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Investing in Digital Infrastructure
post COVID-19

July 2020



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DIGITAL REVOLUTION OFFERS NEW INFRASTRUCTURE OPPORTUNITIES

The COVID-19 pandemic is set to accelerate the shift to the digital economy, expanding the relatively new asset class of digital infrastructure.

The growth of digital infrastructure in recent years has broadened opportunities for infrastructure investors looking beyond traditional assets to the data centres, telecom towers and fibre networks that underpin the digital economy, a recent NAB Roundtable was told.

The Corporate & Institutional Banking Roundtable brought together consultants and institutional investors to discuss the emergence of digital infrastructure as a distinct asset class, supported by the ever-growing demand for data.

Funds are increasingly looking at the physical technology assets that underpin critical services in the economy and the move to the cloud, hyper connected homes and industries and the Internet of Things.

“The need for digital infrastructure is fundamental, and we’re seeing that businesses and consumers are demanding not only increased speed of data but lower latency and better energy efficiency,” said Brad Calleja, Executive, Specialised and Acquisition Finance at NAB.

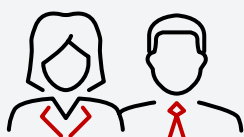
“From an investment perspective, this period of change and development presents a unique strategic opportunity to invest in digital infrastructure, but it also introduces new risks that need to be considered,” said Calleja.

The COVID-19 pandemic triggered a surge in demand for data as jobs, schooling, university education and even medical visits suddenly moved online as governments around the world imposed shut down measures to slow the spread of the virus.

The response accelerated digital trends that might have taken years to eventuate.

Before quarantine and lockdowns, just seven per cent of American civilian workers had access to flexible telecommuting; that is expected to grow to as much as 30 per cent of the workforce working from home several days a week in the next two years¹.

1. <https://www.infrastructureinvestor.com/how-digital-infrastructure-became-mission-critical/>



PARTICIPANTS IN THE NAB ROUNDTABLE

Participants

Bain & Company

David Ellis, Partner

Michael Verhoeven, Partner

First Sentier Investors

Jay Chong, Associate Director
Infrastructure Investments

Macquarie Infrastructure & Real Assets (MIRA)

Ani Satchcroft, Executive
Director

Moderators

NAB

Brad Calleja, General Manager,
Specialised & Acquisition
Finance

Phillip Mak, Global Head of
Infrastructure, Specialised &
Acquisition Finance

Tailwinds to investment

The COVID-driven massive spike in demand for online connectivity illustrates the favourable tailwinds to investment in digital infrastructure assets. Many large investors in hard infrastructure assets such as ports, roads and airports are eyeing opportunities in telecommunications as a complementary sector to traditional infrastructure.

The subsets of digital infrastructure assets include towers, fibre optic networks, and data centres.

“Digital infrastructure has become an essential service,” said Ani Satchcroft, Executive Director at alternative asset manager Macquarie Infrastructure & Real Assets (MIRA). MIRA, with approximately A\$223 billion in assets under management around the world, has organised its infrastructure business in Australia into three pillars: utilities, transport and digital.

“That gives you a sense of how much evolution and growth we’ve seen -- digital is now sitting alongside the pillars we have traditionally regarded as infrastructure,” she told the NAB Roundtable. MIRA has investments in data centres, fibre assets and telecommunication tower businesses across Europe, North America, and the Asia Pacific.

While the demand story is clear, the investment opportunity has not always been as apparent, the NAB Roundtable

heard. The sector has complex drivers of profitability, a high cost of rolling out new technology (such as the NBN), and pressure on prices that consumers are willing to pay.

“Everyone has seen the macro trend of needing more connectivity, but the big question for us was how do we invest in assets that also meet the core requirements of our investors?” Satchcroft said.

“We assess the assets from the perspective of barriers to entry, stability of cash flows and visibility of those cash flows, resilience through market cycles – all similar requirements for any style of infrastructure investment.”

While investors generally need little advice on core infrastructure assets such as roads, the features of a potential digital asset are not as well understood and can require a process of education and engagement that Satchcroft describes as “a bit of a journey”. She noted she and her team spent significant time analysing the data centre sector before making the first investment.

In April, MIRA led a consortium that acquired 88% of Airtrunk, a hyperscale data centre platform, in a deal valuing Airtrunk at A\$3 billion. MIRA cited significant growth in the global data centre industry driven by “an exponential increase” in data consumption, the shift to the cloud and a shift from internal IT systems to outsourced resources².

