaps was measured using a present value of cash flow valuation technique based on forward yield curves for the same or similar financial instruments.

Derivative Financial Instruments

A derivative is a financial instrument whose value changes in response to an underlying variable, requires little or no initial net investment, and is settled at a future date. Derivatives are initially recognized on the consolidated balance sheets at fair value on the date on which the derivatives are entered into and subsequently re-measured at fair value. Derivatives are separated into their current and long-term components based on the timing of the estimated cash flows as of the end of each reporting period.

Embedded derivatives included in hybrid instruments are treated and disclosed as separate derivatives when their economic characteristics and risks are not closely related to those of the host contract, the terms of the embedded derivative are the same as those of a stand-alone derivative, and the combined contract is not measured at fair value through earnings. The financial host contracts are accounted for and measured using the applicable GAAP of the relevant financial instrument category.

The method of recognizing fair value gains and losses depends on whether the derivatives are designated as hedging instruments, and if so, the nature of the hedge relationship. All gains and losses from changes in the fair values of derivatives that do not qualify for hedge accounting are recognized immediately in earnings. Cash flows from derivatives not designated as hedging instruments are classified in accordance with the nature of the derivative instrument and how it is used in the context of the Company's business.

The Company enters into interest rate swap agreements to manage its interest rate risk associated with variable-rate borrowings. In January and February 2019, Switch, Ltd. entered into four interest rate swap agreements; whereby, Switch, Ltd. will pay a weighted average fixed interest rate (excluding the applicable interest margin) of 2.48% on notional amounts corresponding to borrowings of $400.0 million in exchange for receipts on the same notional amount at a variable interest rate based on the applicable LIBOR at the time of payment. The interest rate swap agreements mature in June 2024 and are not designated as hedging instruments. Losses from derivatives not designated as hedging instruments, inclusive of periodic net settlement amounts, were recorded in loss on interest rate swaps on the consolidated statements of comprehensive income and totaled $23.5 million and $14.9 million for the years ended December 31, 2020 and 2019, respectively.

Recent Accounting Pronouncements

ASU 2014-09–Revenue from Contracts with Customers and ASU 2016-02–Leases

In the fourth quarter of 2019, the Company adopted Accounting Standards Update ("ASU") 2014-09, Revenue from Contracts with Customers (Topic 606) and ASU 2016-02, Leases (Topic 842) effective January 1, 2019, each using the modified retrospective approach. The results for the year ended December 31, 2019 reflect the adoption of this guidance on January 1, 2019, with a cumulative adjustment recorded to total stockholders' equity of $1.2 million.

ASU 2016-13–Financial Instruments–Credit Losses

In June 2016, the Financial Accounting Standards Board ("FASB") issued ASU 2016-13, Financial Instruments–Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments ("ASU 2016-13"). Under this guidance, a company is required to use a new forward-looking "expected loss" model for trade and other receivables that generally results in the earlier recognition of allowances for losses. In April 2019, the FASB issued ASU 2019-04, which, among other amendments, allows for certain policy elections and practical expedients related to accrued interest on financial instruments. In May 2019, the FASB issued ASU 2019-05, which granted targeted transition relief by allowing entities to irrevocably elect the fair value option for certain financial assets previously measured at amortized cost. In November 2019, the FASB issued ASU 2019-10 and ASU 2019-11, which addressed certain aspects of the guidance related to effective dates, expected recoveries, troubled debt restructurings, accrued interest receivables, and financial assets secured by collateral. In February and March 2020, the FASB also issued ASU 2020-02 and ASU 2020-03, respectively, which provide certain amendments and improvements to sections of ASU 2016-13. The Company adopted this guidance effective January 1, 2020 using the modified retrospective method. The adoption of this guidance did not materially impact the Company's consolidated financial statements.

ASU 2018-13–Fair Value Measurement

In August 2018, the FASB issued ASU 2018-13, Disclosure Framework–Changes to the Disclosure Requirements for Fair Value Measurement ("ASU 2018-13"). The amendments in this update modify the disclosure requirements for fair value measurements by removing, modifying, or adding certain disclosures. In addition, in November 2018, the FASB issued ASU 2018-19, which provides clarifications and improvements on sections of ASU 2018-13. The Company adopted this guidance retrospectively as of March 31, 2020. The adoption of this guidance did not materially impact the Company's consolidated financial statements.

ASU 2019-12–Income Taxes

In December 2019, the FASB issued ASU 2019-12, Income Taxes (Topic 740)–Simplifying the Accounting for Income Taxes ("ASU 2019-12"). The amendments in ASU 2019-12 provide certain clarifications and simplify accounting for income taxes by removing certain exceptions to the general principles in the current guidance. The amendments in ASU 2019-12 are effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. The Company early adopted this guidance prospectively as of December 31, 2020. The early adoption of this guidance did not materially impact the Company's consolidated financial statements.

ASU 2020-04–Reference Rate Reform

In March 2020, the FASB issued ASU 2020-04, Reference Rate Reform (Topic 848)–Facilitation of the Effects of Reference Rate Reform on Financial Reporting ("ASU 2020-04"). The amendments in ASU 2020-04 are elective and provide optional expedients and exceptions to contracts, hedging relationships, and other transactions that reference LIBOR or another reference rate expected to be discontinued due to reference rate reform if certain criteria are met. In January 2021, the FASB issued ASU 2021-01, which provides clarifications and improvements on applying certain optional expedients and exceptions of ASU 2020-04. The expedients and exceptions provided by the amendments do not apply to contract modifications made and hedging relationships entered into or evaluated after December 31, 2022. The Company elected to adopt this guidance prospectively as of March 31, 2020 as it has LIBOR-based contracts extending beyond the expected discontinuation of LIBOR, including its term loan facility, revolving credit facility, and interest rate swap agreements. The adoption of this guidance did not materially impact the Company's consolidated financial statements.

ASU 2020-10–Codification Improvements

In October 2020, the FASB issued ASU 2020-10, Codification Improvements ("ASU 2020-10"). The amendments in ASU 2020-10 improve codification by ensuring that all guidance that includes an option for an entity to provide information in the notes to financial statements is codified within the disclosure section of the codification. The Company early adopted this guidance retrospectively as of July 1, 2020. The early adoption of this guidance did not materially impact the Company's consolidated financial statements.

Reclassifications

Certain amounts in the accompanying consolidated balance sheet as of December 31, 2019 and the consolidated statements of cash flows for the years ended December 31, 2019 and 2018 have been reclassified to be consistent with the current year presentation. These reclassifications were to (i) separately present accrued interest and the current portion of interest rate swap liability from accrued expenses and other on the consolidated balance sheet, (ii) aggregate the current portion of finance lease liabilities with accrued expenses and other on the consolidated balance sheet, and (iii) separately present the change in accrued interest from accrued expenses and other on the consolidated statements of cash flows. The reclassifications had no impact on the Company's financial condition, results of operations, or net cash flows.

3. Property and Equipment, Net

Property and equipment, net consists of the following:

	December 31,	
	2020	2019
	(in thousands)	
Land and land improvements	$ 286,706	$ 223,877
Buildings, building improvements, and leasehold improvements	532,938	435,214
Substation equipment	19,780	19,780
Data center equipment	1,230,623	1,021,056
Vehicles	1,974	1,732
Core network equipment	37,327	36,572
Fiber facilities	14,441	13,180
Computer equipment, furniture and fixtures	42,243	39,057
Finance lease ROU assets	72,951	72,569
Construction in progress	198,355	254,750
Property and equipment, gross	2,437,338	2,117,787
Less: accumulated depreciation and amortization	(699,923)	(566,670)
Property and equipment, net	$ 1,737,415	$ 1,551,117

Accumulated amortization for finance lease ROU assets totaled $14.3 million and $11.7 million as of December 31, 2020 and 2019, respectively.

During the years ended December 31, 2020, 2019, and 2018, capitalized interest was $4.3 million, $5.8 million, and $4.9 million, respectively.

In May 2020, the Company purchased approximately two acres of land in Las Vegas, Nevada for $2.5 million from an entity in which a member of its Board of Directors has a beneficial ownership interest.

Total depreciation and amortization of property and equipment recognized on the consolidated statements of comprehensive income was as follows:

	Years Ended December 31,		
	2020	2019	2018
	(in thousands)		
Cost of revenue	$ 138,019	$ 116,274	$ 104,095
Selling, general and administrative expense	4,719	3,671	2,571
Total depreciation and amortization of property and equipment	$ 142,738	$ 119,945	$ 106,666

4. Long-Term Deposit

In February 2019, the Company and a number of other entities (collectively, the “Parties”) entered into a reimbursement agreement with Storey County, Nevada (the “County”); whereby, the Parties would fund the construction of a water project (the “Project”) on behalf of the County and would then be reimbursed the cost of the Project by the County from various taxes collected. The reimbursement agreement shall expire on the earlier of June 30, 2039 or when all costs have been reimbursed. As of December 31, 2020 and 2019, the Company had incurred $2.6 million and $2.2 million, respectively, in costs related to the Project that have been classified as long-term deposits on the consolidated balance sheets.

In March 2015, Nevada Power Company dba NV Energy (“NV Energy”) and Switch, Ltd. entered into a Substation Agreement; whereby, NV Energy designed, constructed, maintains, and owns a substation and related feeders in connection with service to Switch’s development of certain of its data center facilities in Las Vegas. Switch has paid the associated costs and associated tax gross-up related to the development of the substation and related feeders as defined in the Substation Agreement. These costs are subject to reimbursement based upon Switch’s future power usage. As of December 31, 2020, there were no costs incurred subject to reimbursement classified as long-term deposits on the consolidated balance sheet. As of December 31, 2019, costs incurred subject to reimbursement totaled $1.1 million and are classified as long-term deposits on the consolidated balance sheet.

5. Equity Method Investments

As of December 31, 2020 and 2019, the Company held two investments, SUPERNAP International and Planet3, Inc. (“Planet3”). As of December 31, 2020 and 2019, the Company determined that it continued to have a variable interest in both SUPERNAP International and Planet3 as the entity does not have sufficient equity at risk. However, the Company concluded that it is not the primary beneficiary of SUPERNAP International or of Planet3 as it does not have deemed control of either entity. As a result, it does not consolidate either entity into its consolidated financial statements.

As of December 31, 2020 and 2019, the Company held a 50% ownership interest in SUPERNAP International, the investment of which was accounted for under the equity method of accounting. As of March 31, 2018, the Company’s carrying value of its investment in SUPERNAP International was reduced to zero as a result of recording its share of the investee’s losses. Accordingly, as the Company does not have any guaranteed obligations and is not otherwise committed to provide further financial support to SUPERNAP International, the Company discontinued the equity method of accounting for its investment in SUPERNAP International as of March 31, 2018. The Company’s share of net loss recorded during the year ended December 31, 2018 amounted to $0.3 million. As of December 31, 2020 and 2019, the Company recorded amounts consisting primarily of royalty fees and reimbursable expenses due from SUPERNAP International of $0.1 million and $0.3 million, respectively, within accounts receivable on the consolidated balance sheets.

As of December 31, 2019, the Company held a 45% ownership interest in Planet3, the investment of which was accounted for under the equity method of accounting. As of December 31, 2016, the Company’s carrying value of its investment in Planet3 was reduced to zero as a result of recording its share of the investee’s losses as well as an other than temporary loss in value. As the Company did not have any guaranteed obligations and was not otherwise committed to provide further financial support to Planet3, the Company discontinued the equity method of accounting for its investment in Planet3 as of December 31, 2016. In June 2020, the Company and Planet3 entered into a share exchange and note cancellation agreement (“Share Exchange Agreement”); whereby, Planet3 agreed to transfer shares of its Class A Stock to the Company and entered into a royalty agreement with the Company in exchange for all shares of Planet3 common stock held by the Company prior to the Share Exchange Agreement, and the cancellation by the Company of all principal and interest outstanding for certain promissory notes issued as part a note purchase agreement entered into by the Company and Planet3 in May 2016. As a result of the Share Exchange Agreement, the Company’s ownership interest in Planet3 decreased to 5% and is no longer accounted for as an equity method investment as of December 31, 2020.

6. Long-Term Debt

Long-term debt consists of the following as of:

	December 31, 2020	December 31, 2019
	(in thousands)	
Senior Unsecured Notes Due 2028	$ 600,000	$ —
Term Loan Facility	400,000	585,000
Revolving Credit Facility	—	170,000
Long-term debt, gross	1,000,000	755,000
Less: unamortized debt issuance costs and original issue discount	(8,787)	(3,628)
	991,213	751,372
Less: long-term debt, current	—	(6,000)
Long-term debt, net	$ 991,213	$ 745,372

Credit Agreement

In June 2017, Switch, Ltd. entered into an amended and restated credit agreement ("Credit Agreement") with Wells Fargo Bank, National Association, as administrative agent, and certain other lenders, consisting of a $600.0 million term loan facility (the "Term Loan Facility"), maturing in June 2024, and a $500.0 million revolving credit facility (the "Revolving Credit Facility," and, together with the Term Loan Facility, the "Credit Facilities"), maturing in June 2022. In September 2020, Switch, Ltd. entered into a second amendment to the Credit Agreement ("Amended Credit Agreement") to, among other things, extend the maturity of the Revolving Credit Facility to June 2023, modify the ratio used for the financial covenant and certain basket availability tests from a consolidated total leverage ratio to a consolidated secured leverage ratio, and refresh or increase certain baskets for restricted payments, investments, and junior debt payments. In connection with this amendment, certain lenders exited the Revolving Credit Facility and, as a result of the issuance of the Notes (defined below), a partial repayment was applied to the Term Loan Facility to reduce its principal amount to $400.0 million, which is due upon maturity in June 2024. As a result, the Company recorded a $0.2 million loss on extinguishment of debt during the year ended December 31, 2020.

The Amended Credit Agreement permits the issuance of letters of credit upon Switch, Ltd.'s request of up to $30.0 million. Upon satisfying certain conditions, the Amended Credit Agreement provides that Switch, Ltd. can increase the amount available for borrowing under the Credit Facilities no more than five times (up to an additional $75.0 million in total, plus an additional amount subject to certain leverage restrictions) during the term of the Amended Credit Agreement. As of December 31, 2020, the Company had $500.0 million of available borrowing capacity under the Revolving Credit Facility, net of outstanding letters of credit.

The Credit Facilities are collateralized by substantially all of Switch's tangible and intangible personal property and are guaranteed by certain of Switch, Ltd.'s wholly-owned subsidiaries. Interest on the Credit Facilities is calculated based on the base rate plus the applicable margin or a LIBOR rate plus the applicable margin, at Switch, Ltd.'s election. Interest calculations are based on 365/366 days for a base rate loan and 360 days for a LIBOR loan. Base rate interest payments are due and payable in arrears on the last day of each calendar quarter. LIBOR rate interest payments are due and payable on the last day of each selected interest period (not to extend beyond three-month intervals). As of December 31, 2020 and 2019, amounts under the Term Loan Facility had an underlying interest rate of 2.40% and 4.05%, respectively. As of December 31, 2019, amounts under the Revolving Credit Facility had an underlying interest rate of 3.51%. In addition, the Revolving Credit Facility incurs a fee on unused lender commitments based on the applicable margin and payments are due and payable in arrears on the last day of each calendar quarter.

The Amended Credit Agreement contains affirmative and negative covenants customary for such financings, including, but not limited to, limitations on incurring additional debt, incurring additional liens, encumbrances or contingent liabilities, and paying distributions or making certain other restricted payments (with certain exceptions and baskets, including a restricted payment basket of $50.0 million per fiscal year). The Amended Credit Agreement also requires Switch, Ltd. to maintain compliance with the consolidated secured leverage ratio (as defined in the Amended Credit Agreement) of 4.00 to 1.00 for each fiscal quarter.

Senior Unsecured Notes Due 2028

In September 2020, Switch, Ltd. (the “Issuer”) issued $600.0 million aggregate principal amount of its 3.75% senior unsecured notes due 2028 (the “Notes”), pursuant to an indenture (the “Indenture”) by and among the Issuer, the guarantors named therein and U.S. Bank National Association, as trustee. A portion of the net proceeds was used to repay outstanding borrowings on the Revolving Credit Facility and reduce the principal amount of the Term Loan Facility.

The Notes bear interest at the rate of 3.75% per annum, payable in cash semi-annually in arrears on March 15 and September 15 of each year, beginning on March 15, 2021. The Notes mature on September 15, 2028 and are fully and unconditionally guaranteed on a senior unsecured basis by each of the Issuer’s current and future domestic restricted subsidiaries that guarantee its obligations under its Credit Facilities.

Prior to September 15, 2023, the Issuer may redeem the Notes, in whole or in part, at a redemption price of 100% of the principal amount thereof, plus a “make-whole” premium set forth in the Indenture, plus accrued and unpaid interest. In addition, prior to September 15, 2023, the Issuer may redeem up to 40% of the aggregate principal amount of the Notes at a redemption price equal to 103.75% of the principal amount thereof, plus accrued and unpaid interest, with the net cash proceeds from one or more equity offerings. On or after September 15, 2023, the Issuer may redeem some or all of the Notes at a redemption price decreasing annually from 101.875% of the principal amount to 100% of the principal amount, plus accrued and unpaid interest.

In the event of a change of control triggering event (as defined in the Indenture), the Issuer will be required to offer to repurchase the Notes at a price equal to 101% of the principal amount thereof, plus any accrued and unpaid interest. If holders of not less than 90.0% in aggregate principal amount of the outstanding Notes validly tender in connection with any tender offer or other offer to purchase the Notes (including pursuant to a change of control offer, an alternate offer, or an offer to purchase with the proceeds from any asset disposition, all as described in the indenture), the Issuer will have the right to redeem the remaining Notes outstanding following such purchase at a cash redemption price equal to the applicable price paid to holders in such purchase, plus accrued and unpaid interest.

The Notes are general unsecured obligations of the Issuer and the guarantors. Under the terms of the Indenture, the Notes rank equally in right of payment with all of the Issuer’s and the guarantors’ existing and future senior indebtedness, and rank contractually senior in right of payment to the Issuer’s and the guarantors’ future indebtedness and other obligations that are expressly subordinated in right of payment to the Notes. The Notes are effectively subordinated to the Issuer’s and the guarantors’ existing and future secured indebtedness, including secured indebtedness under the Credit Facilities, to the extent of the value of the assets securing such indebtedness. The Notes and guarantees are structurally subordinated to all existing and future indebtedness and liabilities of the Issuer’s subsidiaries that do not guarantee the Notes.

The Indenture contains covenants that, subject to exceptions and qualifications, among other things, limit the Issuer’s ability and the ability of its Restricted Subsidiaries (as defined in the Indenture) to incur additional indebtedness and guarantee indebtedness, pay dividends or make other distributions or repurchase or redeem Switch, Inc.’s capital stock, prepay, redeem or repurchase certain indebtedness, issue certain preferred stock or similar equity securities, make loans and investments, dispose of assets, incur liens, enter into transactions with affiliates, enter into agreements restricting the ability to pay dividends, and consolidate, merge or sell all or substantially all assets.

The Indenture contains customary events of default including, without limitation, failure to make required payments, failure to comply with certain agreements or covenants, cross-acceleration to certain other indebtedness in excess of specified amounts, certain events of bankruptcy and insolvency, and failure to pay certain judgments. An event of default under the notes will allow either the trustee or the holders of at least 25% in aggregate principal amount of the then outstanding Notes to accelerate, or in certain cases, will automatically cause the acceleration of the maturity of all outstanding Notes.

Fair Value of Long-Term Debt

The estimated fair value of the Company’s long-term debt as of December 31, 2020 and 2019 was approximately $1.01 billion and $755.0 million, respectively, compared to its carrying value, excluding debt issuance costs and original issue discount, of $1.00 billion and $755.0 million, respectively. The estimated fair value of the Company’s long-term debt was based on Level 2 inputs using quoted market prices on or about December 31, 2020 and 2019, respectively.

As of December 31, 2020, long-term debt maturities are as follows (in thousands):

2021	$ —
2022	—
2023	—
2024	400,000
2025	—
Thereafter	600,000
	1,000,000
Less: unamortized debt issuance costs and original issue discount	(8,787)
	$ 991,213

7. Leases

Finance Leases

The Company leases land and a building for one of its data centers from an entity in which a member of its Board of Directors has a beneficial ownership interest. The building lease expires in 2033 with two subsequent 10-year and one five-year renewal option periods and the land lease expires in 2069. As of December 31, 2020, the finance lease ROU assets, net of accumulated amortization, related to the land and building were $36.7 million and $9.9 million, respectively. As of December 31, 2019, the finance lease ROU assets, net of accumulated amortization, related to the land and building were $37.6 million and $10.7 million, respectively.

In February 2016, a wholly-owned subsidiary of Switch, Ltd. acquired rights and interests to manage, construct and use the Nevada Broadband Telemedicine Initiative (“NBTI”) fiber network. The right to use the NBTI fiber network is accounted for as a finance lease. As of December 31, 2020 and 2019, finance lease ROU assets related to the NBTI fiber network, net of accumulated amortization, were $9.8 million and $10.5 million, respectively. There are no future minimum payment obligations related to this finance lease. The finance lease expires in 2042 with a 25-year renewal option.

The Company is the sole consumer of output from feeders related to substations owned by NV Energy. The Company accounts for these arrangements as finance leases. As of December 31, 2020 and 2019, finance lease ROU assets related to the feeders, net of accumulated amortization, were $1.2 million and $1.0 million, respectively. There are no future minimum payment obligations related to these finance leases. The finance leases expire in 2049 through 2058.

In December 2018, the Company purchased a taxable industrial development revenue bond (the “Bond”) issued by a local government agency (the “Agency”) in order to reduce certain tax expenditures for data center facilities under construction. The Bond matures in December 2032. Pursuant to the terms of the Bond, the Company transferred title to certain of its property and equipment with total costs of $229.8 million and $133.1 million as of December 31, 2020 and 2019, respectively, to the Agency. The Company leases the property and equipment from the Agency subject to an option to purchase for nominal consideration, which the Company may exercise at any time, upon tendering the Bond to the Agency. The title to these assets will revert to the Company upon retirement or cancellation of the Bond. As the Company is both the bondholder and the lessee for the property and equipment, the Company exercised its right to offset the amounts invested in and the obligations for this Bond on the consolidated balance sheets. The underlying assets remain in property and equipment, net on the consolidated balance sheets as all risks and rewards remain with the Company.

The Company has entered into lease agreements for indefeasible rights of use in fibers with non-cancellable terms expiring in 2039. The rights to use these fibers are accounted for as finance leases. As of December 31, 2020 and 2019, finance lease ROU assets related to these fiber agreements, net of accumulated amortization, were each $1.1 million.

The Company includes its finance lease ROU assets within property and equipment, net and the current portion of its finance lease liabilities within accrued expenses and other on its consolidated balance sheets.

Operating Leases

The Company leases land, warehouse storage space, and data center buildings under operating leases that have non-cancellable terms expiring in 2021 through 2066 with entities in which a member of its Board of Directors has a beneficial ownership interest.

