

## A Digital Revolution

In the minute it takes you to read these first few lines, there will have been 4.1 million Google searches, 190 million emails sent, 19 million texts received, 4.7 million YouTube videos viewed, 1.9 million Facebook logins, and 400,000 apps downloaded<sup>1</sup>, all within just one minute.

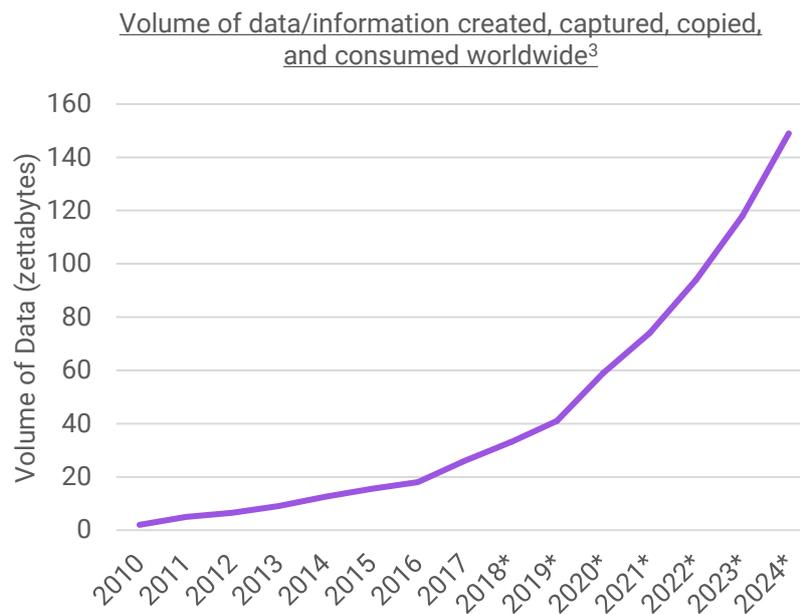
The digital age is firmly here. The so-called 'Fourth Industrial Revolution' in which digital technologies pervade every area of life, from how we work and play, to how we navigate day-to-day life, is well underway.

This evolution from analogue to digital has happened startlingly quickly. The technology now at our fingertips operates at a speed and sophistication that would have once fallen well beyond the reach of many of our imaginations.

As the technology available to us grows, so too does the demand for the data which powers and enables it. Data is generated all day, every day, and is increasingly accessed via more mobile means for an ever-increasing number of activities. This 'Internet of Things', which connects physical objects, such as domestic appliances, vehicles and industrial machinery to the internet, has resulted in an explosion of new data which needs to be communicated, exchanged and stored. We have a perpetual cycle of connectivity, where more apps create more data, which creates more apps, which in turn creates more data – a continuous data loop.

Since 2010, the number of internet users worldwide has doubled, with global internet traffic growing by around 30% a year according to the Institute for Economic Affairs (IEA). The Covid-19 pandemic has highlighted the extent to which digital technology enables us to stay connected, as well as how much we have come to rely on data services and networks. At the height of the first lockdown in 2020, heavy use of video streaming and conferencing, as well as social media and online gaming, sparked a 40% surge in global internet traffic<sup>2</sup>.

Even without the accelerating effect of Covid-19 the underlying trends are "driving exponential growth in demand for data centre and network services" the IEA reports. Global internet traffic is expected to double between 2019 and 2022, with the number of mobile internet users expected to hit five billion by 2025. Meanwhile, the number of connections making up the 'Internet of Things' is projected to double from 12 billion to 25 billion in the same period. A new lexicon has emerged in reaction to this huge data growth. Megabytes, Gigabytes and Terabytes are now overshadowed by Petabytes (1,024 Terabytes), Exabytes (1,024 Petabytes), and Zettabytes (1,024 Exabytes).



<sup>1</sup> [www.visualcapitalist.com](http://www.visualcapitalist.com)

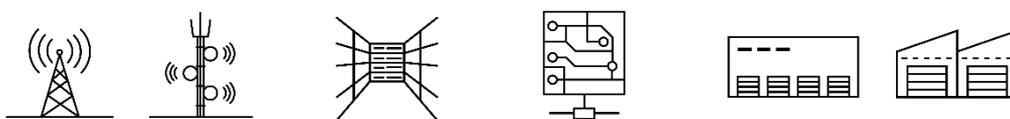
<sup>2</sup> [www.iea.org/reports/data-centres-and-data-transmission-networks](http://www.iea.org/reports/data-centres-and-data-transmission-networks)

<sup>3</sup> Statista. \* denotes a forecast value

Of course, this does not all happen unaided, and the infrastructure needed to support and enable the storage and transmission of reams of data across the world every day is now as critical as transport networks on road, rail and sea. The demand, and indeed opportunity, for investment is huge, particularly with the continuous emergence of new technology. The 5G revolution, for example, is expected to be a game changer with download speeds projected to be 18.5x faster than 4G, greatly increasing demands on data and the infrastructure that enables it.

Digital infrastructure assets are, by definition, physical in nature; they generate contractual income, have long time horizons and are accessible to investors via liquid listed securities. They are critical in nature as they fulfil a fundamental digital need. The loss of such assets could have a major detrimental effect on not only the availability of digital services, but more broadly on the functioning of society itself.

There are four broad categories which account for the most important components of this next generation of infrastructure: logistics warehouses, data centres, fibre optic cable networks, and mobile communication towers.



Each benefits from the digital revolution we have all experienced in our day-to-day lives. Logistics warehouses have benefitted from a boom in e-commerce that was present even before the well-documented pandemic-induced mass adoption of internet shopping. Data centres - large purpose-built server warehouses - host the physical servers that businesses need to store and transmit their data and continue to benefit from the growing demand. The need for central hubs to host and transmit that data will continue to accelerate, putting successful, sophisticated data centres at the forefront of the digital revolution.

Of course, this data relies on a physical network to enable the transmission to and from users at work and home. The huge rise in data usage is incompatible with ageing infrastructure and there is an obvious and overwhelming need to replace old copper cables with new fibre optic cables, offering greater bandwidth and speed.

There are significant environmental benefits to be found by ensuring the very best technology and infrastructure is installed, ensuring data is stored and transmitted in the most efficient and sustainable way. There is no avoiding the vast amount of energy that is used when we all email, text and use social media - the digital revolution and its perpetual data cycle is very much in motion - but by investing in best-of-class assets that help to centralise processes and encourage use of the cloud, rather than physical in-house data storage, we can work to minimise the toll our hunger for digital technology has on the wider world.

Digital assets are critical infrastructure and are well established in developed markets around the world. There is nothing short of exponential growth ahead. The soon to be launched VT Gravis Digital Infrastructure Income Fund aims to tap into this mammoth trend, gaining exposure to projects which enable the digital world to work, via liquid specialist global REITs, housing best-in-class assets. For an investor, these assets are secured with long-term contracts and secure tenants, as well as the potential for further significant growth as the digital world expands in the years and decades – even centuries – to come. Investing in this long-term trend, investors can tap into the potential for strong future returns and steady, secure income.

**Matthew Norris, CFA**

**Director of Real Estate Securities**

**Fund Adviser VT Gravis Digital Infrastructure Income Fund, VT Gravis UK Listed Property (PAIF) Fund**

12<sup>th</sup> May 2021