Hamilton Lane

Catching the Wave: The Thematic Approach Driving Infrastructure Investment

April 29, 2021 | Brent Burnett, Co-Head of Real Assets

Having grown up on the land-locked side of a coastal state, I always found myself envious of those who lived near the ocean.

The allure of surfing in the open water appealed to me. Having traveled to a few of the best surf spots in Hawaii and California, I even tried my hand a time or two. With my rented longboard in tow, I headed out into the waves of the open water, much to the dismay of the local pros. Here came an obvious amateur – farmer's tan, giant longboard, awkwardly paddling in the wrong spot at the wrong time in a flailing attempt to catch a wave. It was clear to them that I was out of place and out of touch.

But here's the thing: Occasionally, as luck would have it, I *did* catch a wave. Standing atop my massive longboard on those lucky rides, I looked around as if to say to the others, "See, it's not so hard, I can do this too!" As the Beach Boys sang, "Catch a wave and you're sitting on top of the world." The reality was, my surfing skills were better described by Tom Petty, in that "even the losers get lucky sometimes."

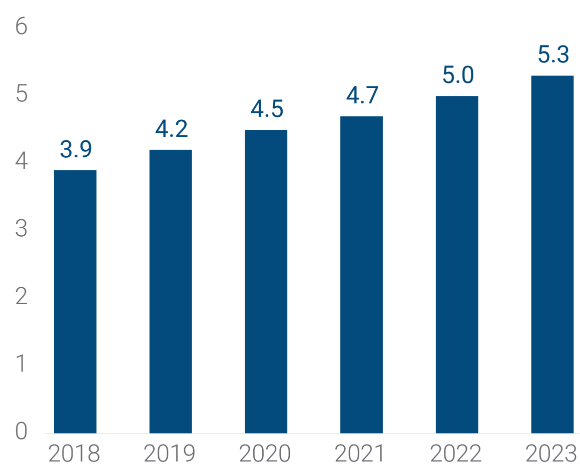
So that's a glimpse into my sad surfing backstory, but what does this have to do with infrastructure investing? What we've observed over the last year is a dramatic migration toward thematic investing within infrastructure, with an obvious focus on sectors that experienced either stability or growth through the COVID-19 environment. Infrastructure investors seem to be trying earnestly to catch the wave of any asset related to digitization and electrification. To be fair, the macro trends in these sectors are clear, and clearly attractive.

Data Infrastructure

On the data infrastructure side, the number of internet users globally is expected to grow at a 6% CAGR through 2023, adding another billion users from today's levels.[1] While the universe of users is expanding, data intensity is also increasing. Looking at average traffic per capita on the next page, not only is there a higher number of users, but the amount of data they use has also nearly tripled in the last five years.