In addition, the Company leases an aircraft, warehouse storage space, and storage yards for fiber, construction materials, and equipment under operating leases that have non-cancellable terms expiring in 2021 through 2055.

Operating lease ROU assets of $29.2 million and $30.6 million were included within other assets on the Company's consolidated balance sheets as of December 31, 2020 and 2019, respectively.

Lease Expense

The components of lease expense are as follows:

	Years Ended December 31,	
	2020	2019
	(in thousands)	
Finance lease cost		
Amortization of ROU assets	$ 2,540	$ 1,993
Interest on lease liabilities	4,257	3,255
Operating lease cost[1]	6,663	7,136
Short-term lease cost	73	17
Variable lease cost	740	625
Sublease income	(101)	(13)
Total lease cost	$ 14,172	$ 13,013

(1) Related party rent included in operating lease cost was $4.7 million for each of the years ended December 31, 2020 and 2019.

Other Information

Other supplemental information related to leases is as follows:

	Years Ended December 31,	
	2020	2019
	(in thousands)	
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash flows from finance leases	$ 4,579	$ 3,484
Operating cash flows from operating leases	$ 7,241	$ 7,167
Financing cash flows from finance leases	$ 249	$ 876

	December 31,	
	2020	2019
Weighted average remaining lease term (in years)		
Finance leases	36	37
Operating leases	26	25
Weighted average discount rate		
Finance leases	6.9 %	6.9 %
Operating leases	7.2 %	7.2 %

Maturities of Lease Liabilities

Maturities of lease liabilities as of December 31, 2020 are as follows:

	Finance Leases			Operating Leases		
	Related Parties	Other	Total	Related Parties	Other	Total
	(in thousands)					
2021	$ 4,568	$ 21	$ 4,589	$ 3,959	$ 1,376	$ 5,335
2022	4,843	21	4,864	2,909	1,058	3,967
2023	4,969	22	4,991	2,051	881	2,932
2024	5,036	22	5,058	2,051	877	2,928
2025	5,170	23	5,193	2,051	91	2,142
Thereafter	134,138	384	134,522	50,500	583	51,083
Total undiscounted future cash flows	158,724	493	159,217	63,521	4,866	68,387
Less: amount representing interest	(101,508)	(206)	(101,714)	(38,633)	(707)	(39,340)
Present value of undiscounted future cash flows	$ 57,216	$ 287	$ 57,503	$ 24,888	$ 4,159	$ 29,047

Leases Not Yet Commenced

A wholly-owned subsidiary of Switch, Ltd. entered into three power purchase and sale agreements for electricity over a term of 25 years and two battery energy storage system agreements for battery capacity over a term of 20 years. While the Company determined these agreements contain leases under ASC 842, these agreements have not yet commenced as of December 31, 2020. These agreements result in an aggregate lease commitment of $848.0 million during the respective lease terms to commence on the earlier of October 1, 2022, or upon delivery of the battery energy storage system.

Disclosures Related to Periods Prior to Adoption of ASC 842

During the year ended December 31, 2018, rent expense related to operating leases was $7.7 million, of which $5.0 million was related party rent.

8. Retirement Benefit Plans

The Company has a defined contribution retirement plan that covers its eligible employees (the “Plan”). The Plan is qualified in accordance with Section 401(k) of the Internal Revenue Code of 1986, as amended (the “Code”). Eligible employees can participate in the Company’s pre-tax 401(k) plan or after-tax Roth 401(k) plan. The Company makes matching contributions equal to 100% of the first 3% of compensation deferred by a participant. Beginning in January 2019, the Company also makes matching contributions equal to 50% of the next 2% of compensation deferred by a participant. The Company may make an additional discretionary matching contribution. The Company recognized expense related to its contributions to the Plan of $2.3 million, $2.0 million, and $1.5 million during the years ended December 31, 2020, 2019, and 2018, respectively.

9. Commitments and Contingencies

Purchase Commitments

The Company has entered into 20-year renewable energy agreements with NV Energy to purchase all PECs realized from Switch Station 1, a 100 megawatt photovoltaic solar generation facility, not to exceed the Company’s total electric load from its data center facilities, and Switch Station 2, a 79 megawatt photovoltaic solar generation facility. As of December 31, 2020, future minimum PEC purchase commitments are $1.7 million for each of 2021, 2022, 2023, 2024, and 2025, and $20.8 million thereafter.

As of December 31, 2020, the Company is party to a license agreement with a remaining term of 15 years and future minimum purchase commitments of $0.5 million for each of 2022, 2023, 2024, and 2025, and $5.2 million thereafter. There are no future minimum purchase commitments for 2021.

Self-Insurance Reserves

The Company is self-insured for various levels of employee health coverage. Insurance reserves include accruals for estimated settlements for known claims, as well as accruals for estimates of incurred but not reported claims. As of December 31, 2020 and 2019, the estimated liabilities for unpaid and incurred but not reported claims totaled

$0.5 million and $0.8 million, respectively, which are included within accrued salaries and benefits on the consolidated balance sheets.

Legal Proceedings

On September 7, 2017, Switch, Ltd. and Switch, Inc. were named in a lawsuit filed in the U.S. District Court for the District of Nevada by V5 Technologies formerly d/b/a Cobalt Data Centers. Switch, Inc. has been dismissed from the case. The lawsuit alleges, among other things, that Switch, Ltd. monopolized the Las Vegas Metropolitan area of Southern Nevada's data center colocation market and engaged in unfair business practices leading to the failure of Cobalt Data Centers in 2015 and seeks monetary damages in an amount yet to be disclosed. Discovery closed in February 2020. In January 2021, summary judgment was granted in Switch, Ltd.'s favor dismissing all but four of the claims and a partial motion for summary judgment by Cobalt Data Centers was fully denied. The scope of the alleged damages against Switch, Ltd was also narrowed. Switch, Ltd. is vigorously defending the remaining claims in the case.

On September 12, 2017, Switch, Ltd. filed a complaint in the Eighth Judicial District of Nevada against the consultant, Stephen Fairfax, and his business, MTechnology Inc. Among other claims, Switch raised allegations of breach of contract and misappropriation of trade secrets. The complaint also alleged that Aligned Data Centers LLC ("Aligned") hired Mr. Fairfax and MTechnology Inc. to design their data centers; that this consultant had toured Switch under a non-disclosure agreement; and that this consultant breached his confidentiality agreements with Switch by using Switch's designs to design the Aligned data centers. Switch, Ltd. is seeking an injunction to prevent the defendants in the lawsuit from infringing Switch, Ltd.'s patents, as well as other remedies. The parties are currently engaged in discovery.

Four substantially similar putative class action complaints, captioned Martz v. Switch, Inc. et al. (filed April 20, 2018); Palkon v. Switch, Inc. et al. (filed April 30, 2018); Chun v. Switch, Inc. et al. (filed May 11, 2018); and Silverberg v. Switch, Inc. et al. (filed June 6, 2018), were filed in the Eighth Judicial District of Nevada, and subsequently consolidated into a single case (the "State Court Securities Action"). Additionally, on June 11, 2018, one putative class action complaint captioned Cai v. Switch, Inc. et al. was filed in the United States District Court for the District of New Jersey (the "Federal Court Securities Action," and collectively with the State Court Securities Action, the "Securities Actions") and subsequently transferred to the Eighth Judicial District of Nevada in August 2018 and the federal court appointed Oscar Farach lead plaintiff. These lawsuits were filed against Switch, Inc., certain current and former officers and directors and certain underwriters of Switch, Inc.'s IPO alleging federal securities law violations in connection with the IPO. These lawsuits were brought by purported stockholders of Switch, Inc. seeking to represent a class of stockholders who purchased Class A common stock in or traceable to the IPO, and seek unspecified damages and other relief. With respect to the Federal Court Securities Action, in July 2019, the federal court granted Switch, Inc.'s motion to dismiss in part, which narrowed the scope of the plaintiff's case. In December 2019, Switch, Inc. filed a motion for judgment on the pleadings, and in July 2020, the federal court entered a judgment in favor of Switch, Inc. With respect to the State Court Securities Action, in February 2021, the court granted Switch, Inc.'s motion to dismiss. Switch, Inc. believes that the remaining lawsuit is without merit and intends to continue to vigorously defend against it.

On September 10, 2018, two purported stockholders of Switch, Inc. filed substantially similar shareholder derivative complaints, respectively captioned Liu v. Roy et al., and Zhao v. Roy et al., in the Eighth Judicial District of Nevada, which were subsequently consolidated into a single case (the "Derivative Shareholder Action"). These lawsuits allege breaches of fiduciary duty, unjust enrichment, waste of corporate assets, abuse of control, and gross mismanagement against certain current and former officers and directors of Switch, Inc. The plaintiffs also named Switch, Inc. as a nominal defendant. The complaints arise generally from the same allegations described in the State Court Securities Action and Federal Court Securities Action. The plaintiffs seek unspecified damages on Switch, Inc.'s behalf from the officer and director defendants, certain corporate governance actions, compensatory awards, and other relief. In December 2019, the court granted the parties' stipulation to stay the Derivative Shareholder Action until the earlier of any of the following events: the Securities Actions are resolved with prejudice as to each defendant or a motion for summary judgment is resolved in the Federal Court Securities Action. The Derivative Shareholder Action remains stayed.

The outcomes of the legal proceedings are inherently unpredictable, subject to significant uncertainties, and could be material to the Company's financial condition, results of operations, and cash flows for a particular period. Where the Company is a defendant, it will vigorously defend against the claims pleaded against it. These actions are each in preliminary stages and management has determined that based on proceedings to date, it is currently unable to determine the probability of the outcome of these actions or the range of reasonably possible loss, if any.

10. Income Taxes

Income before income taxes for domestic and foreign operations is as follows:

	Years Ended December 31, 2020	2019	2018
	(in thousands)		
Domestic	$ 42,690	$ 34,161	$ 31,379
Foreign	215	94	(118)
Total income before income taxes	$ 42,905	$ 34,255	$ 31,261

Components of income tax expense consist of the following:

	Years Ended December 31, 2020	2019	2018
	(in thousands)		
Current			
Federal	$ —	$ —	$ —
State	—	—	—
Total current income tax expense	$ —	$ —	$ —
Deferred			
Federal	$ 4,514	$ 2,693	$ 1,939
State	16	20	4
Total deferred income tax expense	$ 4,530	$ 2,713	$ 1,943
Total income tax expense	$ 4,530	$ 2,713	$ 1,943

The Company's operations are primarily conducted in the state of Nevada, which does not have a corporate level income tax. A reconciliation of the U.S. statutory tax rate to the effective income tax rate is presented below:

	Years Ended December 31, 2020	2019	2018
U.S. statutory tax rate	21.0 %	21.0 %	21.0 %
Rate effect from pass-through entity	(11.1)	(13.9)	(17.0)
Other	0.7	0.8	2.2
Effective income tax rate	10.6 %	7.9 %	6.2 %

During the years ended December 31, 2020 and 2019, the Company's effective income tax rate differs from the U.S. statutory tax rate primarily because it does not record income taxes on the income before income taxes attributable to noncontrolling interest holders. In addition, the Tax Cuts and Jobs Act ("TCJA") enacted in December 2017 reduced the U.S. federal corporate rate from a top marginal rate of 35% to a flat rate of 21%, limited the net operating loss ("NOL") carryforward deduction to 80% of current year taxable income, and eliminated NOL carrybacks, among other provisions. During the fourth quarter of 2018, the Company finalized its calculations related to the impacts of the TCJA with no adjustment to its previously recorded provisional tax benefit.

Significant components of Switch, Inc.'s deferred tax assets and liabilities were as follows as of:

	December 31,			
	2020		2019	
	(in thousands)			
Deferred tax assets:				
Investment in partnership	$	144,688	$	93,089
Net operating loss carryforwards		58,513		21,283
		203,201		114,372
Less: valuation allowance		—		—
	$	203,201	$	114,372
Deferred tax liabilities:				
Other	$	—	$	—
	$	—	$	—
Net deferred tax assets	$	203,201	$	114,372

As of December 31, 2020, Switch had a U.S. federal income tax NOL carryforward of $276.8 million available to offset future taxable income, of which $1.9 million will expire in 2037 and $274.9 million will be carried forward indefinitely under the TCJA. Switch also has state NOL carryforwards of $8.0 million, of which $0.2 million will expire in 2028, $1.6 million will expire in 2029, $5.5 million will expire in 2030, and $0.7 million will be carried forward indefinitely. Management believes on a more likely than not basis that Switch will be able to realize the tax benefit of its NOL carryforwards.

As a result of the increase in Switch, Inc.'s ownership of Switch, Ltd. following the exchanges of noncontrolling interest for Class A common stock during the years ended December 31, 2020 and 2019 described in Note 13 "Noncontrolling Interest," the Company recorded a deferred tax asset related to the increase in the tax basis of Switch, Inc.'s ownership interest in Switch, Ltd. of $144.7 million and $93.1 million as of December 31, 2020 and 2019, respectively.

As of December 31, 2020, the Company concluded, based on the weight of all available positive and negative evidence, that all of its deferred tax assets are more likely than not to be realized.

The Company did not record any penalties or interest related to income taxes or uncertain tax positions, as management has concluded that no such positions exist, on the consolidated balance sheets as of December 31, 2020 and 2019. In addition, the Company did not record any penalties or interest related to income taxes on the consolidated statements of comprehensive income during the years ended December 31, 2020, 2019, and 2018.

The Company is subject to examination for tax years beginning with the year ended December 31, 2017. The Company is not currently subject to income tax audits in any U.S. or state jurisdictions for any tax year.

Tax Receivable Agreement

Pursuant to the Company's election under Section 754 of the Code, the Company expects to obtain an increase in the tax basis of its ownership interest in the net assets of Switch, Ltd. following the redemption or exchange of noncontrolling interest for Class A common stock and other qualifying transactions. The Company intends to treat any redemptions and exchanges of noncontrolling interest as direct purchases of noncontrolling interest for U.S. federal income tax purposes. These increases in tax basis may reduce the amounts that the Company would otherwise pay in the future to various tax authorities. They may also decrease gains (or increase losses) on future dispositions of certain capital assets to the extent tax basis is allocated to those capital assets.

The Company has recorded a liability under the TRA of $278.9 million and $162.1 million as of December 31, 2020 and 2019, respectively, of which $56.8 million and $49.2 million is owed to named executive officers of the Company and members of its Board of Directors as of December 31, 2020 and 2019, respectively. The TRA provides for the payment of 85% of the amount of the tax benefits, if any, that Switch, Inc. is deemed to realize as a result of increases in the tax basis of its ownership in Switch, Ltd. related to exchanges of noncontrolling interest for Class A common stock. No amounts are expected to be paid within the next 12 months. See Note 13 "Noncontrolling Interest" for additional information.

11. Stockholders' Equity

As of December 31, 2020, under Switch, Inc.'s amended and restated articles of incorporation dated October 5, 2017 (the "Amended and Restated Articles of Incorporation"), Switch, Inc. was authorized to issue: (i) 750 million shares of Class A common stock, par value $0.001 per share, (ii) 300 million shares of Class B common stock, par value $0.001 per share (of which 94.9 million shares have been retired and may not be reissued), (iii) 75 million shares of Class C common stock, par value $0.001 per share (of which 42.9 million shares have been retired and may not be reissued), and (iv) 10 million shares of blank check preferred stock, par value $0.001 per share. Holders of shares of Class A common stock, Class B common stock, and Class C common stock are entitled to one vote, one vote, and 10 votes, respectively, on all matters to be voted upon by the stockholders.

In November 2019, at the request of Switch, Inc.'s Board of Directors, the holders of Class C common stock converted each share of Class C common stock held by them into one share of Class B common stock pursuant to the Amended and Restated Articles of Incorporation.

Dividends

Holders of shares of Class A common stock are entitled to receive cash dividends as may be declared from time to time at the sole discretion of Switch, Inc.'s Board of Directors. Holders of shares of Class B common stock and Class C common stock are not entitled to participate in any such dividends declared by Switch, Inc.'s Board of Directors. During the year ended December 31, 2020, Switch, Inc. paid cash dividends of $0.159 per share of Class A common stock and recorded a total of $17.9 million as a reduction of retained earnings from cash dividends declared by its Board of Directors. During the year ended December 31, 2019, Switch, Inc. paid cash dividends of $0.118 per share of Class A common stock and recorded a total of $9.4 million as a reduction of retained earnings from cash dividends declared by its Board of Directors. During the year ended December 31, 2018, Switch, Inc. paid cash dividends of $0.059 per share of Class A common stock and recorded a total of $3.0 million as a reduction of retained earnings from cash dividends declared by its Board of Directors.

The declaration, amount, and payment of any future dividends on shares of Class A common stock will be at the discretion of Switch, Inc.'s Board of Directors and will depend upon many factors, including Switch, Inc.'s results of operations, financial condition, capital requirements, restrictions in the Credit Agreement and Indenture, and other factors that Switch, Inc.'s Board of Directors deems relevant.

12. Equity-Based Compensation

2005 Common Membership Unit Plan

There were no unit options outstanding under the 2005 Common Membership Unit Plan during the year ended December 31, 2020 and there were no unit options granted or vested during the years ended December 31, 2020, 2019, and 2018. Total aggregate intrinsic value of unit options exercised was $1.2 million during the year ended December 31, 2018.

Common Unit Awards

In September 2017, Switch, Ltd. granted 7.5 million Incentive Units to its Chief Executive Officer (the "CEO Award") and 1.5 million Incentive Units to its President with a hurdle amount of $11.69 per Incentive Unit (the "President Award") under its then-current operating agreement. The CEO Award contained a provision that caused the Incentive Units underlying the CEO Award to convert into Common Units on a one-to-one basis in connection with the closing of Switch, Inc.'s IPO. In connection with the effectiveness of the Switch Operating Agreement and closing of Switch, Inc.'s IPO, the CEO Award converted into 7.5 million Common Units and the President Award converted into 472,000 Common Units after net settling the hurdle amount. If a forfeiture of unvested Common Units under the CEO Award and the President Award occurs, the associated shares of Class B common stock are also forfeited.

The summary of Common Unit activity under the Switch Operating Agreement for the year ended December 31, 2020 is presented below:

	Number of Units (in thousands)	Weighted Average Grant Date Fair Value per Unit
Unvested Common Units—January 1, 2020	3,188	$ 11.11
Vested	(1,594)	$ 11.11
Unvested Common Units—December 31, 2020	1,594	$ 11.11

Total fair value of Common Units vested was $26.6 million, $9.4 million, and $10.7 million for the years ended December 31, 2020, 2019, and 2018, respectively. There were no Common Units granted during the years ended December 31, 2020, 2019, and 2018.

As of December 31, 2020, total equity-based compensation cost related to all unvested Common Units was $1.9 million, which is expected to be recognized over a weighted average period of 0.78 years.

2017 Incentive Award Plan

In September 2017, Switch, Inc.'s Board of Directors adopted the 2017 Incentive Award Plan (the "2017 Plan"). The 2017 Plan, effective as of its adoption date, provides that the initial aggregate number of shares reserved and available for issuance is 25.0 million shares of Class A common stock plus an increase each January 1, beginning on January 1, 2018 and ending on and including January 1, 2027, equal to the lesser of (A) 17.0 million shares of Class A common stock, (B) 5% of the aggregate number of shares of Switch, Inc.'s Class A common stock, Class B common stock, and Class C common stock outstanding on the final day of the immediately preceding calendar year and (C) such smaller number of shares of Class A common stock as is determined by the Board of Directors. Since January 1, 2018, Switch, Inc.'s Board of Directors has approved annual increases totaling 13.3 million shares in the aggregate number of shares of Class A common stock reserved and available for issuance under the 2017 Plan. These increases, and each annual increase thereafter, are subject to adjustment in the event of a stock split, stock dividend or other defined changes in Switch, Inc.'s capitalization.

The 2017 Plan allows for the grant of (i) stock options, including incentive stock options, (ii) stock appreciation rights, (iii) non-statutory stock options under the Code, (iv) restricted stock awards ("RSAs"), (v) restricted stock units ("RSUs"), or (vi) other stock or cash based awards as may be determined by the plan's administrator from time to time. The term of each option award shall be no more than 10 years from the date of grant. Options exercised under the 2017 Plan provide the purchaser with full rights equivalent to those of existing Class A common stock holders and holders as of the date of exercise. The Company's policy for issuing shares upon stock option exercise is to issue new shares of Class A common stock. Additionally, the Switch Operating Agreement states that Switch, Ltd. will maintain at all times a one-to-one ratio between the number of Common Units owned by Switch, Inc. and the number of outstanding shares of Class A common stock, including those issued as a result of stock option exercises and vesting of RSU awards.

The 2017 Plan also provides for dividend equivalent units ("DEUs") based on the value of the dividends per share paid on the Company's Class A common stock, which are accumulated on RSUs during the vesting period. The DEUs vest and will be settled with shares of the Company's Class A common stock concurrently with the vesting of the associated RSUs based on the closing share price on the vesting date.

The summary of stock option activity under the 2017 Plan for the year ended December 31, 2020 is presented below:

	Number of Stock Options (in thousands)	Weighted Average Exercise Price per Stock Option	Weighted Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding—January 1, 2020	8,342	$ 13.57		
Granted	1,117	$ 14.95		
Exercised	(177)	$ 17.00		
Expired	(219)	$ 17.00		
Outstanding—December 31, 2020	9,063	$ 13.59	7.53	$ 28,135
Fully vested and expected to vest—December 31, 2020	9,063	$ 13.59	7.53	$ 28,135
Exercisable—December 31, 2020	5,991	$ 14.93	7.04	$ 11,537

The following additional disclosures are provided for stock options under the 2017 Plan:

	Years Ended December 31,		
	2020	2019	2018
Weighted average grant date fair value	$ 4.38	$ 3.15	$ 1.84
Total fair value of stock options vested (in thousands)	$ 1,917	$ 959	$ 176
Total intrinsic value of stock options exercised (in thousands)	$ 85	$ —	$ —

The weighted average assumptions used in estimating the grant date fair value of stock options are listed in the table below:

	Years Ended December 31,		
	2020	2019	2018
Expected volatility	31.3 %	29.3 %	28.2 %
Risk-free interest rate	0.9 %	2.5 %	2.8 %
Expected term (in years)	6.3	6.3	5.9
Dividend rate	0.8 %	1.1 %	1.7 %

As of December 31, 2020, total equity-based compensation cost related to all unvested stock options was $7.1 million, which is expected to be recognized over a weighted average period of 2.57 years.

The summary of RSU activity, inclusive of DEU settlements, under the 2017 Plan for the year ended December 31, 2020 is presented below:

	Number of Units (in thousands)	Weighted Average Grant Date Fair Value per Unit
Unvested RSUs—January 1, 2020	3,308	$ 12.53
Granted	1,454	$ 15.05
Vested	(1,016)	$ 12.85
Forfeited	(180)	$ 13.81
Unvested RSUs—December 31, 2020	3,566	$ 13.40

The following additional disclosures are provided for RSU awards under the 2017 Plan:

	Years Ended December 31,		
	2020	2019	2018
Weighted average grant date fair value	$ 15.05	$ 9.12	$ 15.03
Total fair value of shares vested (in thousands)	$ 15,102	$ 5,114	$ 2,925

As of December 31, 2020, total equity-based compensation cost related to all unvested RSU awards was $32.2 million, which is expected to be recognized over a weighted average period of 2.32 years.