2. <https://www.macquarie.com/kr/en/about/news/2020/macquarie-managed-infrastructure-fund-led-consortium-reaches-financial-close-on-leading-hyperscale-data-centre-platform-airtrunk.html>

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Defensive assets?

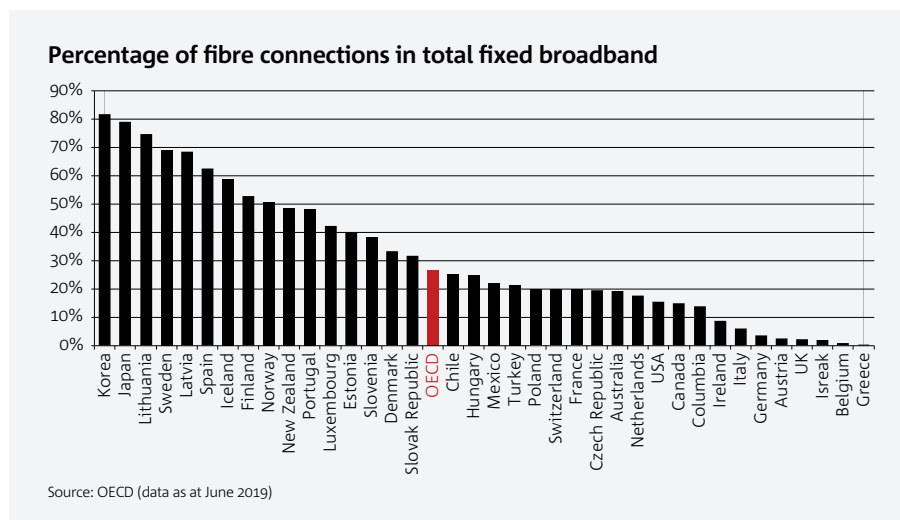
Indeed, while assets such as airports and roads have traditionally been viewed as defensive sectors, the economic havoc wreaked by COVID-19 has turned those assumptions on their head. Perhaps fibre optics and telecom towers have become the more defensive plays in 2020, when international borders are closed and air and road traffic collapsed at the height of the shutdowns.

Reliance on electronic data will grow as we spend more time at home, working or streaming video, and adopting smart devices for lighting, heating and even the fridge and coffee machine.

According to the OECD, nine countries now have high-speed fibre making up 50% or more of their fixed internet connections, up from six in 2018³.

Jay Chong, Associate Director, Infrastructure Investments at First Sentier Investors, says his team typically employs the same investment analysis with digital assets as they would with a core infrastructure opportunity. First Sentier (formerly Colonial First State Global Asset Management) has A\$220 billion in assets under management across a range of asset classes.

“We look at digital infrastructure in a similar way -- we take a long-term view and like to see stable cashflow and barriers to entry” Chong told the NAB Roundtable. “In New Zealand, fibre falls under the same regulatory regime as electricity and gas; the regulators see fibre in the same way to other core infrastructure sectors.”



3. <https://www.oecd.org/internet/broadband/broadband-statistics-update.htm>

DATA EXPLOSION EXPECTED IN COMING YEARS



Digitisation (AI)

Artificial intelligence (AI) uses cases growing at 10-30% annually.

- Autonomous vehicles up 31%



Networking (IoT)

IoT (Internet of Things; connected devices) forecast to grow at a rate of ~34% annually.

- Increase from 8.4 billion devices (2017) to 20.4 billion in 2020.

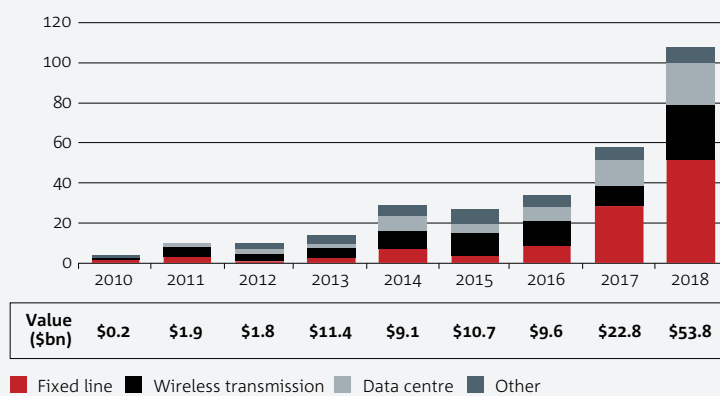


5G Connectivity

Total global 5G traffic is expected to grow from one exabyte in 2019 to 598 exabytes in 2025.

