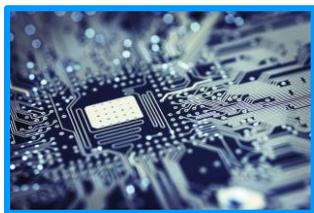




# OAK INVESTMENT MANAGEMENT GROUP



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## Technology and Real Estate

*Technology interacts with the economy in an iterative and cumulative way. Today, real estate as an asset class would be unrecognisable without the speed of calculative machinery and of communication that has also utterly transformed the rest of the economy. But there are, however, some particular aspects of technology and real estate that are worthwhile remembering when it comes to investment decisions.*

From a management point of view, technology (mainly computers and the internet) have made it possible to monitor a vast amount of real estate in one place, in unprecedented detail. For better and for worse, Commercial Mortgage Backed Securities (CMBS) would have been impossible without technological advances in computing and communication. From a trend point of view, technology has been changing the way we interact and use real estate. For better and for worse, long established ways of living, working and shopping are being broken and redefined in a new way. All of these factors must inform how real estate is invested in going forward.

Generally speaking the benefits of this technologically-driven world are much greater economic efficiency, heightened liquidity in normal circumstances, enhanced flexibility and choice for each individual economic participant in the real estate investment or utilisation market. The challenges are that real estate remains a bulky in terms of size, statistically binomial rather than discrete and flaws can be qualitative or contextual rather than quantitative.

The quantitative 'precision' of technology can be misleading for two main reasons. First, the law of averages does not always explain outliers that can be important observation points. The second is that a trend line is a historical observation and in no way actually predictive of how future supply and demand interact.

In extreme situations the interconnectedness that is driven by technology and that normally brings so much benefit can transmit serious self-perpetuating human inspired, but machine perpetuated, predispositions: fear and over-confidence. Neither of these are incorrect or wrong from an individual perspective – it rather becomes an issue in a market economy when a) there are no contrarian opinions, even at a seriously adjusted price and b) no one is prepared to carry the investment intra-temporal risk until different opinions emerge. In short technology can harden monolithic received wisdom rather than promote diversity of investment opinion which is the life blood of the market economy.

The important role of technology in real estate needs to be accompanied by a healthy scepticism of clean (as opposed to real) process. In other words, the process and the mechanics of how outputs are reached need to be understood, contextualised and audited. Ultimately, human judgement i.e. robust analytical qualitative stress tests must always be in control of investment decisions in real estate. In this way the best use of technology is one that helps rather than engulfs the real estate investment manager.