The summary of RSA activity under the 2017 Plan for the year ended December 31, 2020 is presented below:

	Number of Units (in thousands)	Weighted Average Grant Date Fair Value per Unit
Unvested RSAs—January 1, 2020	80	$ 12.55
Granted	75	$ 16.61
Vested	(80)	$ 12.55
Unvested RSAs—December 31, 2020	75	$ 16.61

The following additional disclosures are provided for RSAs under the 2017 Plan:

	Years Ended December 31,		
	2020	2019	2018
Weighted average grant date fair value	$ 16.61	$ 12.55	$ 13.08
Total fair value of shares vested (in thousands)	$ 1,432	$ 768	$ —

As of December 31, 2020, total equity-based compensation cost related to all unvested RSAs was $0.6 million, which is expected to be recognized over a weighted average period of 0.45 years.

Total equity-based compensation recognized on the consolidated statements of comprehensive income was as follows:

	Years Ended December 31,		
	2020	2019	2018
	(in thousands)		
Cost of revenue	$ 1,864	$ 1,491	$ 1,468
Selling, general and administrative expense	26,869	28,033	34,265
Total equity-based compensation	$ 28,733	$ 29,524	$ 35,733

Total income tax benefit related to equity-based compensation recognized on the consolidated statements of comprehensive income was $2.7 million, $1.9 million, and $1.5 million for the years ended December 31, 2020, 2019, and 2018, respectively.

13. Noncontrolling Interest

Ownership

Switch, Inc. owns a minority economic interest in Switch, Ltd., where “economic interest” means the right to receive any distributions, whether cash, property, or securities of Switch, Ltd., in connection with Common Units. Switch, Inc. presents interest held by noncontrolling interest holders within noncontrolling interest in the consolidated financial statements. During the years ended December 31, 2020, 2019, and 2018, Switch, Inc. issued an aggregate of 28.3 million shares, 34.0 million shares, and 19.1 million shares of Class A common stock, respectively, to Members in connection with such Members’ redemptions of an equivalent number of Common Units and corresponding cancellation and retirement of an equivalent number of Switch, Inc.’s Class B common stock. Such retired shares of Class B common stock may not be reissued. The redemptions occurred pursuant to the terms of the Switch Operating Agreement.

In August 2018, Switch, Inc.’s Board of Directors authorized a program by which Switch, Ltd. may repurchase up to $150.0 million of its outstanding Common Units for cash and Switch, Inc. will cancel a corresponding amount of its shares of Class B common stock. In November 2019, Switch, Inc.’s Board of Directors increased the repurchase authority by $5.0 million, with any unused amount from this increase expiring on December 31, 2019. In February 2020, Switch, Inc.’s Board of Directors authorized the repurchase by Switch, Ltd. of up to $20.0 million of its outstanding Common Units, which authorization expired unused in March 2020. In May 2020, Switch, Inc.’s Board of Directors authorized the repurchase by Switch, Ltd. of up to $20.0 million of its outstanding Common Units held by Rob Roy, the Founder, Chief Executive Officer and Chairman of Switch, Ltd., and an affiliated entity of Mr. Roy (collectively, the “Founder Members”), with any unused amount from this authorization expiring in June 2020. During the years ended December 31, 2020, 2019, and 2018, Switch, Ltd. elected to repurchase an aggregate of 1.1 million, 6.4 million, and 6.1 million, respectively, of its outstanding Common Units for $20.0 million, all of which was from Founder Members, $91.0 million, of which $2.7 million was from Founder Members and $12.8 million was from an entity in which a member of the Company’s Board of Directors has a beneficial ownership interest, and $60.6 million, respectively, upon the exercise by certain Members of their respective redemption right. Pursuant to these repurchases, Switch, Inc. canceled and retired an equivalent amount of its shares of Class B common stock, and such shares may not be reissued. These repurchases were funded from Switch’s existing cash and cash equivalents. As of December 31, 2020, the Company had no repurchase authority remaining.

The ownership of the Common Units is summarized as follows:

	December 31, 2020		December 31, 2019	
	Units (in thousands)	Ownership %	Units (in thousands)	Ownership %
Switch, Inc.'s ownership of Common Units[1]	118,934	49.8 %	89,688	37.8 %
Noncontrolling interest holders' ownership of Common Units[2]	120,045	50.2 %	147,859	62.2 %
Total Common Units	238,979	100.0 %	237,547	100.0 %

(1) Common Units held by Switch, Inc. exclude 75,000 and 80,000 Common Units underlying unvested restricted stock awards as of December 31, 2020 and 2019, respectively.

(2) Common Units held by noncontrolling interest holders exclude 1.6 million and 3.2 million unvested Common Unit awards as of December 31, 2020 and 2019, respectively.

The Company uses the weighted average ownership percentages during the period to calculate the income before income taxes attributable to Switch, Inc. and the noncontrolling interest holders of Switch, Ltd.

Distributions

Prior to the payment of Switch, Inc.'s Class A common stock dividends during the year ended December 31, 2020, Switch, Ltd. made cash distributions to holders of Common Units, excluding Switch, Inc., of $0.159 per Common Unit for a total distribution of $20.9 million. During the year ended December 31, 2019, Switch, Ltd. made cash distributions to holders of Common Units, excluding Switch, Inc., of $0.118 per Common Unit for a total distribution of $20.1 million. During the year ended December 31, 2018, Switch, Ltd. made cash distributions to holders of Common Units, excluding Switch, Inc., of $0.059 per Common Unit for a total distribution of $11.6 million.

14. Net Income Per Share

The following table sets forth the calculation of basic and diluted net income per share:

	Years Ended December 31,		
	2020	2019	2018
	(in thousands, except per share data)		
Net income per share:			
Numerator—basic:			
Net income attributable to Switch, Inc.—basic	$ 15,539	$ 8,917	$ 4,052
Numerator—diluted:			
Net income attributable to Switch, Inc.—basic	$ 15,539	$ 8,917	$ 4,052
Effect of dilutive securities:			
Shares of Class B and Class C common stock	17,651	17,339	—
Net income attributable to Switch, Inc.—diluted	$ 33,190	$ 26,256	$ 4,052
Denominator—basic:			
Weighted average shares outstanding—basic	105,822	76,501	45,682
Net income per share—basic	$ 0.15	$ 0.12	$ 0.09
Denominator—diluted:			
Weighted average shares outstanding—basic	105,822	76,501	45,682
Weighted average effect of dilutive securities:			
Stock options	1,391	712	50
RSUs	1,200	805	6
DEUs	39	24	8
RSAs	37	35	7
Shares of Class B and Class C common stock	135,012	168,252	—
Weighted average shares outstanding—diluted	243,501	246,329	45,753
Net income per share—diluted	$ 0.14	$ 0.11	$ 0.09

Shares of Class B and Class C common stock do not share in the earnings or losses of Switch, Inc. and are therefore not participating securities. As such, separate calculations of basic and diluted net income per share for each of Class B and Class C common stock under the two-class method have not been presented.

The following table presents potentially dilutive securities excluded from the computation of diluted net income per share for the periods presented because their effect would have been anti-dilutive.

	Years Ended December 31,		
	2020	2019	2018
	(in thousands)		
Stock options[(1)]	5,762	5,040	7,352
RSUs[(1)]	28	—	2,228
Shares of Class B and Class C common stock[(2)]	—	—	191,426

(1) Represents the number of instruments outstanding at the end of the period. Application of the treasury stock method would reduce this amount if they had a dilutive effect and were included in the computation of diluted net income per share.
(2) Shares of Class B and Class C common stock at the end of the period are considered potentially dilutive shares of Class A common stock under application of the if-converted method.

15. Segment Reporting

The Company's chief operating decision maker is its Chief Executive Officer. The Company manages its operations as a single operating segment for the purposes of assessing performance and making operating decisions. All of the Company's assets are maintained in the United States, although the Company held an equity method investment in SUPERNAP International through December 31, 2020, which had deployed facilities in Italy and Thailand. The Company derives almost all of its revenue from sales to customers in the United States, based upon the billing address of the customer. Revenue derived from customers outside the United States, based upon the billing address of the customer, was less than 2% of revenue for each of the years ended December 31, 2020, 2019, and 2018.

The Company's revenue is comprised of the following:

	Years Ended December 31,		
	2020	2019	2018
	(in thousands)		
Colocation	$ 413,791	$ 370,682	$ 324,209
Connectivity	91,885	85,009	74,006
Other	5,871	6,619	7,645
Total revenue	$ 511,547	$ 462,310	$ 405,860

16. Subsequent Events

In January and February 2021, Switch, Inc. issued an aggregate of 7.5 million and 0.2 million shares, respectively, of Class A common stock to Members in connection with such Members' redemptions of an equivalent number of Common Units and corresponding cancellation and retirement of an equivalent number of shares of Class B common stock. Such retired shares of Class B common stock may not be reissued. The redemptions occurred pursuant to the terms of the Switch Operating Agreement.

In February 2021, the Company acquired SUPERNAP International's 30% ownership interest in SUPERNAP (Thailand) Company Limited, the entity which has deployed a data center facility in Thailand, for $2.2 million and sold its 50% ownership interest in SUPERNAP International for $4.9 million, thus disposing of its interest in the data center facility deployed in Italy.

In February 2021, Switch, Inc.'s Board of Directors declared a dividend of $0.05 per share of Class A common stock, for a total estimated to be $6.4 million, to be paid on March 26, 2021 to holders of record as of March 16, 2021. Prior to the payment of this dividend, Switch, Ltd. will make a cash distribution to all holders of record of Common Units, including Switch, Inc., of $0.05 per Common Unit, for a total estimated to be $12.1 million.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated, as of December 31, 2020, the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as amended, or the "Exchange Act"). Based on their evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of December 31, 2020.

In designing and evaluating our disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable, not absolute, assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions, regardless of how remote.

Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may deteriorate.

Our management, including our Chief Executive Officer and Chief Financial Officer, evaluated, as of December 31, 2020, the effectiveness of our internal control over financial reporting based on the framework and criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on their evaluation, as of December 31, 2020, our management concluded that our internal control over financial reporting was effective based on this criteria.

The effectiveness of our internal control over financial reporting as of December 31, 2020, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report included herein.

Remediation of Previously Identified Material Weakness

We previously identified and disclosed in our Annual Report on Form 10-K for the year ended December 31, 2019, the following material weakness in our internal control over financial reporting, which has been remediated, as described below:

In connection with the audit of our 2017 consolidated financial statements, a material weakness was identified related to an insufficient complement of resources with an appropriate level of accounting expertise, knowledge, and training commensurate with the complexity of our financial reporting matters. This material weakness led to pervasive immaterial adjustments to our annual and interim consolidated financial statements, inadequate review over account reconciliations, and the inability to maintain segregation of duties over journal entries resulting in the lack of an effective control environment during the years ended December 31, 2019, 2018, and 2017.

During the first three quarters of 2020, we substantially completed the comprehensive risk assessment of the design of existing controls and implemented new controls as needed to remediate the above previously identified material weakness. However, as we had yet to complete the testing and evaluation of the operating effectiveness of controls, the above previously identified material weakness remained unremediated as of September 30, 2020. During the quarter ended December 31, 2020, we completed the testing and evaluation of the operating effectiveness of the controls and concluded that the above previously identified material weakness had been remediated as of December 31, 2020.

Changes in Internal Control over Financial Reporting

The remediation activities described above during the quarter ended December 31, 2020 have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

On February 25, 2021, the Board of Directors of the Company approved and adopted amendments to the Company's bylaws, effective as of that date (the "Amended and Restated Bylaws"), to implement "proxy access," a means for the Company's stockholders to include stockholder-nominated director candidates in the Company's proxy materials for annual meetings of stockholders.

Section 2.13(b) of the Amended and Restated Bylaws generally permit a stockholder, or group of not more than twenty (20) stockholders, to include up to the greater of two (2) director nominees or twenty percent (20%) of the number of directors in office as of the last day a notice for nomination may be timely received in the Company's proxy materials for annual meetings of its stockholders; provided that the stockholder or group of stockholders has for at least three (3) years owned (as determined by the Company's Board of Directors) three percent (3%) or more of the Company's outstanding capital stock entitled to vote. Use of the proxy access process to submit stockholder nominees is subject to additional eligibility, procedural and disclosure requirements set forth in the Amended and Restated Bylaws. The Amended and Restated Bylaws also reflect other technical and administrative changes.

The foregoing description of the Amended and Restated Bylaws is qualified in its entirety by reference to the full text of the Amended and Restated Bylaws, a copy of which is filed as Exhibit 3.2 hereto and incorporated herein by reference.

Part III.

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item is incorporated by reference to the Proxy Statement for the 2021 annual meeting of the stockholders, which will be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2020.

Item 11. Executive Compensation.

The information required by this item is incorporated by reference to the Proxy Statement for the 2021 annual meeting of the stockholders, which will be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2020.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Securities authorized for issuance under equity compensation plans

The table below provides information about our compensation plans under which our Class A common stock is authorized for issuance as of December 31, 2020. See Note 12 to the consolidated financial statements included in Part II, Item 8 for a description of these compensation plans.

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted average exercise price of outstanding options, warrants and rights (b)[2]	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)[3]
Equity compensation plans approved by security holders[1]	12,629,181	$ 13.59	24,003,229

(1) Includes awards granted and available to be granted under our 2017 Incentive Award Plan.
(2) The weighted average exercise price does not include restricted stock units granted under our 2017 Incentive Award Plan.
(3) Our 2017 Incentive Award Plan provides for annual increases, each January 1, beginning on January 1, 2018 and ending on and including January 1, 2027, equal to the lesser of (A) 17.0 million shares of Class A common stock, (B) 5% of the aggregate number of shares of our Class A common stock, Class B common stock, and Class C common stock outstanding on the final day of the immediately preceding calendar year, and (C) such smaller number of shares of Class A common stock as is determined by our board of directors.

Certain information required by this item is incorporated by reference to the Proxy Statement for the 2021 annual meeting of the stockholders, which will be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2020.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this item is incorporated by reference to the Proxy Statement for the 2021 annual meeting of the stockholders, which will be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2020.

Item 14. Principal Accountant Fees and Services.

The information required by this item is incorporated by reference to the Proxy Statement for the 2021 annual meeting of the stockholders, which will be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2020.

Part IV.

Item 15. Exhibit and Financial Statement Schedules.

The following documents are filed as part of this report:

(1) Financial statements:

(2) Financial statement schedules:

All financial statement schedules are omitted since they are not required or are not applicable, or the required information is included in the consolidated financial statements or notes thereto.

(3) Exhibits:

			Incorporated by Reference		
Exhibit No.		Exhibit Description	Form	Exhibit	Filing Date
3.1		Amended and Restated Articles of Incorporation of Switch, Inc.	8-K	3.1	10/11/2017
3.2	*	Amended and Restated Bylaws of Switch, Inc.			
4.1	*	Description of Switch, Inc.'s Securities.			
4.2		Indenture governing Switch, Ltd.'s 3.75% Senior Notes due 2028, dated September 17, 2020, by and among Switch, Ltd., the guarantors named therein and U.S. Bank National Association, as trustee.	8-K	4.1	9/18/2020
4.3		Form of 3.75% Senior Notes due 2028 (included in Exhibit 4.2)	8-K	4.2	9/18/2020
10.1		Tax Receivable Agreement, dated October 5, 2017, by and among Switch, Inc., Switch, Ltd., and each other person from time to time party thereto.	8-K	10.1	10/11/2017
10.2		Amended and Restated Registration Rights Agreement, dated October 5, 2017, by and among Switch, Inc., Switch, Ltd. and each other person from time to time party thereto.	8-K	10.2	10/11/2017
10.3		Fifth Amended and Restated Operating Agreement of Switch, Ltd., dated October 5, 2017, by and among Switch, Ltd. and its Members.	8-K	10.3	10/11/2017
10.4		Amended and Restated Credit Agreement, dated as of June 27, 2017, by and among Switch, Ltd., as borrower, the lenders party thereto and Wells Fargo Bank, National Association, as administrative agent.	S-1	10.4	9/8/2017
10.4(a)		First Amendment to Amended and Restated Credit Agreement, dated as of December 28, 2017, by and among Switch, Ltd., as borrower, the guarantors party thereto, the lenders party thereto and Wells Fargo Bank, National Association, as administrative agent.	8-K	10.1	9/8/2017
10.4(b)		Second Amendment to Amended and Restated Credit Agreement, dated September 17, 2020, by and among Switch, Ltd., as borrower, the guarantors party thereto, the lenders party thereto and Wells Fargo Bank, National Association, as administrative agent.	8-K	10.1	9/18/2020

Exhibit No.		Exhibit Description	Incorporated by Reference Form	Exhibit	Filing Date
10.5		Amended and Restated Collateral Agreement, dated as of June 27, 2017, by and among Switch, Ltd. and certain of its subsidiaries, as grantors, and Wells Fargo Bank, National Association, as administrative agent.	S-1	10.5	9/8/2017
10.6		Amended and Restated Subsidiary Guaranty Agreement, dated as of June 27, 2017, by and among Switch, Ltd., as borrower, certain of its subsidiaries, as grantors, and Wells Fargo Bank, National Association, as administrative agent.	S-1	10.6	9/8/2017
10.7	†	Switch, Inc. 2017 Incentive Award Plan.	S-1/A	10.7	9/25/2017
10.7(a)	†	Form of Stock Option Agreement under Switch, Inc. 2017 Incentive Award Plan.	S-1/A	10.7(a)	9/25/2017
10.7(b)	†	Form of Restricted Stock Agreement under Switch, Inc. 2017 Incentive Award Plan.	S-1/A	10.7(b)	9/25/2017
10.7(c)	†	Form of Restricted Stock Unit Grant under Switch, Inc. 2017 Incentive Award Plan.	10-Q	10.1	11/14/2017
10.8	†	Offer Letter, dated January 7, 2016, by and between Switch, Ltd. and Gabe Nacht.	S-1/A	10.8	9/25/2017
10.9		Form of Indemnification Agreement entered into between Switch, Inc. and certain of its directors and officers, effective October 11, 2017.	S-1	10.9	9/8/2017
10.10		Standard Industrial Real Estate Lease, dated August 21, 2007, by and between Switch, Ltd. (f/k/a Switch Communications Group L.L.C.) and Beltway Business Park Warehouse No. 3, LLC, as amended by (i) First Amendment to Lease, dated January 25, 2008, (ii) Confirmation of Initial Lease Term and Amendment to Lease, dated April 28, 2008, (iii) Third Amendment to Lease, dated January 21, 2011, (iv) Fourth Amendment to Lease, dated August 9, 2013, and (v) Fifth Amendment to Lease, dated June 21, 2016.	S-1/A	10.1	9/25/2017
10.11		Lease Agreement, dated November 4, 2010, by and between Switch, Ltd. (f/k/a Switch Communications Group L.L.C.) and Beltway Business Park Office No. 1, LLC, as amended by (i) First Amendment to Lease, dated April 1, 2011, (ii) Second Amendment to Lease, dated September 25, 2012, and (iii) Third Amendment to Lease, dated February 1, 2014.	S-1/A	10.11	9/25/2017
10.12		Lease Agreement, dated April 1, 2011, by and between Switch, Ltd. (f/k/a Switch Communications Group L.L.C.) and Beltway Business Park Office No. 1, LLC, as amended by (i) First Amendment to Lease, dated July 23, 2014, and (ii) Second Amendment to Lease, dated May 27, 2016.	S-1/A	10.12	9/25/2017
10.12(a)	*	Third Amendment to Lease, dated November 19, 2020, by and between Switch, Ltd. and Beltway Business Park Office No. 1, LLC.			
10.13		Land Lease, dated January 12, 2012, by and between Switch, Ltd. (f/k/a Switch Communications Group L.L.C.) and Beltway Business Park Warehouse No. 4, LLC, as amended by (i) Confirmation of Lease Term and Amendment to Lease, dated February 22, 2013, and (ii) First Amendment to Lease, dated June 21, 2016.	S-1/A	10.13	9/25/2017
10.14		Lease Agreement, dated April 24, 2012, by and between InNEVation L.L.C. and Beltway Business Park Office No. 2, LLC, as amended by (i) First Amendment to Lease, dated February 19, 2013, (ii) Second Amendment to Lease, dated March 14, 2013, (iii) Third Amendment to Lease, dated August 20, 2013, (iv) Fourth Amendment to Lease, dated September 1, 2013, (v) Fifth Amendment to Lease, dated January 12, 2015, (vi) Sixth Amendment to Lease, dated January 19, 2015, (vii) Seventh Amendment to Lease, dated November 15, 2015, and (viii) Eighth Amendment to Lease, dated January 17, 2017.	S-1/A	10.14	9/25/2017
10.15		Standard Industrial Real Estate Lease, dated November 3, 2014, by and between Switch, Ltd. and Beltway Business Park Warehouse No. 1, LLC.	S-1/A	10.15	9/25/2017
10.16		Land Lease, dated June 21, 2016, by and between Switch, Ltd. and Beltway Business Park Warehouse No. 6, LLC, as amended by Confirmation of Lease Term and Amendment to Lease, dated March 22, 2017.	S-1/A	10.16	9/25/2017
10.17	†	LTIP Incentive Unit Award Agreement, by and between Switch, Ltd. and Rob Roy, dated September 7, 2017.	S-1/A	10.17	9/25/2017
10.18	†	Incentive Unit Award Agreement, by and between Switch, Ltd. and Thomas Morton, dated September 7, 2017.	S-1/A	10.18	9/25/2017

Exhibit No.		Exhibit Description	Incorporated by Reference Form	Exhibit	Filing Date
10.19	†	Restricted Stock Unit Award Agreement between Switch, Inc. and Rob Roy dated December 27, 2017.	8-K	10.2	12/28/2017
10.20	†	Executive Severance Agreement by and among Switch, Ltd., Switch, Inc., and Rob Roy dated April 10, 2019.	8-K	10.1	4/16/2019
10.21	†	Executive Severance Agreement by and among Switch, Ltd., Switch, Inc., and Thomas Morton dated April 10, 2019.	8-K	10.2	4/16/2019
10.22	†	Executive Severance Agreement by and among Switch, Ltd., Switch, Inc., and Gabe Nacht dated April 10, 2019.	8-K	10.3	4/16/2019
10.23		Land Lease, dated March 13, 2019, by and between Switch, Ltd. and Beltway Business Park Warehouse No. 8, LLC, as amended by Confirmation of Lease Term and Amendment to Lease, dated June 4, 2019.	10-Q	10.4	8/9/2019
21.1	*	Subsidiaries of Switch, Inc.			
23.1	*	Consent of PricewaterhouseCoopers LLP.			
31.1	*	Certification of the Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.			
31.2	*	Certification of the Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.			
32.1	#	Certifications of the Principal Executive Officer and Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.			
101	*	The following financial statements from the Company's Annual Report on Form 10-K, formatted in Inline XBRL: (i) Consolidated Balance Sheets as of December 31, 2020 and 2019, (ii) Consolidated Statements of Comprehensive Income for the years ended December 31, 2020, 2019, and 2018, (iii) Consolidated Statements of Stockholders' Equity for the years ended December 31, 2020, 2019, and 2018, (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2020, 2019, and 2018, and (v) Notes to Consolidated Financial Statements			
104	*	Cover Page Interactive Data File (formatted in Inline XBRL and contained in Exhibit 101)			

* Filed herewith.
\# Furnished herewith.
† Indicates a management contract or compensatory plan or arrangement.