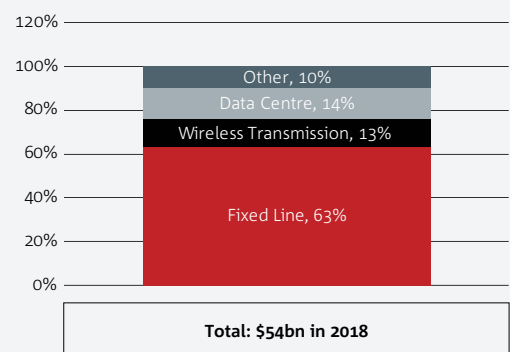
Source: Bain & Co

Infrastructure investment in telecoms has grown rapidly



Source: Bain & Co, Inframation deals database

Most investment still in fixed line



In May, First Sentier agreed to acquire New Zealand’s Ultrafast Fibre Limited (UFF), which has a network of over 3,500 km of fibre providing broadband to more than 237,000 premises in the North Island. First Sentier was attracted by the defensive characteristics of fibre and the dramatic rise in data usage, which has roughly doubled every two years.

“Despite the rise of 5G, fibre has a really strong place in the market, due to its bandwidth, speed and reliability – fibre is always going to have that advantage over wireless networks,” Chong said, noting the reach of delivering fibre to the premises was also an important risk mitigant to network replication.

MIRA’s Satchcroft says consumers expect the same reliability from their digital infrastructure providers as they

do from water or electricity utilities. “In the same way that the operator of a utility or transport system has to earn their social licence to operate -- it’s the same with digital providers, and maybe even more so in this environment,” she said.

“More investment over time is needed in the network to meet the capacity.”

David Ellis, Bain & Company.

Surge in investment

Investment in telecoms infrastructure has seen an “explosion” over the past decade, with the bulk of deal value still in fixed line but a growing volume of transactions in wireless transmission and data centres, the NAB Roundtable was told.

“Since the pandemic began, we’ve seen a massive spike in overall demand,” said David Ellis, partner at Bain & Company. “How do we meet that demand? More and more investment over time is needed in the network to meet the capacity,” he said.

Ellis noted providers have the ability to add capacity in the short term to meet demand without physical investment, pointing to NBN’s decision to boost capacity by 40% during the pandemic without any charge to the end user.

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DIGITAL INFRASTRUCTURE

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In Bain's view, three technological developments suggest there will be continued strong infrastructure-style investment in digital.

First, the de-coupling of products sold to an end-user from the physical infrastructure used to supply it enables the separation of network infrastructure assets from an integrated telco.

Second, increasing densification of infrastructure to improve performance, such as the rollout of small cells to complement macro towers or expansion of fibre closer to the home, requires new capital investment.

Third, advances in capacity and innovation in network sharing will shift the competition away from raw network performance and lead to a focus on capturing cost savings from increased sharing and wholesale models.

Risk of disruption

NAB is a leading financier of this digital segment of the economy, arranging capital to support its development or expansion in Australia, New Zealand the UK and Europe. We've helped companies with growth capital to build out their mobile tower networks, expand broadband and fibre network operations, and keep pace with demand for cloud storage⁴.

"The challenge is that dynamism and uncertainty and perception of an increased risk of disruption in digital," said Michael Verhoeven, Partner at Bain & Company.

"On the plus side, there are much more positive tailwinds in terms of underlying growth compared to traditional infrastructure asset classes.

That's the risk-reward trade-off that everyone is grappling with. You need to identify those assets or segments of the value chain that are more infrastructure-like, that are more defensive, that have more certainty and have a longer-term investment profile."

While some investors are cautious on the pace of technological change in digital infrastructure, panellists at the NAB Roundtable noted that many sectors of the economy face disruption.

"There's an increasing focus on the pace of change in infrastructure investments, but it's not just specific to digital," said MIRA's Satchcroft.

"There has been an evolution in the way people look at the risk of technological change, regardless of whether it's a digital infra asset or another asset. Electrical utilities have challenges of distributed grids, the impact of renewables, regulatory change. You just need to think about what that step change in technology is going to look like."

"There has been an evolution in the way people look at the risk of technological change."

Ani Satchcroft, MIRA.

4. <https://business.nab.com.au/backing-the-infrastructure-behind-the-digital-economy-30789/>

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