Growth in Internet Users

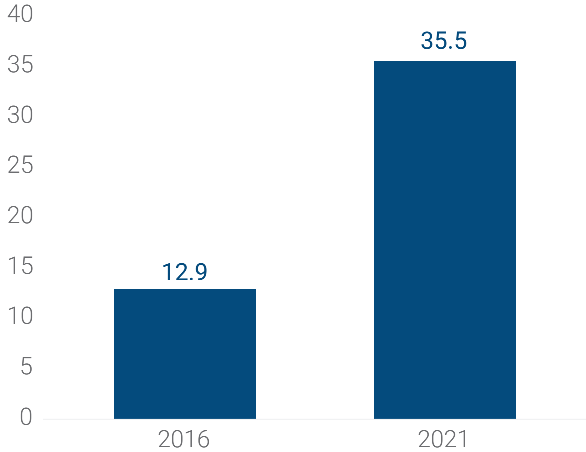
Billions of Internet Users



Source: Cisco Annual Internet Report, 2018 - 2023

Average Traffic per Capita

Gigabytes per Month



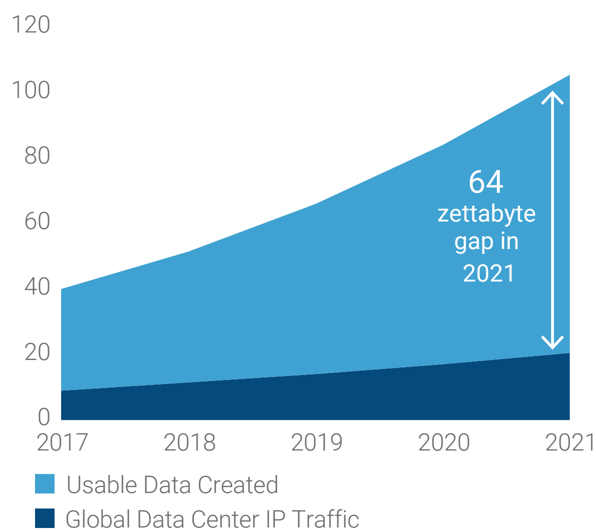
Source: Cisco Annual Internet Report, 2018 - 2023

With this rapid growth in devices, connectivity and data demand, networks and related infrastructure (including 5G deployment), are accelerating to meet these user demands.

A PwC analysis highlighted a 64-zettabyte gap in 2021 between the amount of usable data created and the capacity of global data center IPs, suggesting that global content creation is outpacing data center IP traffic, which can be caused by constraints in data center infrastructure resources.

Data Center Traffic vs. Data Created

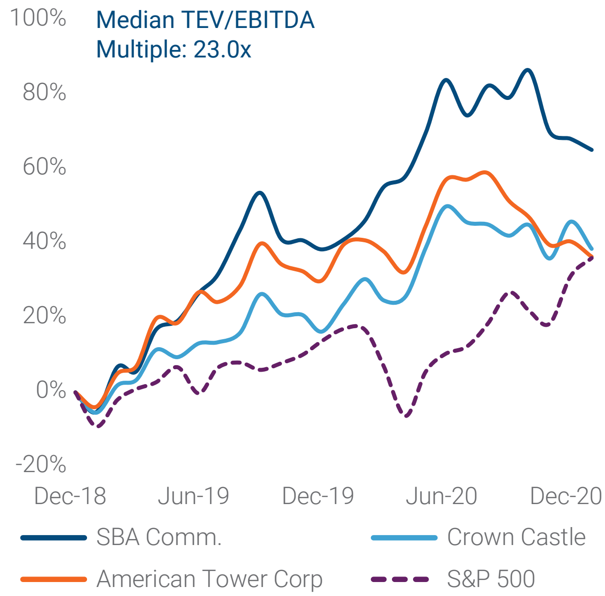
Zettabytes per Year



Source: [1] Cisco Annual Internet Report, 2018-2023. [2] PwC Analysis and Cisco Global Cloud Index: 2016-2021 Forecast, November 2018.

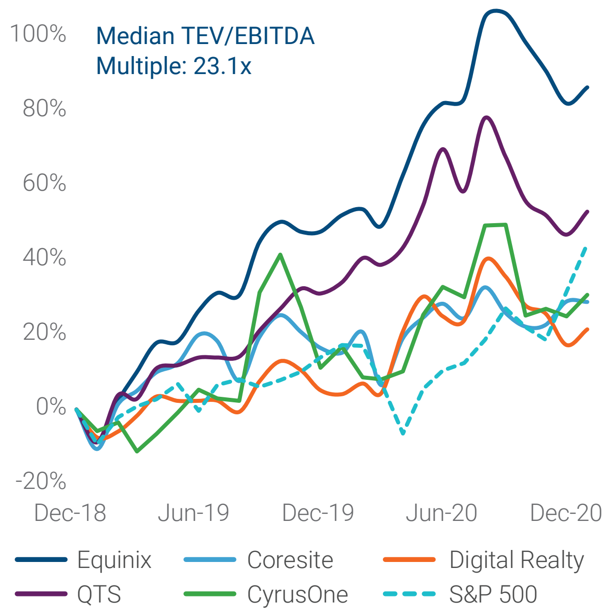
With these trends in mind, it's not surprising to see global tower and data center REITs at all-time highs.

Tower REITs Share Price Appreciation



Source: Bloomberg and CapitalIQ as of December 31, 2020.