Item 16. Form 10-K Summary.

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Switch, Inc.
(Registrant)

Date:	March 1, 2021	/s/ Gabe Nacht
		Gabe Nacht *Chief Financial Officer* (Principal Financial and Accounting Officer and Duly Authorized Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Date:	March 1, 2021	/s/ Rob Roy
		Rob Roy *Chief Executive Officer and Chairman of the Board of Directors* (Principal Executive Officer)
Date:	March 1, 2021	/s/ Gabe Nacht
		Gabe Nacht *Chief Financial Officer* (Principal Financial and Accounting Officer and Duly Authorized Officer)
Date:	March 1, 2021	/s/ Angela Archon
		Angela Archon *Director*
Date:	March 1, 2021	/s/ Liane Pelletier
		Liane Pelletier *Director*
Date:	March 1, 2021	/s/ Zareh Sarrafian
		Zareh Sarrafian *Director*
Date:	March 1, 2021	/s/ Kimberly Sheehy
		Kimberly Sheehy *Director*
Date:	March 1, 2021	/s/ Donald D. Snyder
		Donald D. Snyder *Director*
Date:	March 1, 2021	/s/ Tom Thomas
		Tom Thomas *Director*
Date:	March 1, 2021	/s/ Bryan Wolf
		Bryan Wolf *Director*

Exhibit 3.2

SWITCH, INC.

a Nevada corporation

AMENDED AND RESTATED BYLAWS

Effective as of February 25, 2021

TABLE OF CONTENTS

AMENDED AND RESTATED

BYLAWS

of

SWITCH, INC.

a Nevada corporation

ARTICLE I

OFFICES

Section 1.1 PRINCIPAL OFFICE

The principal office of Switch, Inc. (the "Corporation") shall be at such location within or without the State of Nevada as may be determined from time to time by resolution of the board of directors of the Corporation (the "Board of Directors").

Section 1.2 OTHER OFFICES

Other offices and places of business either within or without the State of Nevada may be established from time to time by resolution of the Board of Directors or as the business of the Corporation may require. The Corporation's resident agent and the street address of the Corporation's resident agent in Nevada shall be as determined by the Board of Directors from time to time.

ARTICLE II

STOCKHOLDERS

Section 2.1 ANNUAL MEETINGS

Annual meetings of the Stockholders of the Corporation (the "Stockholders") shall be held on such date and at such time as may be designated from time to time by the Board of Directors. At the annual meeting, directors shall be elected and such other business, if any, may be transacted as may be brought before the meeting pursuant to this Section 2.1. No business may be transacted at an annual meeting of Stockholders, other than business that is either (i) specified in the notice of meeting (or any supplement thereto) given by or at the direction of the Board of Directors (or any duly authorized committee thereof), (ii) otherwise properly brought before the annual meeting by or at the direction of the Board of Directors (or any duly authorized committee thereof) or (iii) otherwise properly brought before the annual meeting by any Stockholder of the Corporation (A) who is a Stockholder of record on the date of the giving of the notice provided for in Section 2.13 and on the record date for the determination of Stockholders entitled to vote at such annual meeting and (B) who complies with the notice procedures set forth in Section 2.13.

Section 2.2 SPECIAL MEETINGS

(a) Special meetings of Stockholders for any purpose or purposes may be called only in the manner provided in Article 8 of the Amended and Restated Articles of Incorporation of the

Corporation dated as of October 5, 2017 (as the same may be further amended, restated, amended and restated or otherwise modified from time to time, the "Articles of Incorporation"). Special meetings validly called in accordance with Article 8 of the Articles of Incorporation may be held at such date and time as specified in the applicable notice. The Corporation may postpone, reschedule or cancel any special meeting of Stockholders previously scheduled by the Board of Directors.

(b) No business shall be acted upon at a special meeting of Stockholders except as set forth in the notice of the meeting or matters incident to the conduct of the meeting as the presiding officer of the meeting shall determine to be appropriate.

Section 2.3 PLACE OF MEETINGS

Any meeting of the Stockholders may be held at any location in or out of the State of Nevada as may be designated in the notice of meeting. The Board of Directors may, in its sole discretion, determine that a meeting of Stockholders shall not be held at any place, but may instead be held solely by means of electronic communications, videoconferencing, teleconferencing or other available technology authorized by and in accordance with Chapter 78 of the Nevada Revised Statutes ("NRS").

Section 2.4 NOTICE OF MEETINGS; WAIVER OF NOTICE

(a) The chief executive officer, if any, the president, a vice president, the secretary, an assistant secretary or any other individual designated by the Board of Directors shall sign and deliver or cause to be delivered to the Stockholders written notice of any Stockholders' meeting not less than ten (10) days, but not more than sixty (60) days, before the date of such meeting. The notice shall state the place, date and time of the meeting, the means of electronic communications, videoconferencing, teleconferencing or other available technology, if any, by which Stockholders and proxy holders may be deemed to be present in person and vote at such meeting, the record date for determining the Stockholders entitled to vote at the meeting (if such date is different from the record date for Stockholders entitled to notice of the meeting) and, except in the case of the annual meeting, the purpose or purposes for which the meeting is called.

(b) In the case of an annual meeting, subject to Section 2.13 hereof, any proper business may be presented for action, except that (i) if a proposed plan of merger, conversion or exchange is submitted to a vote, the notice of the meeting must state that the purpose, or one of the purposes, of the meeting is to consider the plan of merger, conversion or exchange and must contain or be accompanied by a copy or summary of the plan; and (ii) if a proposed action creating dissenters' rights is to be submitted to a vote, the notice of the meeting must state that the Stockholders are or may be entitled to assert dissenters' rights under NRS 92A.300 to 92A.500, inclusive, and be accompanied by a copy of those sections.

(c) A copy of the notice shall be personally delivered, mailed postage prepaid or sent by electronic communication as provided in NRS 75.150 to each Stockholder of record entitled to vote at the meeting at the address appearing on the records of the Corporation. If personally delivered or delivered by electronic communication (with confirmation of successful transmission), service of the notice is complete, and the time of the notice begins to run from the date upon which the notice is delivered or sent by electronic transmission. If mailed, service of the notice is complete, and the time of the notice begins to run from the date upon which the notice is deposited in the mail. Personal delivery of any such notice to any officer of a corporation or association, to any member of a limited-liability company managed by its members, to any manager of a limited-liability company managed by managers, to any general partner of a partnership or to any trustee of a trust constitutes delivery of the notice to the corporation, association, limited-liability company, partnership or trust.

(d) The written certificate of the individual signing a notice of meeting, setting forth the substance of the notice or having a copy thereof attached, the date the notice was mailed or personally delivered to the Stockholders and the addresses to which the notice was mailed, shall be prima facie evidence of the manner and fact of giving such notice.

(e) Any Stockholder may waive notice of any meeting by a signed writing, either before or after the meeting. Such waiver of notice shall be deemed the equivalent of the giving of such notice.

Section 2.5 DETERMINATION OF STOCKHOLDERS OF RECORD

(a) For the purpose of determining the Stockholders entitled to notice of and to vote at any meeting of Stockholders or any adjournment or postponement thereof, or entitled to receive payment of any distribution or the allotment of any rights, or entitled to exercise any rights in respect of any change, conversion, or exchange of stock or for the purpose of any other lawful action, the directors may fix, in advance, a record date, which shall not be more than sixty (60) days nor less than ten (10) days before the date of such meeting, if applicable.

(b) If no record date is fixed, the record date for determining Stockholders: (i) entitled to notice of and to vote at a meeting of Stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held; and (ii) for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto. A determination of Stockholders of record entitled to notice of or to vote at any meeting of Stockholders shall apply to any adjournment or postponement of the meeting; *provided*, *however*, that the Board of Directors may fix a new record date for the adjourned or postponed meeting and must fix a new record date if the meeting is adjourned or postponed to a date more than sixty (60) days later than the meeting date set for the original meeting.

Section 2.6 QUORUM; ADJOURNED MEETINGS

(a) Unless the Articles of Incorporation provide for a different proportion, Stockholders holding at least a majority of the voting power of the Corporation's outstanding shares of capital stock, represented in person or by proxy (regardless of whether the proxy has authority to vote, or express consent or dissent, on all matters), are necessary to constitute a quorum for the transaction of business at any meeting. If, on any issue, voting by classes or series is required by Chapter 78 or 92A of the NRS, the Articles of Incorporation or these Amended and Restated Bylaws adopted by the Board of Directors effective as of February 25, 2021 (as the same may be further amended, restated, amended and restated or otherwise modified from time to time, these "Bylaws"), at least a majority of the voting power, represented in person or by proxy (regardless of whether the proxy has authority to vote, or express consent or dissent, on all matters), within each such class or series is necessary to constitute a quorum of each such class or series.

(b) If a quorum is not represented, a majority of the voting power represented or the person presiding at the meeting may adjourn the meeting from time to time until a quorum shall be represented. At any such adjourned meeting at which a quorum shall be represented, any business may be transacted which might have been transacted as originally called. When a Stockholders' meeting is adjourned to another time or place hereunder, notice need not be given of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. However, if a new record date is fixed for the adjourned meeting, notice of the adjourned meeting must be given to each Stockholder of record as of the new record date. The Stockholders present at a duly convened meeting at which a quorum is present may continue to transact business until adjournment, notwithstanding the departure of enough Stockholders to leave less than a quorum of the voting power.

Section 2.7 VOTING

(a) Unless otherwise provided in Chapter 78 of the NRS, the Articles of Incorporation, or the resolution providing for the issuance of preferred stock or series of common stock adopted by the Board of Directors pursuant to authority expressly vested in it by the provisions of the Articles of Incorporation (if any such authority is so vested), each Stockholder of record, or such Stockholder's duly authorized proxy, shall be entitled to one (1) vote for each share of voting stock standing registered in such Stockholder's name at the close of business on the record date.

(b) If a quorum is present, unless the Articles of Incorporation, these Bylaws, the rules or regulations of any stock exchange applicable to the Corporation, Chapter 78 of the NRS or other applicable law provide for a different proportion, action by the Stockholders entitled to vote on a matter, other than the election of directors, is approved by and is the act of the Stockholders if the number of votes cast in favor of the action exceeds the number of votes cast in opposition to the action, unless voting by classes or series is required for any action of the Stockholders by Chapter 78 or 92A of the NRS, the Articles of Incorporation or these Bylaws, in which case the number of votes cast in favor of the action by the voting power of each such class or series must exceed the number of votes cast in opposition to the action by the voting power of each such class or series.

(c) If a quorum is present, directors shall be elected by a plurality of the votes cast.

(d) In determining the right to vote shares of the Corporation pursuant to this Section 2.7 or otherwise, the Corporation may rely on any instruments or statements presented to it, *provided that* the Corporation has the right, but not the obligation, to require and review such proof of ownership and voting rights as it determines in good faith. The Corporation is entitled to reject a vote, consent, waiver, or proxy appointment if the secretary or other officer or agent authorized to tabulate votes, acting in good faith, has reasonable basis for doubt about the validity of the signature on it or about the signatory's authority to sign for the Stockholder. All decisions of the Corporation shall be valid and binding unless and until a court of competent jurisdiction determines otherwise.

Section 2.8 PROXIES

Each Stockholder entitled to vote at a meeting of Stockholders or to express dissent to a corporate action in writing without a meeting may authorize, in a manner permitted by Chapter 78 of the NRS, another person or persons to act for such Stockholder by proxy. Every proxy shall continue in full force and effect until its expiration or revocation in a manner permitted by Chapter 78 of the NRS. At any meeting of Stockholders, any holder of shares entitled to vote may designate, in a manner permitted by Chapter 78 of the NRS, another person or persons to act as a proxy or proxies. Every proxy shall continue in full force and effect until its expiration or revocation in a manner permitted by Chapter 78 of the NRS.

Section 2.9 NO ACTION WITHOUT A MEETING

Except as expressly provided by, and in accordance with, the Articles of Incorporation, no action shall be taken by the Stockholders except at an annual or special meeting of Stockholders called and noticed in the manner required by these Bylaws, nor may the Stockholders under any circumstance take action by written consent in lieu of a meeting of Stockholders.

Section 2.10 ORGANIZATION

(a) Meetings of Stockholders shall be presided over by the Chairman of the Board, or, in the absence of the Chairman, by the Lead Independent Director, or in the absence of the Lead Independent Director, the chief executive officer, if any, or, in the absence of the chief executive officer, by the president, if any, or, in the absence of the foregoing persons, by a chairman designated by the Board of Directors, or, in the absence of such designation by the Board of Directors, by a chairman chosen at the meeting by the Stockholders entitled to cast a majority of the votes which all Stockholders present in person or by proxy are entitled to cast. The secretary, or in the absence of the secretary an assistant secretary, shall act as secretary of the meeting, but in the absence of the secretary and any assistant secretary the chairman of the meeting may appoint any person to act as secretary of the meeting. The order of business at each such meeting shall be as determined by the chairman of the meeting. The chairman of the meeting shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts and things as are necessary or desirable for the proper conduct of the meeting, including, without limitation, the establishment of procedures for the maintenance of order and safety, limitation on the time allotted to questions or comments on the affairs of the Corporation, restrictions on entry to such meeting after the time prescribed for the commencement thereof and the opening and closing of the voting polls.

(b) The chairman of the meeting may appoint one or more inspectors of elections. The inspector or inspectors may (i) ascertain the number of shares outstanding and the voting power of each; (ii) determine the number of shares represented at a meeting and the validity of proxies or ballots; (iii) count all votes and ballots; (iv) determine any challenges made to any determination made by the inspector(s); and (v) certify the determination of the number of shares represented at the meeting and the count of all votes and ballots.

Section 2.11 ABSENTEES' CONSENT TO MEETINGS

Transactions of any meeting of the Stockholders are as valid as though had at a meeting duly held after regular call and notice if a quorum is represented, either in person or by proxy, and if, either before or after the meeting, each of the persons entitled to vote, not represented in person or by proxy (and those who, although present, either object at the beginning of the meeting to the transaction of any business because the meeting has not been lawfully called or convened or expressly object at the meeting to the consideration of matters not included in the notice which are legally or by the terms of these Bylaws required to be included therein), signs a written waiver of notice and/or consent to the holding of the meeting or an approval of the minutes thereof. All such waivers, consents, and approvals shall be filed with the corporate records and made a part of the minutes of the meeting. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person objects at the beginning of the meeting to the transaction of any business because the meeting is not lawfully called, noticed or convened and except that attendance at a meeting is not a waiver of any right to object to the consideration of matters not properly included in the notice if such objection is expressly made at the time any such matters are presented at the meeting. Neither the business to be transacted at nor the purpose of any regular or special meeting of Stockholders need be specified in any written waiver of notice or consent, except as otherwise provided in these Bylaws.

Section 2.12 DIRECTOR NOMINATIONS

Subject to the rights, if any, of the holders of preferred stock to nominate and elect directors, nominations of persons for election to the Board of Directors of the Corporation may be made by the Board of Directors, by a committee appointed by the Board of Directors, or by any Stockholder of record entitled to vote in the election of directors who complies with the notice procedures set forth in Section 2.13.

Section 2.13 ADVANCE NOTICE OF STOCKHOLDER PROPOSALS AND DIRECTOR NOMINATIONS BY STOCKHOLDERS

(a) *Annual Meetings of Stockholders*.

(i) Nominations of persons for election to the Board of Directors and the proposal of other business to be considered by the Stockholders may be made at an annual meeting of Stockholders only (A) pursuant to the Corporation’s notice of meeting (or any supplement thereto), (B) by or at the direction of the Board of Directors or a committee appointed by the Board of Directors or (C) by any Stockholder who (1) was a Stockholder of record at the time the notice provided for in this Section 2.13 is delivered to the secretary, who is entitled to vote at the meeting and who complies with the notice procedures set forth in this Section 2.13 or (2) properly made such proposal in accordance with Rule 14a-8 under the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (as so amended and inclusive of such rules and regulations, the “Exchange Act”), which proposal has been included in the proxy statement for the annual meeting.

(ii) Except for nominations that are included in the Corporation’s proxy statement for an annual meeting of Stockholders pursuant to Section 2.13(b), for any nominations or other business to be properly brought before an annual meeting by a Stockholder pursuant to Section 2.13(a)(ii)(C) of these Bylaws, the Stockholder must have given timely notice thereof in writing to the secretary and must provide any updates or supplements to such notice at the times and in the forms required by this Section 2.13, and any such proposed business (other than the nominations of persons for election to the Board of Directors) must constitute a proper matter for Stockholder action. To be timely, a Stockholder's notice shall be delivered to the secretary at the principal executive offices of the Corporation not later than the close of business on the ninetieth (90th) day, nor earlier than the close of business on the one hundred twentieth (120th) day, prior to the first anniversary of the preceding year's annual meeting (*provided, however*, that in the event that the date of the annual meeting is more than thirty (30) days before or more than seventy (70) days after such anniversary date, notice by the Stockholder must be so delivered not earlier than the close of business on the one hundred twentieth (120th) day prior to such annual meeting and not later than the close of business on the later of the ninetieth (90th) day prior to such annual meeting or the tenth (10th) day following the day on which public announcement of the date of such meeting is first made by the Corporation). In no event shall the public announcement of an adjournment or postponement of an annual meeting commence a new time period (or extend any time period) for the giving of a Stockholder's notice as described above. To be in proper form, such Stockholder's notice must:

(A) as to each person whom the Stockholder proposes to nominate for election as a director of the Corporation, set forth (I) all information relating to such person that is required to be disclosed in solicitations of proxies for election of directors in an election contest, or is otherwise required, in each case pursuant to and in accordance with Section 14(a) of the Exchange Act and the rules and regulations promulgated thereunder, (II) such person's written consent to being named in the proxy statement as a nominee and to serving as a director of the Corporation if elected and (III) such other information regarding such person as may reasonably be requested by the Board of Directors in writing prior to the meeting of Stockholders at which such candidate's nomination is to be acted upon in order for the Board of Directors to determine the eligibility of such candidate for nomination to be an independent director of the Corporation in accordance with the Corporation's Corporate Governance Guidelines adopted by the Board of Directors and as amended from time to time;

(B) with respect to each nominee for election or reelection to the Board of Directors, include the completed and signed questionnaire, representation and agreement required by Section 2.14 of these Bylaws;

(C) as to any other business that the Stockholder proposes to bring before the meeting, set forth (I) a brief description of the business desired to be brought before the meeting, (II) the text of the proposal or business (including the text of any resolutions proposed for consideration and in the event that such business includes a proposal to amend these Bylaws, the language of the proposed amendment), (III) the reasons for conducting such business at the meeting and any material interest in such business of such Stockholder and the beneficial owner, if any, on whose behalf the proposal is made, and (IV) any other information relating to such item of business that would be required to be disclosed in a proxy statement or other filing required to be made in connection with the solicitation of proxies in support of the business proposed to be brought before the meeting pursuant to Section 14A of the Exchange Act; and

(D) as to the Stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made, set forth (I) the name and address of such Stockholder, as they appear on the Corporation's books, and of such beneficial owner, (II) the class or series and number of shares of stock which are owned beneficially and of record by such Stockholder and such beneficial owner, except that such Stockholder shall in all events be deemed to beneficially own any shares of any class or series of stock of the Corporation as to which such Stockholder has a right to acquire beneficial ownership at any time in the future, (III) a description of any agreement, arrangement or understanding with respect to the nomination or proposal between or among such Stockholder and/or such beneficial owner, any of their respective affiliates or associates, and any others acting in concert with any of the foregoing, including, in the case of a nomination, the nominee, (IV) a description of any agreement, arrangement or understanding (including any derivative or short positions, profit interests, options, warrants, convertible securities, stock appreciation or similar rights, hedging transactions, and borrowed or loaned shares) that has been entered into as of the date of the Stockholder's notice by, or on behalf of, such Stockholder and such beneficial owners, whether or not such instrument or right shall be subject to settlement in underlying shares of Stock, the effect or intent of which is to mitigate loss to, manage risk or benefit of share price changes for, or increase or decrease the voting power of, such Stockholder or such beneficial owner, with respect to securities of the Corporation, (V) a representation that the Stockholder is a holder of record of stock entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to propose such business or nomination, (VI) a representation whether the Stockholder or the beneficial owner, if any, intends or is part of a group which intends (x) to deliver a proxy statement and/or form of proxy to holders of at least the percentage of outstanding stock required to approve or adopt the proposal or elect the nominee and/or (y) otherwise to solicit proxies or votes from Stockholders in support of such proposal or nomination, (VII) any material pending or threatened legal proceeding in which such Stockholder is a party or material participant involving the Corporation or any of its officers or directors, or any affiliate of the Corporation, (VIII) any other material relationship between such Stockholder, on the one hand, and the Corporation or any affiliate of the Corporation, on the other hand, and (IX) any other information relating to such Stockholder and beneficial owner, if any, required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for, as applicable, the proposal and/or for the election of directors in an election contest pursuant to and in accordance with Section 14A of the Exchange Act and the rules and regulations promulgated thereunder.

The foregoing notice requirements of this Section 2.13(a) shall be deemed satisfied by a Stockholder with respect to business other than a nomination for election as a director of the Corporation if the Stockholder has notified the Corporation of his, her or its intention to present a proposal at an annual meeting in compliance with applicable rules and regulations promulgated under the Exchange Act and such Stockholder's proposal has been included in a proxy statement that has been prepared by the Corporation to solicit proxies for such annual meeting. The Corporation may require any proposed nominee for election as a director of the Corporation to furnish such other information as the Corporation may reasonably require to determine the eligibility of such proposed nominee to serve as a director of the Corporation.

(iii) Notwithstanding anything in the second sentence of Section 2.13(a)(ii) of these Bylaws to the contrary, in the event that the number of directors to be elected to the Board of Directors at the annual meeting is increased effective after the time period for which nominations would otherwise be due under Section 2.13(a)(ii) of these Bylaws and there is no public announcement by the Corporation naming the nominees for the additional directorships at least one hundred (100) days prior to the first anniversary of the preceding year's annual meeting, a Stockholder's notice required by this Section 2.13 shall also be considered timely, but only with respect to nominees for the additional directorships, if it shall be delivered to the secretary at the principal executive offices of the Corporation not later than the close of business on the tenth (10th) day following the day on which such public announcement is first made by the Corporation.

(b) *Proxy Access for Director Nominations at Annual Meetings.*

(i) Starting with the 2022 annual meeting of the Stockholders of the Corporation, the Corporation shall include in its proxy statement for an annual meeting of Stockholders the name, together with the Required Information (as defined below), of any person nominated for election (a "Stockholder Nominee") to the Board of Directors by a Stockholder that satisfies, or by a group of no more than twenty (20) Stockholders that satisfy, the requirements of paragraph (b) of this Section 2.13 (an "Eligible Stockholder"), and that expressly elects at the time of providing the notice required by

Section 2.13(b) (the "Proxy Access Nomination Notice") to have its nominee included in the Corporation's proxy materials pursuant to Section 2.13(b).

(ii) To be timely, a Stockholder's Proxy Access Nomination Notice shall be delivered to the secretary at the principal executive offices of the Corporation not later than the close of business on the one hundred twentieth (120th) day, nor earlier than the close of business on the one hundred fiftieth (150th) day, prior to the first anniversary of the date the Corporation first distributed its definitive proxy statement to Stockholders for the preceding year's annual meeting (*provided, however*, that in the event that the date of the annual meeting is more than thirty (30) days before or more than seventy (70) days after the anniversary date of the preceding year's annual meeting, notice by the Stockholder must be so delivered not earlier than the close of business on the one hundred fiftieth (150th) day prior to such annual meeting and not later than the close of business on the later of the one hundred twentieth (120th) day prior to such annual meeting or the tenth (10th) day following the day on which public announcement of the date of such meeting is first made by the Corporation). In no event shall the public announcement of an adjournment or postponement of an annual meeting commence a new time period (or extend any time period) for the giving of the Proxy Access Nomination Notice as described above.

(iii) For purposes of this Section 2.13(b), the "Required Information" that the Corporation will include in its proxy statement is (A) the information concerning the Stockholder Nominee and Eligible Stockholder that is required to be disclosed in the Corporation's proxy statement by the regulations promulgated under the Exchange Act; and (B) if the Eligible Stockholder so elects, a Statement (as defined below). To be timely, the Required Information must be delivered to the secretary of the Corporation within the time period specified in Section 2.13(b) for providing the Proxy Access Nomination Notice.

(iv) The number of Stockholder Nominees (including Stockholder Nominees that were submitted by an Eligible Stockholder for inclusion in the Corporation's proxy materials pursuant to Section 2.13(b), but either are subsequently withdrawn or that the Board of Directors decides to nominate as nominees of the Board of Directors) appearing in the Corporation's proxy materials with respect to an annual meeting of Stockholders shall not exceed the greater of (A) two (2) or (B) twenty percent (20%) of the number of directors in office as of the last day on which a Proxy Access Nomination Notice may be delivered pursuant to Section 2.13(b)(ii), or if such amount is not a whole number, the closest whole number below twenty percent (20%) (the "Permitted Number") (*provided, however*, that the Permitted Number shall be reduced, but not below zero, by the number of such director candidates for which the Corporation shall have received one or more valid notices that a Stockholder (other than an Eligible Stockholder) intends to nominate director candidates at such applicable annual meeting of Stockholders pursuant to Section 2.13(a) and, provided, further, that in the event that one or more vacancies for any reason occurs on the Board of Directors at any time after the Proxy Access Nomination Notice is required to be submitted pursuant to Section 2.13(b) and before the date of the applicable annual meeting of Stockholders and the Board of Directors resolves to reduce the size of the Board of Directors in connection therewith, the Permitted Number shall be calculated based on the number of directors in office as so reduced). In the event that the number of

Stockholder Nominees submitted by Eligible Stockholders pursuant to Section 2.13(b) exceeds the Permitted Number, each Eligible Stockholder will select one Stockholder Nominee for inclusion in the Corporation's proxy materials until the maximum number is reached, going in order of the amount (largest to smallest) of shares of capital stock of the Corporation each Eligible Stockholder has disclosed as owned in its respective Proxy Access Nomination Notice submitted to, and confirmed by, the Corporation. If the Permitted Number is not reached after each Eligible Stockholder has selected one Stockholder Nominee, this selection process will continue as many times as necessary, following the same order each time, until the Permitted Number is reached.

(v) For purposes of Section 2.13(b), an Eligible Stockholder shall be deemed to "own" only those outstanding shares of the capital stock of the Corporation as to which the Stockholder possesses both (A) full voting and investment rights pertaining to the shares and (B) the full economic interest in (including the opportunity for profit and risk of loss on) such shares provided that the number of shares calculated in accordance with clauses (A) and (B) shall not include any shares (i) sold by such Stockholder or any of its affiliates in any transaction that has not been settled or closed, (ii) borrowed by such Stockholder or any of its affiliates for any purposes or purchased by such Stockholder or any of its affiliates pursuant to an agreement to resell, or (iii) subject to any option, warrant, forward swap, contract of sale, or other derivative or similar agreement entered into by such Stockholder or any of its affiliates, whether any such instruction or agreement is to be settled with shares or with cash based on the notional amount or value of shares of outstanding capital stock of the Corporation, in any such case which instruction or agreement has, or is intended to have, the purpose or effect of reducing in any manner, to any extent or at any time in the future, such Stockholder's or its affiliates' full right to vote or direct the voting of any shares, and/or hedging, offsetting or altering to any degree gain or loss arising from the full economic ownership of such shares by such Stockholder or affiliate. For avoidance of doubt, shares of Class B common stock of the Corporation shall constitute shares of capital stock "owned" within the definition in this Section 2.13(b)(v) if and only if such owner both is a Permitted Class B Owner possessing the full voting rights conferred by such Class B common stock, and also possesses the full investment rights and economic interest associated therewith as the holder of record of an aggregate number of common units in Switch Ltd. equal to the number of such shares of Class B common stock, all as required by the Articles of Incorporation, including but not limited to Article 3.E thereof. A Stockholder shall "own" shares held in the name of a nominee or other intermediary so long as the Stockholder retains the right to instruct how the shares are voted with respect to the election of directors and possesses the full economic interest in the shares. A person's ownership of shares shall be deemed to continue during any period in which (A) the person has loaned such shares provided that the person has the power to recall such loaned shares on three (3) business days' notice, or (B) the person has delegated any voting power by means of a proxy, power of attorney or other instrument or arrangement that is revocable at any time by the person. The terms "owned," "owning" and other variations of the word "own" shall have correlative meanings. Whether outstanding shares of capital stock of the Corporation are "owned" for these purposes shall be determined by the Board of Directors, which determination shall be conclusive and binding on the Corporation and its Stockholders.

(vi) An Eligible Stockholder must have owned (as defined above) for at least three (3) years the number of shares of capital stock as shall constitute three percent

(3%) or more of the outstanding capital stock of the Corporation entitled to vote on the election of persons to the Board of Directors (the "Required Shares") as both (A) a date within seven (7) days prior to the date of the Proxy Access Nomination Notice and (B) the record date for determining Stockholders entitled to vote at the annual meeting of Stockholders. For purposes of satisfying the foregoing ownership requirements under Section 2.13(b), (A) the shares of capital stock owned by one or more Stockholders, or by the person or persons who own shares of the capital stock of the Corporation and on whose behalf any Stockholder is acting, may be aggregated, provided that the number of Stockholders and other persons whose ownership is aggregated does not exceed twenty (20) and (B) a group of funds under common management and investment control shall be treated as one Stockholder or person for this purpose. No person may be a member of more than one group of persons constituting and Eligible Stockholder under Section 2.13(b). For the avoidance of doubt, if a group of Stockholders aggregates ownership of shares in order to meet the requirements under Section 2.13(b), all shares held by each Stockholder constituting their contribution to the foregoing three percent (3%) threshold must be held by that Stockholder continuously for at least three (3) years, and evidence of such continuous ownership shall be provided as specified under Section 2.13(b).

(vii) Within the time period specified in Section 2.13(b) for providing the Proxy Access Nomination Notice, an Eligible Stockholder must provide the following information in writing to the secretary of the Corporation:

(A) one or more written statements from the record holder of the shares (and from each intermediary through which the shares are or have been held during the requisite three (3)-year holding period) verifying that, as of a date within seven (7) days prior to the date of the Proxy Access Nomination Notice, the Eligible Stockholder owns, and has owned continuously for the preceding three (3) years, the Required Shares, and the Eligible Stockholder's agreement to provide, within five (5) business days after the record date for the annual meeting of Stockholders, written statements from the record holder and intermediaries verifying the Eligible Stockholder's continuous ownership of the Required Shares through the record date;

(B) an agreement to provide immediate notice if the Eligible Stockholder ceases to own the Required Shares at any time prior to the date of the annual meeting;

(C) a copy of the Schedule 14N (or any successor form) relating to the Stockholder Nominee, completed and filed with the Securities and Exchange Commission (the "SEC") by the Eligible Stockholder as applicable, in accordance with SEC rules;

(D) the written consent of each Stockholder Nominee to being named in the Corporation's proxy statement, proxy card and ballot as a nominee and to serving as a director if elected;

(E) a written notice of the nomination of such Stockholder Nominee that includes the following additional information, agreements, representations and warranties by the Nominating Stockholder (including, for the avoidance of doubt, each group member in the case of a group of Eligible Stockholders): (1) the information that would be required to be set forth in a Stockholder's notice of nomination pursuant to Section 2.13(a); (2) the details of any relationship that existed within the past three years and that would have been described pursuant to Item 6(e) of Schedule 14N (or any successor item) if it existed on the date of submission of the Schedule 14N; (3) a representation and warranty that the Eligible Stockholder did not acquire, and is not holding, securities of the Corporation for the purpose or with the effect of influencing or changing control of the Corporation; (4) a representation and warranty that the Eligible Stockholder has not nominated and will not nominate for election to the Board of Directors at the annual meeting any person other than such Eligible Stockholder's Stockholder Nominee(s); (5) a representation and warranty that the Nominating Stockholder has not engaged in and will not engage in a "solicitation" within the meaning of Rule 14a-1(l) under the Exchange Act (without reference to the exception in Section 14a-(l)(2)(iv)) with respect to the annual meeting, other than with respect to such Eligible Stockholder's Stockholder Nominee(s) or any nominee of the Board of Directors); (6) a representation and warranty that the Eligible Stockholder will not use any proxy card other than the Corporation's proxy card in soliciting Stockholders in connection with the election of a Stockholder Nominee at the annual meeting; (7) a representation and warranty that the Stockholder Nominee's candidacy or, if elected, board membership would not violate applicable state or federal law or the Stock Exchange Rules; (8) a representation and warranty that the Stockholder Nominee: (a) does not have any direct or indirect relationship with the Corporation that will cause the Stockholder Nominee to be deemed not independent pursuant to the Corporation's Corporate Governance Guidelines and otherwise qualifies as independent under the Corporation's Corporate Governance Guidelines, the SEC rules and the stock exchange rules; (b) meets the audit committee and compensation committee independence requirements under the stock exchange rules; (c) is a "non-employee director" for the purposes of Rule 16b-3 under the Exchange Act (or any successor rule); (d) is an "outside director" for the purposes of Section 162(m) of the Internal Revenue Code (or any successor provision); (e) is not and has not been subject to any event specified in Rule 506(d)(1) of Regulation D (or any successor rule) under the Securities Act of 1933 or Item 401(f) of Regulation S-K (or any successor rule) under the Exchange Act, without reference to whether the event is material to an evaluation of the ability or integrity of the Stockholder Nominee; and (f) meets the director qualifications set forth in the Corporation's Corporate Governance Guidelines; (9) a representation and warranty that the Eligible Stockholder satisfies the eligibility requirements set forth in Section 2.13(b); (10) a representation and warranty that the Nominating Stockholder will continue to satisfy the eligibility requirements described in Section 2.13(b) through the date of the annual meeting; (11) a representation as to the Eligible Stockholder's intentions with respect to continuing to hold the Required Shares for at least one year following the annual meeting; (12) details of any position of the Stockholder Nominee as an officer or director of any competitor (that is, any entity that produces products or provides services that compete with or are alternatives to the principal products produced or services provided by the Corporation or its affiliates) of the Corporation, within the three years preceding the submission of the Proxy Access Nomination Notice; (13) if desired, a statement for inclusion in the proxy statement in support of the Stockholder Nominee's election to the Board of Directors, provided that such statement shall not exceed 500 words and shall fully comply with Section 14 of the Exchange Act and the rules and regulations thereunder (the "Statement"); and (14) in the case of a nomination by a Nominating Stockholder comprised of a group, the designation by all Eligible Stockholders in such group of one Eligible Stockholder that is authorized to act on behalf of the group with respect to matters relating to the nomination, including withdrawal of the nomination;

(F) an executed agreement pursuant to which the Eligible Stockholder (including in the case of a group, each Eligible Stockholder in that group) agrees: (1) to comply with all applicable laws, rules and regulations in connection with the nomination, solicitation and election; (2) to file any written solicitation or other communication with the Stockholders relating to one or more of the Corporation's directors or director nominees or any Stockholder Nominee with the SEC, regardless of whether any such filing is required under any rule or regulation or whether any exemption from filing is available for such materials under any rule or regulation; (3) to assume all liability stemming from an action, suit or proceeding concerning any legal or regulatory violation arising out of any communication by the Eligible Stockholder or the Stockholder Nominee nominated by such Eligible Stockholder with the Corporation, its Stockholders or any other person in connection with the nomination or election of directors, including, without limitation, the Proxy Access Nomination Notice; (4) to indemnify and hold harmless the Corporation and each of its directors, officers and employees individually against any liability, loss, damages, expenses or other costs (including attorneys' fees) incurred in connection with any threatened or pending action, suit or proceeding, whether legal, administrative or investigative, against the Corporation or any of its directors, officers or employees arising out of or relating to a failure of the Eligible Stockholder or Stockholder Nominee to comply with, or any breach or alleged breach of, its, or his or her, as applicable, obligations, agreements or representations under Section 2.13(b); (5) in the event that any information included in the Proxy Access Nomination Notice, or any other communication by the Eligible Stockholder (including with respect to any Eligible Stockholder included in a group) with the Corporation, its Stockholders or any other person in connection with the nomination or election ceases to be true and accurate in all material respects (or due to a subsequent development omits a material fact necessary to make the statements made not misleading), to promptly (and in any event within 48 hours of discovering such misstatement or omission) notify the Corporation and any other recipient of such communication of the misstatement or omission in such previously provided information and of the information that is required to correct the misstatement or omission; and (6) in the event that the Eligible Stockholder (including any Eligible Stockholder included in a group) has failed to continue to satisfy the eligibility requirements described in Section 2.13(b), to promptly notify the Corporation; and

(G) an executed agreement by the Stockholder Nominee: (1) to provide to the Corporation such other information, including completion of the Corporation's director nominee questionnaire, as the Board of Directors or its designee, acting in good faith, may request; (2) that the Stockholder Nominee has read and agrees, if elected, to serve as a member of the Board of Directors, to adhere to the Corporation's Corporate Governance Guidelines, Code of Business Conduct and any other Corporation policies and guidelines applicable to directors; and (3) that the Stockholder Nominee is not and will not become a party to (a) any compensatory, payment or other financial agreement, arrangement or understanding with any person or entity in connection with such person's nomination, candidacy, service or action as director of the Corporation that has not been fully disclosed to the Corporation prior to or concurrently with the Nominating Stockholder's submission of the Proxy Access Nomination Notice, (b) any agreement, arrangement or understanding with, and has not given and will not give any commitment or assurance to, any person or entity as to how the Stockholder Nominee, if elected as a director of the Corporation, will act or vote on any issue or question (a "Voting Commitment") that has not been fully disclosed to the Corporation prior to or concurrently with the Nominating Stockholder's submission of the Nomination Notice or (c) any Voting Commitment that could limit or interfere with the Stockholder Nominee's ability to comply, if elected as a director of the Corporation, with his or her fiduciary duties under applicable law.

The information and documents required by this Section 2.13(b) shall be (1) provided with respect to and executed by each Eligible Stockholder in the group; and

(2) provided with respect to the persons specified in Instructions 1 and 2 to Items 6(c) and (d) of Schedule 14N (or any successor item).

(viii) Notwithstanding anything to the contrary contained in this Section 2.13, the Corporation may omit from its proxy statement, or may supplement or correct, any information, including all or any portion of the Statement, if the Board of Directors or its designee in good faith determines that: (A) such information is not true in all material respects or omits a material statement necessary to make the statements made not misleading, (B) the inclusion of such information in the proxy statement would otherwise violate SEC proxy rules or any other applicable law, rule or regulation or would be excludable by the Corporation under the rules and regulations of the SEC if submitted as part of a shareholder proposal for inclusion in a proxy statement, or (C) the inclusion of such information in the proxy statement would impose a material risk of liability upon the Corporation. The Corporation may solicit against, and include in the proxy statement any other information that the Corporation or the Board of Directors determines, in their discretion, to include in the proxy statement relating to the nomination of the Stockholder Nominee, including, without limitation, any statement in opposition to the nomination and any of the information provided pursuant to Section 2.13.

(ix) Any Stockholder Nominee who is included in the Corporation's proxy materials for a particular annual meeting of Stockholders but either (A) withdraws from or becomes ineligible or unavailable for election at the annual meeting, or (B) does not receive at least twenty-five percent (25%) of the votes cast "for" the Stockholder Nominee's election, will be ineligible to be a Stockholder Nominee pursuant to this Section 2.13(b) for the next two (2) annual meetings.

(x) The Corporation shall not be required to include, pursuant to Section 2.13(b), any Stockholder Nominees in its proxy materials for any meeting of Stockholders (A) for which the secretary of the Corporation receives a notice that a Stockholder has nominated a person for election to the Board of Directors pursuant to the advance notice requirements for Stockholder Nominees for director set forth in Section 2.13(a) and such Stockholder does not expressly elect at the time of providing the notice to have its nominee included in the Corporation's proxy materials pursuant to this Section 2.13(b), (B) if the Eligible Stockholder who has nominated such Stockholder Nominee (or any member of any group of Stockholders that together is such Eligible Stockholder) has engaged in or is currently engaged in, or has been or is a "participant" in another person's, "solicitation" within the meaning of Rule 14a-1(l) under the Exchange Act in support of the election of any individual as a director at the meeting other than its Stockholder Nominee(s) or a nominee of the Board of Directors, (C) if another person is engaging in a "solicitation" within the meaning of Rule 14a-1(l) under the Exchange Act in support of the election of any individual as a director at the applicable annual meeting of Stockholders other than a nominee of the board of directors, (D) who is not independent under the applicable independence standards, as determined by the Board of Directors, (E) whose election as a member of the Board of Directors would cause the Corporation to be in violation of these bylaws, the certificate of incorporation, the listing standards of the principal exchange upon which the Corporation's capital stock is traded, or any applicable law, rule or regulation, (F) who is or has been, within the past three years, an officer or director of a competitor, as defined in Section 8 of the Clayton

Antitrust Act of 1914, (G) who is a named subject of a pending criminal proceeding (excluding traffic violations and other minor offenses) or has been convicted in such a criminal proceeding within the past ten (10) years, (H) who is subject to any order of the type specified in Rule 506(d) of Regulation D promulgated under the Securities Act of 1933, as amended, (I) if such Stockholder Nominee or the applicable Eligible Stockholder shall have provided information to the Corporation in respect to such nomination that was untrue in any material respect or omitted to state a material fact necessary in order to make the statement made, in light of the circumstances under which it was made, not misleading, as determined by the Board of Directors, (J) if the Eligible Stockholder or applicable Stockholder Nominee otherwise contravenes any of the agreements or representations made by such Eligible Stockholder or Stockholder Nominee or fails to comply with its obligations pursuant to this Section 2.13, or (K) the Stockholder Nominee becomes unwilling or unable to serve on the Board of Directors or any material violation or breach occurs of any of the obligations, agreements, representations or warranties of the Eligible Stockholder or the Stockholder Nominee under Section 2.13(b).

(xi) Notwithstanding anything to the contrary set forth herein, the Board of Directors or the person presiding at the annual meeting of Stockholders shall declare a nomination by an Eligible Stockholder to be invalid, and such nomination shall be disregarded notwithstanding that proxies in respect of such vote may have been received by the Corporation, if (A) the information provided pursuant to this Section 2.13(b) to the Corporation by such individual or by the Eligible Stockholder (or any member of any group of Stockholders that together is such Eligible Stockholder) who nominated such individual was untrue in any material respect or omitted to state a material fact necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading or (B) such individual, or the Eligible Stockholder (or any member of any group of Stockholders that together is such Eligible Stockholder) who nominated such individual, shall have breached or failed to comply with its agreements, representations undertakings and/or obligations pursuant to these bylaws, including, without limitation, Section 2.13(b).

(xii) The Eligible Stockholder (including any person who owns shares of capital stock of the Corporation that constitute part of the Eligible Stockholder's ownership for purposes of satisfying Section 2.13(b)(vi)) shall file with the SEC any solicitation or other communication with the Stockholders relating to the meeting at which the Stockholder Nominee will be nominated, regardless of whether any such filing is required under Regulation 14A of the Exchange Act or whether any exemption from filing is available for such solicitation or other communication under Regulation 14A of the Exchange Act.

(c) *Special Meetings of Stockholders.* Except to the extent required by law, special meetings of Stockholders may be called only in accordance with Article 8 of the Articles of Incorporation. The only business to be conducted at a special meeting of Stockholders is that brought before the meeting pursuant to the Corporation's notice of meeting. Nominations of persons for election to the Board of Directors may be made at a special meeting of Stockholders at which directors are to be elected pursuant to the Corporation's notice of meeting (1) by or at the direction of the Board of Directors or a committee appointed by the Board of Directors or (2) provided that the Board of Directors has determined that directors shall be elected at such meeting, by any Stockholder who is a Stockholder of record at the time the notice provided for in this Section 2.13 is delivered to the secretary, who is entitled to vote at the meeting and upon such election and who complies with the notice procedures set forth in this Section 2.13. In the event the Corporation calls a special meeting of Stockholders for the purpose of electing one or more directors to the Board of Directors, any such Stockholder entitled to vote in such election of directors may nominate a person or persons (as the case may be) for election to such position(s) as specified in the Corporation's notice of meeting, if the Stockholder's notice required by Section 2.13(a)(ii) of these Bylaws (including the completed and signed questionnaire, representation and agreement required by Section 2.14 of these Bylaws and any other information, documents, affidavits, or certifications required by the Corporation) shall be delivered to the secretary at the principal executive offices of the Corporation not earlier than the close of business on the one hundred twentieth (120th) day prior to such special meeting and not later than the close of business on the later of the ninetieth (90th) day prior to such special meeting or the tenth (10th) day following the day on which public announcement is first made of the date of the special meeting and of the nominees proposed by the Board of Directors to be elected at such meeting. In no event shall the public announcement of an adjournment or postponement of a special meeting commence a new time period (or extend any time period) for the giving of a Stockholder's notice as described above.