Data Center REITs Share Price Appreciation



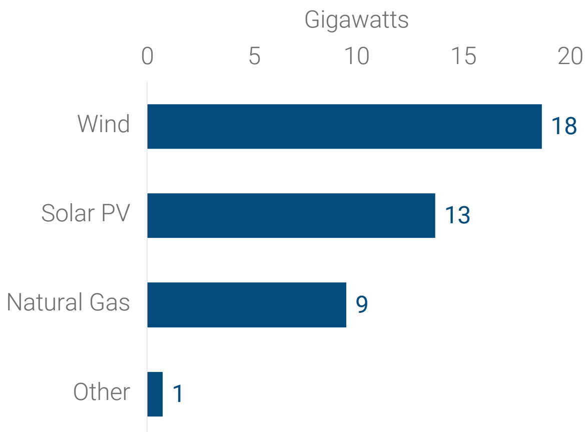
Source: Bloomberg and CapitalIQ as of December 31, 2020.

Renewable Power Generation

Macro trends in renewable power generation are no less compelling. In 2020, more than 150 gigawatts of net capacity additions were added globally for renewable power, with the largest additions coming from China, the U.S. and the EU. In the U.S., planned wind and solar capacity additions in 2020 were over three times that of natural gas, and although natural gas is expected to see positive net capacity additions in the near-term, retirements are anticipated to exceed additions after 2023.

2020 U.S. Electric Power Installations

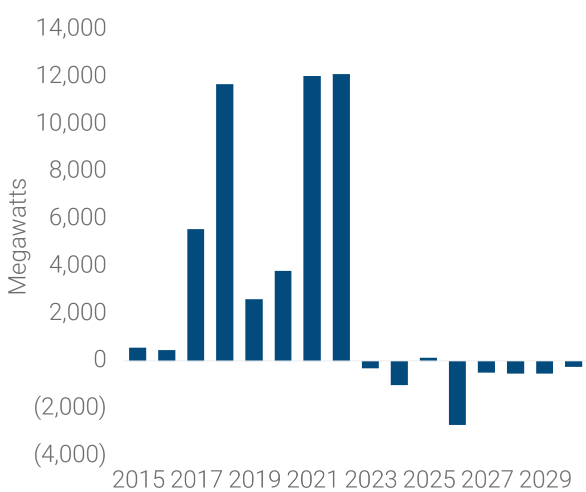
Planned Capacity Additions by Type



Source: EIA Preliminary Monthly Electric Generator Inventory Report as of June 14, 2020.

Net Annual Change in Natural Gas Capacity

Net Capacity Additions/Retirements

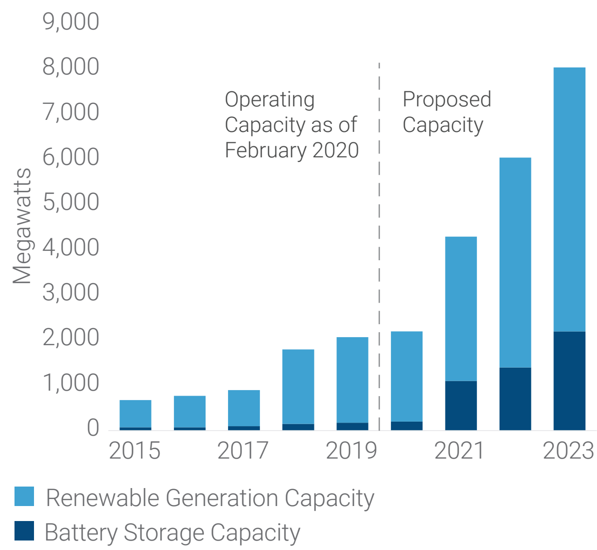


Source: EIA, Headwaters Economics. As of April 2020.

Trends in battery storage technology are also aiding renewables, which have long been plagued by dispatch challenges and intermittent power delivery to the grid. Advances in battery technologies have the potential to solve both dispatch and intermittency problems faced by grid operators. For this reason, we are seeing more renewable capacity additions being co-located with battery storage. This makes good sense because, in some power markets, battery storage alone isn't counted as a generation asset and therefore, may not qualify for capacity-based payments. Battery storage, co-located with renewable generation, allows an asset owner to receive a capacity payment for the generation assets while having the flexibility to take advantage of market pricing inefficiencies through the battery storage component.