(d) *General.*

(i) Except as otherwise expressly provided in any applicable rule or regulation promulgated under the Exchange Act, only such persons who are nominated in accordance with the procedures set forth in this Section 2.13 shall be eligible to be elected at an annual or special meeting of Stockholders to serve as directors and only such business shall be conducted at a meeting of Stockholders as shall have been brought before the meeting in accordance with the procedures set forth in this Section 2.13. Except as otherwise provided by law, the chairman of the meeting shall have the power and duty (A) to determine whether a nomination or any business proposed to be brought before the meeting was made or proposed, as the case may be, in accordance with the procedures set forth in this Section 2.13 (including whether the Stockholder or beneficial owner, if any, on whose behalf the nomination or proposal is made or solicited (or is part of a group which solicited) or did not so solicit, as the case may be, proxies or votes in support of such Stockholder's nominee or proposal in compliance with such Stockholder's representation as required by Section 2.13(a)(ii)(D)(VI) of these Bylaws) and (B) if any proposed nomination or business was not made or proposed in compliance with this Section 2.13, to declare that such nomination shall be disregarded or that such proposed business shall not be transacted. Notwithstanding the foregoing provisions of this Section 2.13, unless otherwise required by law, if the Stockholder (or a qualified representative of the Stockholder) does not appear at the annual or special meeting of Stockholders to present a nomination or proposed business, such nomination shall be disregarded and such proposed business shall not be transacted, notwithstanding that proxies in respect of such vote may have been received by the Corporation. For purposes of this Section 2.13, to be considered a qualified representative of the Stockholder, a person must be a duly authorized officer, manager or partner of such Stockholder or must be authorized by a writing executed by such Stockholder or an electronic transmission delivered by such Stockholder to act for such Stockholder as proxy at the meeting of

Stockholders and such person must produce such writing or electronic transmission, or a reliable reproduction of the writing or electronic transmission, at the meeting of Stockholders.

(ii) For purposes of this Section 2.13, "public announcement" shall include disclosure in a press release reported by the Dow Jones News Service, Associated Press or other national news service or in a document publicly filed by the Corporation with the SEC pursuant to Section 13, 14 or 15(d) of the Exchange Act and the rules and regulations promulgated thereunder.

(iii) Notwithstanding the foregoing provisions of this Section 2.13, a Stockholder shall also comply with all applicable requirements of the Exchange Act and the rules and regulations promulgated thereunder with respect to the matters set forth in this Section 2.13; *provided, however*, that any references in these Bylaws to the Exchange Act or the rules and regulations promulgated thereunder are not intended to and shall not limit any requirements applicable to nominations or proposals as to any other business to be considered pursuant to this Section 2.13 (including clause (a)(ii)(C)) hereof and clause (b) hereof), and compliance with clauses (a)(ii)(C) and (b) of this Section 2.13 shall be the exclusive means for a Stockholder to make nominations or submit other business (other than, as provided in the penultimate sentence of clause (a)(i) hereof, business other than nominations brought properly under and in compliance with Rule 14a-8 promulgated under the Exchange Act, as may be amended from time to time). Nothing in this Section 2.13 shall be deemed to affect any rights (x) of Stockholders to request inclusion of proposals or nominations in the Corporation's proxy statement pursuant to applicable rules and regulations promulgated under the Exchange Act or (y) of the holders of any series of preferred stock of the Corporation to elect directors pursuant to any applicable provisions of the Articles of Incorporation.

(iv) A Stockholder providing notice of its intent to propose business or to nominate a person for election to the Board of Directors shall update and supplement its notice to the Corporation, if necessary, so that the information provided or required to be provided in such notice pursuant to this Section 2.13 shall be true and correct as of the record date for notice of the meeting and as of the date that is ten (10) business days prior to the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to, or mailed and received by, the secretary at the principal executive offices of the Corporation not later than five (5) business days after the record date for notice of the meeting (in the case of the update and supplement required to be made as of such record date), and not later than eight (8) business days prior to the date for the meeting or, if practicable, any adjournment or postponement thereof (and, if not practicable, on the first practicable date prior to the date to which the meeting has been adjourned or postponed) (in the case of the update and supplement required to be made as of ten (10) business days prior to the meeting or any adjournment or postponement thereof).

Section 2.14 SUBMISSION OF QUESTIONNAIRE, REPRESENTATION AND AGREEMENT

To be eligible to be a nominee for election or reelection as a director of the Corporation, the candidate for nomination must have previously delivered (in accordance with the time periods prescribed for delivery of notice under Section 2.13 of these Bylaws), to the secretary at the principal executive offices of the Corporation, (a) a completed written questionnaire (in a form provided by the Corporation) with respect to the background, qualifications, stock ownership and independence of such proposed nominee and (b) a written representation and agreement (in form provided by the Corporation) that such candidate for nomination (i) is not and, if elected as a director during his or her term of office, will not become a party to (A) a Voting Commitment or (B) any Voting Commitment that could limit or interfere with such proposed nominee's ability to comply, if elected as a director of the Corporation, with such proposed nominee's fiduciary duties under applicable law, (ii) is not, and will not become a party to, any agreement, arrangement or understanding with any person or entity other than the Corporation with respect to any direct or indirect compensation or reimbursement for service as a director and (iii) if elected as a director of the Corporation, will comply with all applicable corporate governance, conflict of interest, confidentiality, stock ownership and trading and other policies and guidelines of the Corporation applicable to directors and in effect during such person's term in office as a director of the Corporation (and, if requested by any candidate for nomination, the secretary shall provide to such candidate for nomination all such policies and guidelines then in effect).

ARTICLE III
DIRECTORS

Section 3.1 GENERAL POWERS; PERFORMANCE OF DUTIES

The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors, except as otherwise provided in Chapter 78 of the NRS or the Articles of Incorporation.

Section 3.2 NUMBER, TENURE, AND QUALIFICATIONS

The total number of directors constituting the entire Board of Directors shall be fixed in the manner provided in the Articles of Incorporation. The number of directors shall be no less than one (1) director and no more than fifteen (15) directors. Directors need not be Stockholders. Each director shall hold office until his or her successor shall be elected or appointed and qualified or until his or her earlier death, retirement, disqualification, resignation or removal. No reduction of the number of directors shall have the effect of removing any director prior to the expiration of his or her term of office. No provision of this Section 3.2 shall be restrictive upon the right of the Board of Directors to fill vacancies or upon the right of the Stockholders to remove directors as is hereinafter provided.

Section 3.3 CHAIRMAN OF THE BOARD

The Board of Directors shall elect a Chairman of the Board from the members of the Board of Directors who shall preside at all meetings of the Board of Directors and Stockholders at which he or she shall be present and shall have and may exercise such powers as may, from time to time, be assigned to him or her by the Board of Directors, these Bylaws or as may be provided by applicable law.

Section 3.4 LEAD INDEPENDENT DIRECTOR

In the event that the Board of Directors elects a Chairman of the Board who is an employee of the Corporation, the Board may also elect a Lead Independent Director who shall preside at all meetings of the Board of Directors and Stockholders at which he or she shall be present and the Chairman of the Board is not present and shall have and may exercise such powers as may, from time to time, be assigned to him or her by the Board of Directors, these Bylaws or as may be provided by law.

Section 3.5 REMOVAL AND RESIGNATION OF DIRECTORS

A director may be removed from the Board of Directors by the Stockholders only as provided in the Articles of Incorporation. Any director may resign effective upon giving written notice, unless the notice specifies a later time for effectiveness of such resignation, to the Chairman of the Board, if any, the president or the secretary, or in the absence of all of them, any other officer.

Section 3.6 VACANCIES; NEWLY CREATED DIRECTORSHIPS

Vacancies on the Board of Directors shall be filled in the manner provided by the Articles of Incorporation. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent directors.

Section 3.7 REGULAR MEETINGS

Regular meetings of the Board of Directors may be held at such places, if any, within or without the State of Nevada and at such times as the Board of Directors may from time to time determine.

Section 3.8 SPECIAL MEETINGS

Except as otherwise required by law, and subject to any rights of the holders of preferred stock, special meetings of the Board of Directors may be called only by the Chairman of the Board, if any, or if there be no Chairman of the Board, by any of the chief executive officer, if any, the president or the secretary, and shall be called by the Chairman of the Board, if any, the chief executive officer, if any, the president or the secretary upon the request of at least a majority of the authorized number of directors. If the Chairman of the Board, or if there be no Chairman of the Board, each of the chief executive officer, if any, president and secretary, refuses or neglects to call such special meeting, a special meeting may be called by a written request signed by the Lead Independent Director or at least a majority of the directors in office.

Section 3.9 PLACE OF MEETINGS

Any regular or special meeting of the directors of the Corporation may be held at such place as the Board of Directors, or in the absence of such designation, as the notice calling such meeting, may designate. A waiver of notice signed by the directors may designate any place for the holding of such meeting.

Section 3.10 NOTICE OF MEETINGS

Except as otherwise provided in Section 3.7 of these Bylaws, there shall be delivered to each director at the address appearing for him or her on the records of the Corporation, at least twenty-four (24) hours before the time of such meeting, a copy of a written notice of any meeting (a) by delivery of such notice personally, (b) by mailing such notice postage prepaid, (c) by facsimile, (d) by overnight courier, or (e) by electronic transmission or electronic writing, including, but not limited to, email. If mailed to an address inside the United States, the notice shall be deemed delivered two (2) business days following the date the same is deposited in the United States mail, postage prepaid. If mailed to an address outside the United States, the notice shall be deemed delivered four (4) business days following the date the same is deposited in the United States mail, postage prepaid. If sent via facsimile, by electronic transmission or electronic writing, including, but not limited to, email, the notice shall be deemed delivered upon sender's receipt of confirmation of the successful transmission. If sent via overnight courier, the notice shall be deemed delivered the business day following the delivery of such notice to the courier. If the address of any director is incomplete or does not appear upon the records of the Corporation it will be sufficient to address any notice to such director at the registered office of the Corporation. Any director may waive notice of any meeting, and the attendance of a director at a meeting and oral consent entered on the minutes of such meeting shall constitute waiver of notice of the meeting unless such director objects, prior to the transaction of any business, that the meeting was not lawfully called, noticed or convened. Attendance for the express purpose of objecting to the transaction of business thereat because the meeting was not properly called or convened shall not constitute presence or a waiver of notice for purposes hereof. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Board of Directors need be specified in the notice or waiver of notice of such meeting.

Section 3.11 QUORUM; ADJOURNED MEETINGS

(a) A majority of the directors constituting the Whole Board (as such term is defined in the Articles of Incorporation), at a meeting duly assembled, is necessary to constitute a quorum for the transaction of business; *provided that*, solely for the purposes of filling vacancies pursuant to Section 3.6 of these Bylaws, a meeting of the Board of Directors may be held if a majority of the directors then in office participate in such meeting.

(b) At any meeting of the Board of Directors where a quorum is not present, a majority of those present may adjourn, from time to time, until a quorum is present, and no notice of such adjournment shall be required. At any adjourned meeting where a quorum is present, any business may be transacted which could have been transacted at the meeting originally called.

Section 3.12 MANNER OF ACTING; PRESUMPTION OF ASSENT

Except in cases in which the Articles of Incorporation, these Bylaws or applicable law otherwise provides, a majority of the votes entitled to be cast by the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors. A director of the Corporation who is present at a meeting of the Board of Directors at which action on any corporate matter is taken shall be presumed to have assented to the action unless his dissent shall be entered in the minutes of the meeting or unless he shall file his written dissent to such action with the person acting as secretary of the meeting before the adjournment thereof or shall forward any dissent by certified or registered mail to the secretary of the Corporation immediately after the adjournment of the meeting. Such right to dissent shall not apply to a director who voted in favor of such action.

Section 3.13 TELEPHONIC AND ELECTRONIC MEETINGS

Members of the Board of Directors or of any committee designated by the Board of Directors may participate in a meeting of the Board of Directors or such committee through electronic communications, videoconferencing, teleconferencing or other available technology for which the Corporation shall have implemented reasonable measures to: verify the identity of each person participating through such means as a director or committee, as the case may be; and provide the directors or members a reasonable opportunity to participate in the meeting and to vote on matters submitted to the directors or members, as the case may be, including an opportunity to communicate and to read or hear the proceedings of the meeting in a substantially concurrent manner with such proceedings. Participation in a meeting pursuant to this Section 3.13 constitutes presence in person at the meeting.

Section 3.14 ACTION WITHOUT MEETING

Any action required or permitted to be taken at a meeting of the Board of Directors may be taken without a meeting if, before or after the action, a written consent thereto is signed by all of the members of the Board of Directors. The written consent may be signed in counterparts, including, without limitation, facsimile counterparts, and shall be filed with the minutes of the proceedings of the Board of Directors.

Section 3.15 POWERS AND DUTIES

(a) Except as otherwise restricted by the laws of the State of Nevada or the Articles of Incorporation, the Board of Directors has full control over the business and affairs of the Corporation. The Board of Directors may delegate any of its authority to manage, control or conduct the business of the Corporation to any standing or special committee in accordance with Section 3.16, or to any officer or agent, and to appoint any persons to be agents of the Corporation with such powers, including the power to sub-delegate, and upon such terms as may be deemed fit.

(b) The Board of Directors, in its discretion, or the officer of the Corporation presiding at a meeting of Stockholders, in his or her discretion, may (i) require that any votes cast at such meeting shall be cast by written ballot, and/or (ii) submit any contract or act for approval or ratification at any annual meeting of the Stockholders or any special meeting properly called and noticed for the purpose of considering any such contract or act, *provided* a quorum is present.

Section 3.16 COMMITTEES

Committees designated and appointed by the Board of Directors shall function subject to and in accordance with the following regulations and procedures:

(a) *Designation and Appointment*. The Board of Directors may designate and appoint one or more committees under such name or names and for such purpose or function as may be deemed appropriate or under no name.

(b) *Members; Alternate Members; Terms*. Each committee thus designated and appointed shall consist of one or more of the directors of the Corporation. The Board of Directors may designate one or more of its members as alternate members of any committee, who may, subject to any limitations imposed by the entire Board of Directors, replace absent or disqualified members at any meeting of that committee. If the Board of Directors has not designated alternate members to a committee, then in the absence or disqualification of a member of a committee from a meeting, the member or members thereof present at such meeting and not disqualified from voting, whether or not he, she or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at such meeting in the place of any such absent or disqualified member ("substitute member"). The members or alternate members of any such committee shall serve at the pleasure of and subject to the discretion of the Board of Directors.

(c) *Authority*. Each committee, to the extent provided in the resolution of the Board of Directors creating same, shall have and may exercise such of the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation as the Board of Directors may direct and delegate, except, however, those matters which are required by statute to be reserved unto or acted upon by the entire Board of Directors.

(d) *Records*. Each such committee shall keep and maintain regular records or minutes of its meetings and report the same to the Board of Directors when required.

(e) *Change in Number*. The number of members or alternate members of any committee appointed by the Board of Directors, as herein provided, may be increased or decreased from time to time by appropriate resolution adopted by of the Board of Directors.

(f) *Vacancies*. Vacancies in the membership of any committee designated and appointed hereunder shall be filled by the Board of Directors, at a regular or special meeting of the Board of Directors, in a manner consistent with the provisions of this Section 3.16.

(g) *Removal*. Any member or alternate member of any committee appointed hereunder may be removed by the Board of Directors by the Board of Directors, whenever in its judgment the best interests of the Corporation will be served thereby.

(h) *Meetings*. The time, place and notice (if any) of committee meetings shall be determined by the members of such committee.

(i) *Quorum; Requisite Vote*. At meetings of any committee appointed hereunder, a majority of the number of members designated by the Board of Directors to such committee shall constitute a quorum for the transaction of business. For purposes of determining the presence of a quorum, alternate members or substitute members acting in the place of members at a meeting shall be counted to the same extent as the members of the committee they are replacing; *provided*, *however*, that for purposes of determining the presence of a quorum, alternate members and substitute members (whether or not acting in the place of members at a meeting) shall not be included in the number of members designated by the Board of Directors to such committee. The act of a majority of the members (and to if acting in the place of members, alternate members or substitute members) of the committee present at any meeting at which a quorum is present shall be the act of such committee, except as otherwise specifically provided by statute. If a quorum is not present at a meeting of such committee, the members of such committee present may adjourn the meeting from time to time, without notice other than an announcement at the meeting, until a quorum is present.

(j) *Compensation*. Unless otherwise restricted by the Articles of Incorporation or these Bylaws, compensation for members and alternate members of any committee appointed pursuant to the authority hereof may be authorized by the Board of Directors pursuant to the provisions of Section 3.17 hereof or by a committee specifically authorized by the Board of Directors to authorize compensation.

(k) *Action Without Meeting*. Unless otherwise restricted by the Articles of Incorporation or these Bylaws, any action required or permitted to be taken at a meeting of any committee may be taken without a meeting if a consent in writing, setting forth the action so taken, is signed by all members of such committee. Such consent shall have the same force and effect as a unanimous vote at a meeting. The signed consent, or a signed copy, shall become a part of the record of such committee.

Section 3.17 COMPENSATION

The Board of Directors, without regard to personal interest, may establish the compensation of directors for services in any capacity. If the Board of Directors establishes the compensation of directors pursuant to this subsection, such compensation is presumed to be fair to the Corporation unless proven unfair by a preponderance of the evidence. The directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors and may be paid a fixed sum for attendance at each meeting of the Board of Directors or a stated salary or other compensation as a director. No such payment shall preclude any director from serving the Corporation in any other capacity and receiving compensation therefor. Any director of the Corporation may decline any or all such compensation payable to such director in his or her discretion.

Section 3.18 ORGANIZATION

Meetings of the Board of Directors shall be presided over by the Chairman of the Board, or in the absence of the Chairman of the Board by the Lead Independent Director, or in his or her absence by a chairman chosen at the meeting. The secretary, or in the absence of the secretary an assistant secretary, shall act as secretary of the meeting, but in the absence of the secretary and any assistant secretary the chairman of the meeting may appoint any person to act as secretary of the meeting. The order of business at each such meeting shall be as determined by the chairman of the meeting.

ARTICLE IV
OFFICERS

Section 4.1 ELECTION

The Board of Directors shall elect and appoint a president, a secretary and a treasurer. Said officers shall serve until their respective successors are elected and appointed and shall qualify or until their earlier resignation or removal. The Board of Directors may from time to time, by resolution, elect or appoint such other officers and agents as it may deem advisable, who shall hold office at the pleasure of the Board of Directors, and shall have such powers and duties and be paid such compensation as may be directed by the Board of Directors. Any individual may hold two or more offices.

Section 4.2 REMOVAL; RESIGNATION

Any officer or agent elected or appointed by the Board of Directors may be removed by the Board of Directors with or without cause. Any officer may resign at any time upon written notice to the Corporation. Any such removal or resignation shall be subject to the rights, if any, of the respective parties under any contract between the Corporation and such officer or agent.

Section 4.3 VACANCIES

If any vacancy occurs in any office of the Corporation, the Board of Directors may appoint a successor to fill such vacancy for the remainder of the unexpired term and until a successor shall have been duly chosen and qualified.

Section 4.4 CHIEF EXECUTIVE OFFICER

The Board of Directors may elect a chief executive officer who, subject to the supervision and control of the Board of Directors, shall have the ultimate responsibility for the management and control of the business and affairs of the Corporation, and shall perform such other duties and have such other powers which are delegated to him or her by the Board of Directors, these Bylaws or as may be provided by law.

Section 4.5 PRESIDENT

The president, subject to the supervision and control of the Board of Directors, shall in general actively supervise and control the business and affairs of the Corporation. The president shall keep the Board of Directors fully informed as the Board of Directors may request and shall consult the Board of Directors concerning the business of the Corporation. The president shall perform such other duties and have such other powers which are delegated and assigned to him or her by the Board of Directors if any, these Bylaws or as may be provided by law.

Section 4.6 CHIEF FINANCIAL OFFICER

The Board of Directors may elect a Chief Financial Officer. The Chief Financial Officer shall in general have overall supervision of the financial operations of the Corporation. The president shall perform such other duties and have such other powers which are delegated and assigned to him or her by the Board of Directors if any, these Bylaws or as may be provided by law.

Section 4.7 VICE PRESIDENTS

The Board of Directors may elect one or more vice presidents. In the absence or disability of the president, or at the president's request, the vice president or vice presidents, in order of their rank as fixed by the Board of Directors, and if not ranked, the vice presidents in the order designated by the Board of Directors, or in the absence of such designation, in the order designated by the president, shall perform all of the duties of the president, and when so acting, shall have all the powers of, and be subject to all the restrictions on the president. Each vice president shall perform such other duties and have such other powers which are delegated and assigned to him or her by the Board of Directors, the president, these Bylaws or as may be provided by law.

Section 4.8 SECRETARY

The secretary shall attend all meetings of the Stockholders, the Board of Directors and any committees, and shall keep, or cause to be kept, the minutes of proceeds thereof in books provided for that purpose. He or she shall keep, or cause to be kept, a register of the Stockholders and shall be responsible for the giving of notice of meetings of the Stockholders, the Board of Directors and any committees, and shall see that all notices are duly given in accordance with the provisions of these Bylaws or as required by law. The secretary shall be custodian of the corporate seal, the records of the Corporation, the stock certificate books, transfer books and stock ledgers, and such other books and papers as the Board of Directors or appropriate committee may direct. The secretary shall perform all other duties commonly incident to his or her office and shall perform such other duties which are assigned to him or her by the Board of Directors, the chief executive officer, if any, the president, these Bylaws or as may be provided by law.

Section 4.9 ASSISTANT SECRETARIES

An assistant secretary shall, at the request of the secretary, or in the absence or disability of the secretary, perform all the duties of the secretary. He or she shall perform such other duties as are assigned to him or her by the Board of Directors, the chief executive officer, if any, the president, these Bylaws or as may be provided by law.

Section 4.10 TREASURER

The treasurer, subject to the order of the Board of Directors, shall have the care and custody of, and be responsible for, all of the money, funds, securities, receipts and valuable papers, documents and instruments of the Corporation, and all books and records relating thereto. The treasurer shall keep, or cause to be kept, full and accurate books of accounts of the Corporation's transactions, which shall be the property of the Corporation, and shall render financial reports and statements of condition of the Corporation when so requested by the Board of Directors, the Chairman of the Board, if any, the chief executive officer, if any, or the president. The treasurer shall perform all other duties commonly incident to his or her office and such other duties as may, from time to time, be assigned to him or her by the Board of Directors, the chief executive officer, if any, the president, these Bylaws or as may be provided by law. The treasurer shall, if required by the Board of Directors, give bond to the Corporation in such sum and with such security as shall be approved by the Board of Directors for the faithful performance of all the duties of the treasurer and for restoration to the Corporation, in the event of the treasurer's death, resignation, retirement or removal from office, of all books, records, papers, vouchers, money and other property in the treasurer's custody or control and belonging to the Corporation. The expense of such bond shall be borne by the Corporation. If a chief financial officer of the Corporation has not been appointed, the treasurer may be deemed the chief financial officer of the Corporation.

Section 4.11 ASSISTANT TREASURERS

An assistant treasurer shall, at the request of the treasurer, or in the absence or disability of the treasurer, perform all the duties of the treasurer. He or she shall perform such other duties which are assigned to him or her by the Board of Directors, the chief executive officer, the president, the treasurer, these Bylaws or as may be provided by law. The Board of Directors may require an assistant treasurer to give a bond to the Corporation in such sum and with such security as it may approve, for the faithful performance of the duties of the assistant treasurer, and for restoration to the Corporation, in the event of the assistant treasurer's death, resignation, retirement or removal from office, of all books, records, papers, vouchers, money and other property in the assistant treasurer's custody or control and belonging to the Corporation. The expense of such bond shall be borne by the Corporation.

Section 4.12 EXECUTION OF NEGOTIABLE INSTRUMENTS, DEEDS AND CONTRACTS

All checks, drafts, notes, bonds, bills of exchange, and orders for the payment of money of the Corporation; all deeds, mortgages, proxies, powers of attorney and other written contracts, documents, instruments and agreements to which the Corporation shall be a party; and all assignments or endorsements of stock certificates, registered bonds or other securities owned by the Corporation shall be signed in the name of the Corporation by such officers or other persons as the Board of Directors may from time to time designate. The Board of Directors may authorize the use of the facsimile signatures of any such persons. Any officer of the Corporation shall be authorized to attend, act and vote, or designate another officer or an agent of the Corporation to attend, act and vote, at any meeting of the owners of any entity in which the Corporation may own an interest or to take action by written consent in lieu thereof. Such officer or agent, at any such meeting or by such written action, shall possess and may exercise on behalf of the Corporation any and all rights and powers incident to the ownership of such interest.

ARTICLE V
CAPITAL STOCK

Section 5.1 ISSUANCE

Shares of the Corporation's authorized stock shall, subject to any provisions or limitations of the laws of the State of Nevada, the Articles of Incorporation or any contracts or agreements to which the Corporation may be a party, be issued in such manner, at such times, upon such conditions and for such consideration as shall be prescribed by the Board of Directors.

Section 5.2 STOCK CERTIFICATES AND UNCERTIFICATED SHARES

(a) Every holder of stock in the Corporation shall be entitled to have a certificate signed by or in the name of the Corporation by the chief executive officer, if any, the president or a vice president, and by the secretary or an assistant secretary, of the Corporation (or any other two officers or agents so authorized by the Board of Directors), certifying the number of shares of stock owned by him, her or it in the Corporation; *provided*, *however*, that the Board of Directors may authorize the issuance of uncertificated shares of some or all of any or all classes or series of the Corporation's stock. Any such issuance of uncertificated shares shall have no effect on existing certificates for shares until such certificates are surrendered to the Corporation, or on the respective rights and obligations of the Stockholders. Whenever such certificate is countersigned or otherwise authenticated by a transfer agent or a transfer clerk and by a registrar (other than the Corporation), then a facsimile of the signatures of any corporate officers or agents, the transfer agent, transfer clerk or the registrar of the Corporation may be printed or lithographed upon the certificate in lieu of the actual signatures. In the event that any officer or officers who have signed, or whose facsimile signatures have been used on any certificate or certificates for stock cease to be an officer or officers because of death, resignation or other reason, before the certificate or certificates for stock have been delivered by the Corporation, the certificate or certificates may nevertheless be adopted by the Corporation and be issued and delivered as though the person or persons who signed the certificate or certificates, or whose facsimile signature or signatures have been used thereon, had not ceased to be an officer or officers of the Corporation.

(b) Within a reasonable time after the issuance or transfer of uncertificated shares, the Corporation shall send to the registered owner thereof a written statement certifying the number of shares owned by him, her or it in the Corporation and, at least annually thereafter, the Corporation shall provide to such Stockholders of record holding uncertificated shares, a written statement confirming the information contained in such written statement previously sent. Except as otherwise expressly provided by law, the rights and obligations of the Stockholders shall be identical whether or not their shares of stock are represented by certificates.

(c) Each certificate representing shares shall state the following upon the face thereof: the name of the state of the Corporation's organization; the name of the person to whom issued; the number and class of shares and the designation of the series, if any, which such certificate represents; the par value of each share, if any, represented by such certificate or a statement that the shares are without par value. Certificates of stock shall be in such form consistent with law as shall be prescribed by the Board of Directors. No certificate shall be issued until the shares represented thereby are fully paid. In addition to the foregoing, all certificates evidencing shares of the Corporation's stock or other securities issued by the Corporation shall contain such legend or legends as may from time to time be required by the Chapter 78 of the NRS and/or such other federal, state or local laws or regulations then in effect.

Section 5.3 SURRENDERED; LOST OR DESTROYED CERTIFICATES

All certificates surrendered to the Corporation, except those representing shares of treasury stock, shall be canceled and no new certificate shall be issued until the former certificate for a like number of shares shall have been canceled, except that in case of a lost, stolen, destroyed or mutilated certificate, a new one may be issued therefor. However, any Stockholder applying for the issuance of a stock certificate in lieu of one alleged to have been lost, stolen, destroyed or mutilated shall, prior to the issuance of a replacement, provide the Corporation with his, her or its affidavit of the facts surrounding the loss, theft, destruction or mutilation and, if required by the Board of Directors, an indemnity bond in an amount satisfactory to the Board of Directors or an authorized officer which amount may be in excess of the current market value of the stock, and upon such terms as the treasurer, other officer who is so authorized, or the Board of Directors shall require which shall indemnify the Corporation against any loss, damage, cost or inconvenience arising as a consequence of the issuance of a replacement certificate.

Section 5.4 REPLACEMENT CERTIFICATE

When the Articles of Incorporation are amended in any way affecting the statements contained in the certificates for outstanding shares of capital stock of the Corporation or it becomes desirable for any reason, in the discretion of the Board of Directors, including, without limitation, the merger of the Corporation with another Corporation or the conversion or reorganization of the Corporation, to cancel any outstanding certificate for shares and issue a new certificate therefor conforming to the rights of the holder, the Board of Directors may order any holders of outstanding certificates for shares to surrender and exchange the same for new certificates within a reasonable time to be fixed by the Board of Directors. The order may provide that a holder of any certificate(s) ordered to be surrendered shall not be entitled to vote, receive distributions or exercise any other rights of Stockholders of record until the holder has complied with the order, but the order operates to suspend such rights only after notice and until compliance.

Section 5.5 TRANSFER OF SHARES

No transfer of stock shall be valid as against the Corporation except on surrender and cancellation of the certificates therefor accompanied by an assignment or transfer by the registered owner made either in person or under assignment. Whenever any transfer shall be expressly made for collateral security and not absolutely, the collateral nature of the transfer shall be reflected in the entry of transfer in the records of the Corporation. Subject to the provisions hereof, the Corporation shall register the transfer of a certificate evidencing shares of its capital stock presented to it for transfer if:

(a) *Endorsement*. Upon surrender of the certificate to the Corporation (or its transfer agent, as the case may be) for transfer, the certificate (or an appended stock power) is properly endorsed by the registered owner, or by his duly authorized legal representative or attorney-in-fact, with proper written evidence of the authority and appointment of such representative, if any, accompanying the certificate;

(b) *Guaranty and Effectiveness of Signature*. The signature of such registered owner or his legal representative or attorney-in-fact, as the case may be, has been guaranteed by a national banking association or member of the New York Stock Exchange, and reasonable assurance in a form satisfactory to the Corporation is given that such endorsements are genuine and effective;

(c) *Adverse Claims*. The Corporation has no notice of an adverse claim or has otherwise discharged any duty to inquire into such a claim;

(d) *Collection of Taxes*. Any applicable law (local, state or federal) relating to the collection of taxes relative to the transaction has been complied with; and

(e) *Additional Requirements Satisfied*. Such additional conditions and documentation as the Corporation (or its transfer agent, as the case may be) shall reasonably require, including without limitation thereto, the delivery with the surrender of such stock certificate or certificates of proper evidence of succession, assignment or other authority to obtain transfer thereof, as the circumstances may require, and such legal opinions with reference to the requested transfer as shall be required by the Corporation (or its transfer agent) pursuant to the provisions of these Bylaws and applicable law, shall have been satisfied.

Section 5.6 TRANSFER AGENT; REGISTRARS

The Board of Directors may appoint one or more transfer agents, transfer clerks and registrars of transfer and may require all certificates for shares of stock to bear the signature of such transfer agents, transfer clerks and/or registrars of transfer.

Section 5.7 MISCELLANEOUS

The Board of Directors shall have the power and authority to make such rules and regulations not inconsistent herewith as it may deem expedient concerning the issue, transfer, and registration of certificates for shares of the Corporation's stock.

ARTICLE VI
DISTRIBUTIONS

Distributions may be declared, subject to the provisions of the laws of the State of Nevada and the Articles of Incorporation, by the Board of Directors and may be paid in cash, property, shares of corporate stock, or any other medium. The Board of Directors may fix in advance a record date, as provided in Section 2.5 hereof, prior to the distribution for the purpose of determining Stockholders entitled to receive any distribution.

ARTICLE VII
RECORDS; REPORTS; SEAL; AND FINANCIAL MATTERS

Section 7.1 RECORDS

All original records of the Corporation shall be kept at the principal office of the Corporation by or under the direction of the secretary or at such other place or by such other person as may be prescribed by these Bylaws or the Board of Directors.

Section 7.2 CORPORATE SEAL

The Board of Directors may, by resolution, authorize a seal, and the seal may be used by causing it, or a facsimile, to be impressed or affixed or reproduced or otherwise. Except when otherwise specifically provided herein, any officer of the Corporation shall have the authority to affix the seal to any document requiring it.

Section 7.3 FISCAL YEAR-END

The fiscal year-end of the Corporation shall be such date as may be fixed from time to time by resolution of the Board of Directors.

ARTICLE VIII
INDEMNIFICATION

Section 8.1 INDEMNIFICATION AND INSURANCE

(a) *Indemnification of Directors and Officers*.

(i) For purposes of this Article, (A) ”Indemnitee” shall mean each director or officer who was or is a party to, or is threatened to be made a party to, or is otherwise involved in, any Proceeding (as hereinafter defined), by reason of the fact that he or she is or was a director or officer of the Corporation or member, manager or managing member of a predecessor limited liability company or affiliate of such limited liability company or is or was serving in any capacity at the request of the Corporation as a director, officer, employee, agent, partner, member, manager or fiduciary of, or in any other capacity for, another corporation or any partnership, joint venture, limited liability company, trust, or other enterprise; and (B) ”Proceeding” shall mean any threatened, pending, or completed action, suit or proceeding (including, without limitation, an action, suit or proceeding by or in the right of the Corporation), whether civil, criminal, administrative, or investigative.

(ii) Each Indemnitee shall be indemnified and held harmless by the Corporation to the fullest extent permitted by Nevada law, against all expense, liability and loss (including, without limitation, attorneys’ fees, judgments, fines, taxes, penalties, and amounts paid or to be paid in settlement) reasonably incurred or suffered by the Indemnitee in connection with any Proceeding; *provided that* such Indemnitee either is not liable pursuant to NRS 78.138 or acted in good faith and in a manner such Indemnitee reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any Proceeding that is criminal in nature, had no reasonable cause to believe that his or her conduct was unlawful. The termination of any Proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent, does not, of itself, create a presumption that the Indemnitee is liable pursuant to NRS 78.138 or did not act in good faith and in a manner in which he or she reasonably believed to be in or not opposed to the best interests of the Corporation, or that, with respect to any criminal proceeding he or she had reasonable cause to believe that his or her conduct was unlawful. The Corporation shall not indemnify an Indemnitee for any claim, issue or matter as to which the Indemnitee has been adjudged by a court of competent jurisdiction, after exhaustion of all appeals therefrom, to be liable to the Corporation or for any amounts paid in settlement to the Corporation, unless and only to the extent that the court in which the Proceeding was brought or other court of competent jurisdiction determines upon application that in view of all the circumstances of the case, the Indemnitee is fairly and reasonably entitled to indemnity for such amounts as the court deems proper. Except as so ordered by a court and for advancement of expenses pursuant to this Section 8.1, indemnification may not be made to or on behalf of an

Indemnitee if a final adjudication establishes that his or her acts or omissions involved intentional misconduct, fraud or a knowing violation of law and was material to the cause of action. Notwithstanding anything to the contrary contained in these Bylaws, no director or officer may be indemnified for expenses incurred in defending any threatened, pending, or completed action, suit or proceeding (including without limitation, an action, suit or proceeding by or in the right of the Corporation), whether civil, criminal, administrative or investigative, that such director or officer incurred in his or her capacity as a Stockholder.

(iii) Indemnification pursuant to this Section 8.1 shall continue as to an Indemnitee who has ceased to be a director or officer of the Corporation or member, manager or managing member of a predecessor limited liability company or affiliate of such limited liability company or a director, officer, employee, agent, partner, member, manager or fiduciary of, or to serve in any other capacity for, another corporation or any partnership, joint venture, limited liability company, trust, or other enterprise and shall inure to the benefit of his or her heirs, executors and administrators.

(iv) The expenses of Indemnitees must be paid by the Corporation or through insurance purchased and maintained by the Corporation or through other financial arrangements made by the Corporation, as they are incurred and in advance of the final disposition of the Proceeding, upon receipt of an undertaking by or on behalf of the director or officer to repay the amount if it is ultimately determined by a court of competent jurisdiction that he or she is not entitled to be indemnified by the Corporation. To the extent that a director or officer of the Corporation is successful on the merits or otherwise in defense of any Proceeding, or in the defense of any claim, issue or matter therein, the Corporation shall indemnify him or her against expenses, including attorneys' fees, actually and reasonably incurred in by him or her in connection with the defense.

(b) *Indemnification of Employees and Other Persons*. The Corporation may, by action of its Board of Directors and to the extent provided in such action, indemnify employees and other persons as though they were Indemnitees.

(c) *Non-Exclusivity of Rights*. The rights to indemnification provided in this Article VIII shall not be exclusive of any other rights that any person may have or hereafter acquire under any statute, provision of the Articles of Incorporation or these Bylaws, agreement, vote of Stockholders or directors, or otherwise.

(d) *Insurance*. The Corporation may purchase and maintain insurance or make other financial arrangements on behalf of any Indemnitee for any liability asserted against him or her and liability and expenses incurred by him or her in his or her capacity as a director, officer, employee, member, managing member or agent, or arising out of his or her status as such, whether or not the Corporation has the authority to indemnify him or her against such liability and expenses.

(e) *Other Financial Arrangements*. The other financial arrangements which may be made by the Corporation may include the following: (i) the creation of a trust fund; (ii) the establishment of a program of self-insurance; (iii) the securing of its obligation of indemnification by granting a security interest or other lien on any assets of the Corporation; (iv) the establishment of a letter of credit, guarantee or surety. No financial arrangement made pursuant to this subsection may provide protection for a person adjudged by a court of competent jurisdiction, after exhaustion of all appeals therefrom, to be liable for intentional misconduct, fraud, or a knowing violation of law, except with respect to advancement of expenses or indemnification ordered by a court.

(f) *Other Matters Relating to Insurance or Financial Arrangements*. Any insurance or other financial arrangement made on behalf of a person pursuant to this Section 8.1 may be provided by the Corporation or any other person approved by the Board of Directors, even if all or part of the other person's stock or other securities is owned by the Corporation. In the absence of fraud (i) the decision of the Board of Directors as to the propriety of the terms and conditions of any insurance or other financial arrangement made pursuant to this Section 8.1 and the choice of the person to provide the insurance or other financial arrangement is conclusive; and (ii) the insurance or other financial arrangement is not void or voidable and does not subject any director approving it to personal liability for his action; even if a director approving the insurance or other financial arrangement is a beneficiary of the insurance or other financial arrangement.

Section 8.2 AMENDMENT

Notwithstanding any other provision of these Bylaws relating to their amendment generally, any repeal or amendment of this Article VIII which is adverse to any director or officer shall apply to such director or officer only on a prospective basis, and shall not limit the rights of an Indemnitee to indemnification with respect to any action or failure to act occurring prior to the time of such repeal or amendment.

ARTICLE IX
CHANGES IN NEVADA LAW

References in these Bylaws to Nevada law or the NRS or to any provision thereof shall be to such law as it existed on the date these Bylaws were adopted or as such law thereafter may be changed; *provided* that (a) in the case of any change which expands the liability of directors or officers or limits the indemnification rights or the rights to advancement of expenses which the Corporation may provide in Article VIII hereof, the rights to limited liability, to indemnification and to the advancement of expenses provided in the Articles of Incorporation and/or these Bylaws shall continue as theretofore to the extent permitted by law; and (b) if such change permits the Corporation, without the requirement of any further action by Stockholders or directors, to limit further the liability of directors or limit the liability of officers or to provide broader indemnification rights or rights to the advancement of expenses than the Corporation was permitted to provide prior to such change, then liability thereupon shall be so limited and the rights to indemnification and the advancement of expenses shall be so broadened to the extent permitted by law.

ARTICLE X
AMENDMENT OR REPEAL

Section 10.1 AMENDMENT OF BYLAWS

These Bylaws may be altered, amended or repealed, and new bylaws made, only by the affirmative vote of (a) a majority of the Board of Directors or (b) Stockholders representing at least two-thirds or more of the votes eligible to be cast in an election of Directors.

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

Switch, Inc. ("Switch," the "Company," "we," "our," "us") has one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and listed on The New York Stock Exchange ("NYSE") under the symbol "SWCH": Class A common stock, par value $0.001 per share ("Class A Common Stock").

DESCRIPTION OF CAPITAL STOCK

This section contains a description of our capital stock. This description includes not only our Class A Common Stock, but also our Class B common stock, par value $0.001 per share ("Class B Common Stock"), Class C common stock, par value $0.001 per share ("Class C Common Stock") and preferred stock. The following summary of the terms of our capital stock is not meant to be complete and is qualified by reference to our amended and restated articles of incorporation and our amended and restated bylaws.

Our authorized capital stock currently consists of 750,000,000 shares of Class A Common Stock, 300,000,000 shares of Class B Common Stock, 75,000,000 shares of Class C Common Stock and 10,000,000 shares of blank check preferred stock.

Common Stock

Class A Common Stock

Issuance of Class A Common Stock with Common Units

We will undertake any action, including, without limitation, a reclassification, dividend, division or recapitalization with respect to shares of Class A Common Stock to the extent necessary to maintain a one-to-one ratio between the number of Common Units we own, and the number of outstanding shares of Class A Common Stock, disregarding unvested shares issued in connection with stock incentive plans, shares issuable upon the exercise, conversion or exchange of certain convertible or exchangeable securities and treasury stock. "Common Units" refer to the single class of issued common membership interests of Switch, Ltd.

Voting Rights

Holders of our Class A Common Stock are entitled to cast one vote per share. Holders of our Class A Common Stock are not entitled to cumulate their votes in the election of directors. Generally, holders of all classes of our common stock vote together as a single class and an action is approved by our stockholders if the number of votes cast in favor of the action exceeds the number of votes cast in opposition to the action, while directors are elected by a plurality of the votes cast. Except as otherwise provided by applicable law, amendments to our amended and restated articles of incorporation must be approved by a majority or, in some cases, two-thirds of the combined voting power of all shares entitled to vote, voting together as a single class.

Dividend Rights

Holders of Class A Common Stock share ratably (based on the number of shares of Class A Common Stock held) if and when any dividend is declared by the board of directors out of funds legally available therefor, subject to restrictions, whether statutory or contractual (including with respect to any outstanding indebtedness), on the declaration and payment of dividends and to any restrictions on the payment of dividends imposed by the terms of any outstanding preferred stock or any class or series of stock having a preference over, or the right to participate with, the Class A Common Stock with respect to the payment of dividends. Shares of one class or series may be issued as a share dividend in respect of another class or series.

Liquidation Rights

On our liquidation, dissolution or winding up, each holder of Class A Common Stock will be entitled to a pro rata distribution of the net assets, if any, available for distribution to common stockholders.

Other Matters

No shares of Class A Common Stock are subject to redemption or have preemptive rights to purchase additional shares of Class A Common Stock. Holders of shares of our Class A Common Stock do not have subscription, redemption or conversion rights.

Class B Common Stock

Issuance of Class B Common Stock with Common Units

Shares of Class B Common Stock will only be issued to the extent necessary in connection with the conversion of shares of Class C Common Stock and to maintain a one-to-one ratio between the number of Common Units owned by all holders of Class B Common Stock and the number of outstanding shares of Class B Common Stock owned by all such holders. Shares of Class B Common Stock are cancelled on a one-to-one basis if a holder of shares of Class B Common Stock elects to have its corresponding Common Units redeemed pursuant to the terms of the Fifth Amended and Restated Operating Agreement of Switch, Ltd. (the “Switch Operating Agreement”).

Subject to the restrictions set forth in the Switch Operating Agreement, members of Switch, Ltd. may have their Common Units redeemed for shares of our Class A common stock. To the extent that any holder of Class B Common Stock exercises its right pursuant to the Switch Operating Agreement to have its Common Units redeemed by Switch, Ltd., then simultaneous with the payment of, at our election, cash or shares of Class A Common Stock to such holder, we shall cancel for no consideration a number of shares of Class B Common Stock held by such holder equal to the number of its Common Units redeemed or exchanged in such transaction. Such redeemed or exchanged shares shall be retired and shall not be reissued by us.

Voting Rights

Holders of Class B Common Stock are entitled to cast one vote per share. Holders of our Class B Common Stock are not entitled to cumulate their votes in the election of directors.

Generally, holders of all classes of our common stock vote together as a single class and an action is approved by our stockholders if the number of votes cast in favor of the action exceeds the number of votes cast in opposition to the action, while directors are elected by a plurality of the votes cast. Except as otherwise provided by applicable law, amendments to our amended and restated articles of incorporation must be approved by a majority or, in some cases, two-thirds of the combined voting power of all shares entitled to vote, voting together as a single class.

Dividend Rights

Holders of our Class B Common Stock do not participate in any dividend declared by the board of directors.

Liquidation Rights

On our liquidation, dissolution or winding up, holders of our Class B Common Stock will not be entitled to receive any distribution of our assets.

Transfers

Pursuant to our amended and restated articles of incorporation and the Switch Operating Agreement, holders of our Class B Common Stock are subject to restrictions on transfer of such shares, including that:

- the holder will not transfer any shares of Class B Common Stock to any person unless the holder transfers an equal number of Common Units to the same person; and
- in the event the holder transfers any Common Units to any person, the holder will transfer an equal number of shares of Class B Common Stock to the same person.

Merger, Consolidation, Tender or Exchange Offer

The holders of our Class B Common Stock will have the right to receive, or the right to elect to receive, the same form and amount (on a per share basis) of consideration, if any, as the holders of our Class C Common Stock in the event of a merger, consolidation, conversion, exchange or other business combination requiring the approval of our stockholders or a tender or exchange offer to acquire any shares of our common stock. However, in any such event involving consideration in the form of securities, the holders of our Class C Common Stock will be entitled to receive securities that have no more than ten times the voting power of any securities distributed to the holders of our Class B Common Stock.

Other Matters

No shares of Class B Common Stock are subject to redemption or have preemptive rights to purchase additional shares of Class B Common Stock. Holders of shares of our Class B Common Stock do not have subscription, redemption or conversion rights.

Class C Common Stock

No shares of Class C Common Stock are outstanding. We do not have any current plans to issue any additional shares of Class C Common Stock.