Co-Located Renewables Generation and Storage

Co-Located Facility Capacity



Source: EIA Preliminary Monthly Electric Generator Inventory Report

At this point you may be thinking, "Wow, this seems like a pretty obvious punchline. While acknowledging that everyone is trying to catch these same waves, you've also shown us that these are, in fact, good waves to be riding. So we should all be grabbing our boards, right?"

Here's the issue: Everyone is looking at these same sectors in what they think is their proprietary, thematic approach to investing. And it's not just infrastructure investors trying to catch these waves. Our private equity colleagues see the same sector themes referenced as frequent targets of growth equity and buyout managers. [My favorite example of this was a project book that was shared with us by a large international insurance company. This institution had commissioned one of the big three management consultants to help them understand the investment landscape. The book was full of pretty charts and graphs, but the takeaways were anything but novel: Invest thematically and target digitization and electrification!]

As more capital chases these same sectors, we observe some common concerns as infrastructure investors:

- Purchase prices are becoming quite expensive, with digital and renewable assets frequently trading above 20x forward EBITDA multiples.
- Leverage multiples are also increasing in order to accommodate higher purchase prices.
- Contract terms are getting shorter, and counterparty concentration is becoming more commonplace with some assets.
- Premium multiples are being paid for retail-oriented business models, with short-term, non-credit-rated customers characterized by high churn rates and expensive customer replacement costs.
- Earlier stage companies with sub-scale asset positions and significant technology or other business model risk are also becoming prime targets for infrastructure investors.
- Significant new entrants are chasing data/telecom and renewables without any measurable track record or history in these sectors.

> With the 'catch the wave' mentality that has taken hold in infrastructure, asset quality seems to take a distant back seat to sector exposure.

At the same time, high-quality assets in sectors that saw some temporary disruption from the pandemic are potentially being overlooked as investors pile into these hotter sectors.

We've identified a number of interesting market themes across infrastructure sub-sectors. Some of these themes are growth driven, like those in data/communications and renewable power, but some are more value driven, underpinned by the thesis that a COVID-19 environment has created attractive entry points for certain assets that were the hot infrastructure sectors just two or three years ago, namely transportation and energy assets. Below is a summary of some of the market themes we are seeing across infrastructure sub-sectors. **See table on page 5.**

Regardless of sector, we believe that infrastructure investors need to stay focused on asset-level characteristics that make infrastructure unique in its risk-return profile relative to other strategies in private market portfolios. While some may get lucky and catch the wave in the pocket of these trendier sectors, waves eventually roll, and our expectation is that asset quality, along with specialist sector expertise, will be the difference between those who successfully ride it out and those that get pummeled to the ocean floor.

Focus Sectors	Market Driven Themes
Waste/Water	• Industry fragmentation • Suburban development • Need for efficiency in water and sewage • Aging infrastructure
Transportation	• Highly fragmented short line railroad market • Entry valuations and opportunities for structured solutions improving in current market
Energy Infrastructure	• Major basins sufficiently piped • Water delivery, treatment, storage and transportation infrastructure still required • System consolidation and structured solutions in play
Data / Communications	• Growth in data usage and cloud services • Interconnection of devices/5G • Need to fix bottlenecks in backhaul networks
Traditional & Renewable Power	• Growing electricity demand • Traditional power gives way to renewables over time • Interim opportunities in convential assets addressing renewable intermittency

Target Investment Characteristics

- Entry price defined by attractive relative value
- Cash flow streams underpinned by recurring, contracted revenues
- Assets with diversified, credit-rated counterparties
- High barriers to entry created by high capex, pricing power, market or other regulatory constraints
- Low risk of technological disruption
- Limited commodity price, merchant or cyclical volume risk
- Limited development risk
- Upside driven by platform growth, operational improvements, re-contracting, and/or execution of pre-contracted, success-based capex programs

ENDNOTES

[1] Cisco Annual Internet Report (2018-2023)

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