Preferred Stock

Our amended and restated articles of incorporation provide that our board of directors has the authority, without action by the stockholders, to designate and issue up to 10,000,000 shares of preferred stock in one or more classes or series, and the number of shares constituting any such class or series, and to fix the voting powers, designations, preferences, limitations, restrictions and relative rights of each class or series of preferred stock, including, without limitation, dividend rights, dividend rates, conversion rights, exchange rights, voting rights, rights and terms of redemption, dissolution preferences, and treatment in the case of a merger, business combination transaction, or sale of the Company's assets, which rights may be greater than the rights of the holders of the common stock.

The purpose of authorizing our board of directors to issue preferred stock and determine the rights and preferences of any classes or series of preferred stock is to eliminate delays associated with a stockholder vote on specific issuances. The simplified issuance of preferred stock, while providing flexibility in connection with possible acquisitions, future financings and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or could discourage a third party from seeking to acquire, a majority of our outstanding voting stock. Additionally, the issuance of preferred stock may adversely affect the holders of our Class A Common Stock by restricting dividends on the Class A Common Stock, diluting the voting power of the Class A Common Stock or subordinating the dividend or liquidation rights of the Class A Common Stock. As a result of these or other factors, the issuance of preferred stock could have an adverse impact on the market price of our Class A Common Stock.

Exclusive Forum for Disputes

Our amended and restated articles of incorporation provide that unless we otherwise consent in writing (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees or our stockholders, (iii) any action asserting a claim against us or our officers, directors or employees arising pursuant to any provision of Nevada law regarding corporations, mergers, conversion or domestications, or our amended and restated articles of incorporation or amended and restated bylaws or (iv) any action asserting a claim against us or any of our directors, officers or employees governed by the internal affairs doctrine, will have to be brought only in the Eighth Judicial District Court of Clark County, Nevada, or the Nevada Court. Although we believe this provision benefits us by providing increased consistency in the application of Nevada law in the types of lawsuits to which it applies, the provision may have the effect of discouraging lawsuits against our directors and officers.

Anti-Takeover Effects of Provisions of our Amended and Restated Articles of Incorporation and our Amended and Restated Bylaws

Our amended and restated articles of incorporation and amended and restated bylaws also contain provisions that may delay, defer or discourage another party from acquiring control of us. We expect that these provisions will discourage coercive takeover practices or inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors, which we believe may result in an improvement of the terms of any such acquisition in favor of our stockholders. However, they also give our board of directors the power to discourage acquisitions that some stockholders may favor.

Authorized but Unissued Shares

The authorized but unissued shares (and to the extent not otherwise retired or reserved) of Class A, B and C Common Stock and preferred stock are available for future issuance without stockholder approval, subject to any limitations imposed by the listing standards of the NYSE in addition to our amended and restated articles of incorporation. These additional shares may be used for a variety of corporate finance transactions, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved common stock and preferred stock could make more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise. We do not have any current plans to issue any additional shares of Class C Common Stock.

Requirements for Advance Notification of Stockholder Meetings, Nominations and Proposals

Our amended and restated articles of incorporation provide that stockholders at an annual meeting may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of our board of directors or by a qualified stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has delivered timely written notice in proper form to our secretary of the stockholder's intention to bring such business before the meeting. Our amended and restated articles of incorporation provide that, subject to applicable law, special meetings of the stockholders may be called only by a resolution adopted by the affirmative vote of a majority of the directors then in office. Our amended and restated bylaws prohibit the conduct of any business at a special meeting other than as specified in the notice for such meeting. In addition, any stockholder who wishes to bring business before an annual meeting or nominate directors must comply with the advance notice and duration of ownership requirements set forth in our amended and restated bylaws and provide us with certain information. These provisions may have the effect of deferring, delaying or discouraging hostile takeovers or changes in control of us or changes in our management.

Our amended and restated bylaws generally permit a stockholder, or group of not more than twenty (20) stockholders, to include up to the greater of two (2) director nominees or twenty percent (20%) of the number of directors in office as of the last day a notice for nomination may be timely received in our proxy materials for annual meetings of our stockholders; provided that the stockholder or group of stockholders has for at least three (3) years owned (as determined by our board of directors) three percent (3%) or more of our outstanding capital stock entitled to vote. Use of the proxy access process to submit stockholder nominees is subject to additional eligibility, procedural and disclosure requirements set forth in our amended and restated bylaws.

Limitations on Stockholder Action by Written Consent

Nevada law permits stockholder action by written consent unless the corporation's articles of incorporation or bylaws provide otherwise. Our amended and restated articles of incorporation provide that stockholder action by written consent is permitted so long as the founder members specified therein beneficially own at least 50% of the Class C Common Stock owned by such founder members at the closing of our initial public offering. On November 8, 2019, those founder members converted all of the outstanding Class C Common Stock into shares of Class B Common Stock. Accordingly, all stockholder actions must now be taken at a meeting of our stockholders.

Amendment of Amended and Restated Articles of Incorporation or Bylaws

Nevada law provides generally that a resolution of the board of directors is required to propose an amendment to a corporation's articles of incorporation and that the amendment must be approved by the affirmative vote of a majority of the voting power of all classes entitled to vote, as well as a majority of any class adversely affected. Nevada law also provides that the corporation's bylaws, including any bylaws adopted by its stockholders, may be amended by the board of directors and that the power to adopt, amend or repeal the bylaws may be granted exclusively to the directors in the corporation's articles of incorporation. Our amended and restated articles of incorporation provide that they may be amended by the board of directors, in the manner, and subject to approval by stockholders as, now or hereafter prescribed by statute, except that any amendment to Article 8 regarding the stockholders' right to act by written consent or Article 11 regarding corporate opportunities will require the affirmative vote of at least two-thirds of the votes which all our stockholders would be entitled to cast in an election of directors. Our amended and restated bylaws provide that they may be amended or repealed by the affirmative vote of a majority of our board of directors or stockholders representing at least two-thirds or more of the votes eligible to be cast in an election of directors.

The foregoing provisions of our amended and restated articles of incorporation and amended and restated bylaws could discourage potential acquisition proposals and could delay or prevent a change in control. These provisions are intended to enhance the likelihood of continuity and stability in the composition of our board of directors and in the policies formulated by our board of directors and to discourage certain types of transactions that may involve an actual or threatened change of control. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal. The provisions also are intended to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and, as a consequence, they also may inhibit fluctuations in the market price of our shares of Class A

Common Stock that could result from actual or rumored takeover attempts. Such provisions also may have the effect of preventing changes in our management or delaying or preventing a transaction that might benefit you or other minority stockholders.

Anti-Takeover Effects of Nevada Law

The State of Nevada, where we are incorporated, has enacted statutes that could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire us even though such a transaction may offer our stockholders the opportunity to sell their stock at a price above the prevailing market price. We have not opted out of these statutes.

Business Combinations

The "business combination" provisions of Sections 78.411 to 78.444, inclusive, of the Nevada Revised Statutes ("NRS") generally prohibit a publicly traded Nevada corporation with at least 200 stockholders of record from engaging in various "combination" transactions with any interested stockholder for a period of up to four years after the date of the transaction in which the person became an interested stockholder, unless the combination or transaction was approved by the board of directors before such person became an interested stockholder or the combination is approved by the board of directors, if within two years after the date in which the person became an interested stockholder, and is approved at a meeting of the stockholders by the affirmative vote of stockholders representing at least 60% (for a combination within two years after becoming an interested stockholder) or a majority (for combinations between two and four years thereafter) of the outstanding voting power held by disinterested stockholders. Alternatively, a corporation may engage in a combination with an interested stockholder more than two years after such person becomes an interested stockholder if:

- the consideration to be paid to the holders of the corporation's stock, other than the interested stockholder, is at least equal to the highest of: (a) the highest price per share paid by the interested stockholder within the two years immediately preceding the date of the announcement of the combination or the transaction in which it became an interested stockholder, whichever is higher, plus interest compounded annually, (b) the market value per share of common stock on the date of announcement of the combination or the date the interested stockholder acquired the shares, whichever is higher, less certain dividends paid or (c) for holders of preferred stock, the highest liquidation value of the preferred stock, if it is higher; and
- the interested stockholder has not become the owner of any additional voting shares since the date of becoming an interested stockholder except by certain permitted transactions.

A "combination" is generally defined to include (i) mergers or consolidations with the "interested stockholder" or an affiliate or associate of the interested stockholder, (ii) any sale, lease exchange, mortgage, pledge, transfer or other disposition of assets of the corporation, in one transaction or a series of transactions, to or with the interested stockholder or an affiliate or associate of the interested stockholder: (a) having an aggregate market value equal to 5% or more of the aggregate market value of the assets of the corporation, (b) having an aggregate market value equal to 5% or more of the aggregate market value of all outstanding shares of the corporation or (c) representing more than 10% of the earning power or net income (determined on a consolidated basis) of the corporation, (iii) any issuance or transfer of securities to the interested stockholder or an affiliate or associate of the interested stockholder, in one transaction or a series of transactions, having an aggregate market value equal to 5% or more of the aggregate market value of all of the outstanding voting shares of the corporation (other than under the exercise of warrants or rights to purchase shares offered, or a dividend or distribution made pro rata to all stockholders of the corporation), (iv) adoption of a plan or proposal for liquidation or dissolution of the corporation with the interested stockholder or an affiliate or associate of the interested stockholder and (v) certain other transactions having the effect of increasing the proportionate share of voting securities beneficially owned by the interested stockholder or an affiliate or associate of the interested stockholder.

In general, an "interested stockholder" means any person who (i) beneficially owns, directly or indirectly, 10% or more of the voting power of the outstanding voting shares of a corporation, or (ii) is an affiliate or associate of the corporation that beneficially owned, within two years prior to the date in question, 10% or more of the voting power of the then-outstanding shares of the corporation.

Control Share Acquisitions

The “control share” provisions of Sections 78.378 to 78.3793, inclusive, of the NRS apply to “issuing corporations” that are Nevada corporations doing business, directly or through an affiliate, in Nevada, and having at least 200 stockholders of record, including at least 100 of whom have addresses in Nevada appearing on the stock ledger of the corporation. The control share statute prohibits an acquirer, under certain circumstances, from voting its “control shares” of an issuing corporation’s stock after crossing certain ownership threshold percentages, unless the acquirer obtains approval of the issuing corporation’s disinterested stockholders or unless the issuing corporation amends its articles of incorporation or bylaws within ten (10) days of the acquisition to provide that the “control share” statute does not apply to the corporation or to the types of existing or future stockholders. The statute specifies three thresholds: one-fifth or more but less than one-third, one-third but less than a majority, and a majority or more, of the outstanding voting power of a corporation. Generally, once an acquirer crosses one of the foregoing thresholds, those shares acquired in an acquisition or offer to acquire in an acquisition and acquired within 90 days immediately preceding the date that the acquirer crosses one of the thresholds, become “control shares,” and such control shares are deprived of the right to vote until disinterested stockholders restore the right. In addition, the corporation, if provided in its articles of incorporation or bylaws in effect on the tenth (10th) day following the acquisition of a controlling interest, may cause the redemption of all of the control shares at the average price paid for such shares if the stockholders do not accord the control shares full voting rights. If control shares are accorded full voting rights and the acquiring person has acquired a majority or more of all voting power, all other stockholders who did not vote in favor of authorizing voting rights to the control shares are entitled to demand payment for the fair value of their shares in accordance with statutory procedures established for dissenters’ rights.

Limitations on Liability and Indemnification of Officers and Directors

Nevada law provides that our directors and officers will not be personally liable to us, our stockholders or our creditors for monetary damages for any act or omission of a director or officer other than in circumstances where the director or officer breaches his or her fiduciary duty to us or our stockholders and such breach involves intentional misconduct, fraud or a knowing violation of law and the trier of fact determines that the presumption that he or she acted in good faith, on an informed basis and with a view to the interests of the corporation has been rebutted. Nevada law allows the articles of incorporation of a corporation to provide for greater liability of the corporation’s directors and officers. Our amended and restated articles of incorporation do not provide for greater liability of our officers and directors than is provided under Nevada law.

Nevada law allows a corporation to indemnify officers and directors for actions pursuant to which a director or officer either would not be liable pursuant to the limitation of liability provisions of Nevada law or where he or she acted in good faith and in a manner which he or she reasonably believed to be in or not opposed to our best interests, and, in the case of an action not by or in the right of the corporation and with respect to any criminal action or proceeding, had no reasonable cause to believe the conduct was unlawful. Our amended and restated articles of incorporation and bylaws provide indemnification for our directors and officers to the fullest extent permitted by Nevada law. We have entered into indemnification agreements with each of our directors that may, in some cases, be broader than the specific indemnification provisions contained under Nevada law. In addition, as permitted by Nevada law, our amended and restated articles of incorporation include provisions that eliminate the personal liability of our directors for monetary damages resulting from certain breaches of fiduciary duties as a director. The effect of these provisions is to restrict our rights and the rights of our stockholders in derivative suits to recover monetary damages against a director for breach of fiduciary duties as a director, except that a director will be personally liable for acts or omissions not in good faith or in a manner which he or she did not reasonably believe to be in or not opposed to the best interest of the corporation if, subject to certain exceptions, the act or failure to act constituted a breach of fiduciary duty and such breach involved intentional misconduct, fraud or knowing violations of law.

These provisions may be held not to be enforceable for certain violations of the federal securities laws of the United States.

We are also expressly authorized to carry directors’ and officers’ insurance to protect our directors, officers, employees and agents against certain liabilities.

The limitation of liability and indemnification provisions under Nevada law and in our amended and restated articles of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. These provisions may also have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit us and our stockholders. However, these provisions do not limit or eliminate our rights, or those of any stockholder, to seek non-monetary relief such as injunction or rescission in the event of a breach of a director's fiduciary duties. Moreover, the provisions do not alter the liability of directors under the federal securities laws. In addition, your investment may be adversely affected to the extent that, in a class action or direct suit, we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

Corporate Opportunities

In recognition that partners, principals, directors, officers, members, managers and/or employees of the members (including the founder members, non-founder members and former incentive unit holders) of Switch, Ltd. and their affiliates and investment funds, which we refer to as the "Corporate Opportunity Entities," may serve as our directors and/or officers, and that the Corporate Opportunity Entities may engage in activities or lines of business similar to those in which we engage, our amended and restated articles of incorporation provide for, to the fullest extent permitted under Nevada law, the renouncement by us of all interest and expectancy that we otherwise would be entitled to have in, and all rights to be offered an opportunity to participate in, any business opportunity that from time to time may be presented to a Corporate Opportunity Entity other than an employee of the Company or any of its subsidiaries. Specifically, none of the Corporate Opportunity Entities has any duty to refrain from engaging, directly or indirectly, in the same or similar business activities or lines of business that we do or otherwise competing with us. In the event that any Corporate Opportunity Entity that is not an employee of the Company or its subsidiaries acquires knowledge of a potential transaction or matter which may be a corporate opportunity for itself and us, we will not have any expectancy in such corporate opportunity, and the Corporate Opportunity Entity will not have any duty to communicate or offer such corporate opportunity to us and may pursue or acquire such corporate opportunity for itself or direct such opportunity to another person. In addition, if a director of our Company who is also a partner, principal, director, officer, member, manager or employee of any Corporate Opportunity Entity acquires knowledge of a potential transaction or matter which may be a corporate opportunity for us and a Corporate Opportunity Entity, we will not have any expectancy in such corporate opportunity. In the event that any director of ours who is not an employee of the Company or any of its subsidiaries acquires knowledge of a potential transaction or matter which may be a corporate opportunity for us we will not have any expectancy in such corporate opportunity unless such potential transaction or matter was expressly offered to such director in his or her capacity as such.

To the fullest extent permitted by Nevada law, no potential transaction or business opportunity may be deemed to be a potential corporate opportunity of the Company or its subsidiaries unless (a) the Company or its subsidiaries would be permitted to undertake such transaction or opportunity in accordance with the amended and restated articles of incorporation, (b) the Company or its subsidiaries at such time have sufficient financial resources to undertake such transaction or opportunity and (c) such transaction or opportunity would be in the same or similar line of business in which the Company or its subsidiaries are then engaged or a line of business that is reasonably related to, or a reasonable extension of, such line of business.

By becoming a stockholder in our Company, you will be deemed to have notice of and consented to these provisions of our amended and restated articles of incorporation. Any amendment to the foregoing provisions of our amended and restated articles of incorporation requires the affirmative vote of at least two-thirds of the votes which all our stockholders would be entitled to cast in an election of directors.

Dissenters' Rights of Appraisal and Payment

Under Nevada law, with certain exceptions, as long as shares of Class A Common Stock are traded on the NYSE, holders of shares of our Class A Common Stock will not have dissenters' rights to payment of an appraised fair market value for such shares in connection with a plan of merger, conversion or exchange of the Company unless such action requires holders of a class or series of shares to accept for such shares anything other than cash, certain publicly traded shares or securities of certain investment companies redeemable at the option of the holder. To the extent that dissenters' rights may be available under Nevada law, stockholders who properly request and perfect such rights in connection with such merger or consolidation will have the right to receive payment of the fair value of their shares as determined by the Nevada Court.

Stockholders' Derivative Actions

Under Nevada law, any of our stockholders may bring an action in our name to procure a judgment in our favor, also known as a derivative action, provided that the stockholder bringing the action was a holder of our shares at the time of the transaction to which the action relates or such stockholder's stock thereafter devolved by operation of law and such suit is brought in the Nevada Court. See "Exclusive Forum for Disputes" above.

Exhibit 10.12(a)

THIRD AMENDMENT TO LEASE

BELTWAY BUSINESS PARK, OFFICE NO. 1, LLC

THIS THIRD AMENDMENT TO LEASE ("Amendment") is entered into as of this 19th day of November, 2020 ("Effective Date"), by and between Beltway Business Park, Office No. 1, LLC ("Landlord") and SWITCH, LTD. ("Tenant") and amends the Lease Agreement between Landlord and Tenant dated April 1, 2011, as amended on July 23, 2014 and May 27, 2016 (collectively the "Lease") pursuant to which Tenant leased, from Landlord, 10,755 rentable square feet ("RSF") in space known as Suite 180 (the "Premises") in that certain building located at 5605 Badura Ave., Las Vegas, Nevada ("Building").

For good and valuable consideration, receipt and sufficiency of which is hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. Renewal Term.

The term of the Lease is hereby extended for an additional 12 months (the "3rd Extended Term") commencing April 1, 2021 ("3rd Extended Term Commencement Date") and terminating on March 31, 2022 ("3rd Extended Term Termination Date"). Tenant's occupancy during the 3rd Extended Term shall be under the same covenants, agreements, terms, provisions and conditions as are contained in the Lease for the current term, except as otherwise set forth in this Amendment.

Tenant has no remaining renewal/options and if there are any existing renewal rights/options heretofore granted to Tenant are hereby terminated and shall be of no further force or effect.

2. Base Rent.

Commencing on the Extended Term Commencement Date and continuing during the 3rd Extended Term; the monthly Base Rent shall be $15,373.16 per month ($1.42 per RSF per month).

3. AS IS.

Tenant accepts the Premises in its **"AS-IS"** condition; provided, however, Landlord's service, maintenance and repair obligations under the Lease shall remain in full force and effect.

4. Except to the extent that terms are defined herein to the contrary, all terms used in this Amendment shall have the same meaning as the defined terms set forth in the Lease.

5. Except as expressly provided herein, this Amendment shall not alter, amend or otherwise modify the terms and provisions of the Lease Agreement.

6. Except as modified by this Amendment, the Lease shall remain in full force and affect. As amended hereby, the Lease is hereby ratified and confirmed in its entirety. This Amendment and the Lease embodies the entire agreement between the parties relating to the subject matter contained herein.

7. The parties hereto may execute this Amendment simultaneously, in any number of counterparts, or in facsimile copies, each of which shall be deemed an original, but all of which together shall constitute one and the same Amendment.

8. The parties acknowledge that no broker/agent was used in connection with the execution of this Amendment. Landlord and Tenant covenant to pay, hold harmless and indemnify each other from and against any and all cost, expense or liability for and compensation, commissions or charges claimed by any other broker or agent utilized by the indemnitor with respect to this Amendment or the negotiation hereof

IN WITNESS WHEREOF, Landlord and Tenant have executed this Amendment as of the date first above written.

[Signatures on Following Page]

LANDLORD:

BELTWAY BUSINESS PARK OFFICE NO. 1, LLC,
a Nevada limited liability company

MANAGER:
Majestic Beltway Office Buildings, LLC,
a Delaware limited liability company

Majestic Realty Co.,
a California corporation,
Manager's Agent

By: /s/ Edward P. Roski, Jr.

Its: President and Chairman of the Board

By: ______________________________

Its: ______________________________

MANAGER:
Thomas & Mack Beltway, LLC,
a Nevada limited liability company

By: /s/ Thomas A. Thomas
Its: Thomas A. Thomas, Manager

TENANT:

SWITCH, LTD,
a Nevada limited liability company

By: /s/ Thomas Morton

Its: President

Exhibit 21.1

The following is a list of significant subsidiaries of Switch, Inc., omitting subsidiaries which, considered in the aggregate as a single subsidiary, would not constitute a significant subsidiary as of December 31, 2020.

Legal Name	**State of Organization**
Switch, Ltd.	Nevada
InNEVation, LLC	Nevada
MI GRR, LLC	Michigan
NAPO1, LLC	Nevada
NV NAP 2, LLC	Nevada
NV NAP 4, LLC	Delaware
NV NAP 5, LLC	Nevada
NV NAP 7, LLC	Nevada
NV NAP 8, LLC	Nevada
NV NAP 9, LLC	Nevada
SUPERNAP Atlanta, LLC	Georgia
SUPERNAP Reno, LLC	Nevada
Switch Business Solutions, LLC	Nevada

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-220908) of Switch, Inc. of our report dated March 1, 2021 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Las Vegas, Nevada
March 1, 2021

Exhibit 31.1

CERTIFICATION BY THE CHIEF EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Rob Roy, certify that:

1. I have reviewed this Annual Report on Form 10-K of Switch, Inc.

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report.

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting, which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 1, 2021

By: /s/ Rob Roy

Rob Roy
Chief Executive Officer
Principal Executive Officer

Exhibit 31.2

CERTIFICATION BY THE CHIEF FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Gabe Nacht, certify that:

1. I have reviewed this Annual Report on Form 10-K of Switch, Inc.

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report.

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting, which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 1, 2021

By: /s/ Gabe Nacht

Gabe Nacht
Chief Financial Officer
Principal Financial Officer

Exhibit 32.1

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of Switch, Inc. (the “Company”) for the fiscal year ended December 31, 2020, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), Rob Roy, Chief Executive Officer, and Gabe Nacht, Chief Financial Officer, of the Company, do each certify, pursuant to Section 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge:

1. the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. the information contained in the Report fairly presents, in all materials respects, the financial condition and results of operations of the Company.

Date: March 1, 2021

By: /s/ Rob Roy
Rob Roy
Chief Executive Officer
Principal Executive Officer

By: /s/ Gabe Nacht
Gabe Nacht
Chief Financial Officer
Principal Financial Officer