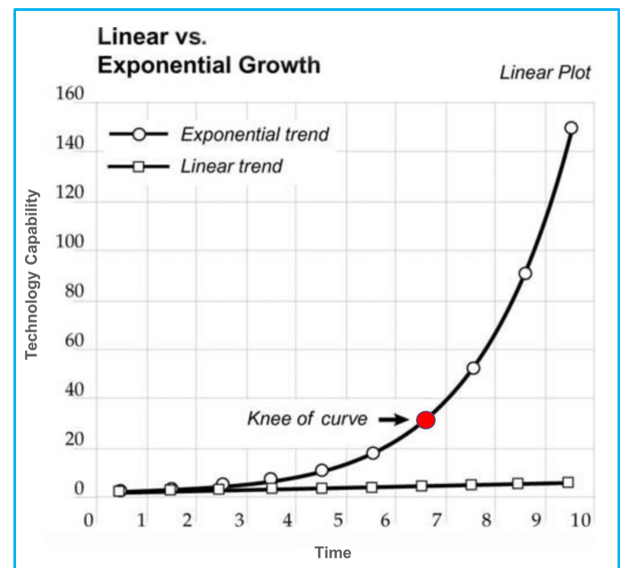


## Knee of the Curve

Technology stocks conquered other sectors last year, which has naturally prompted some investors to ponder: “Is this tech trade over? Is it time to pounce on the next big things?”

Selected technology stocks directly related to the global shift to working from home certainly had their moment to shine, while others were pulled along in a wave of unduly speculation. The actual technology sector is just beginning a massive growth phase that every investor should explore. Over the last few months, consolidation has been a major trend within the technology sector, meaning many technology stocks have traded sideways or traded down. We have seen many market pundits declaring this the end of the technology trade, urging investors to clamour for value stocks. From our perspective, investing in the technology sector right now is the equivalent of holding a beachball tightly underwater. Years from now, we will look back at this time and reflect on how this current shift radically changed civilization forever in ways that we cannot even comprehend at this time. The sector is on the cusp of an exponential ascent and that beachball definitely will not be held down for very long.

The inflection point at which exponential growth segues from mimicking linear growth to demonstrating exponential growth is referred to the “knee” of the curve. We may not fully appreciate this right now, but the entire world is on the brink of a paradigm shift. The world keeps shifting to a more knowledge-based economy. Operating costs are decreasing as the infrastructure continues developing, propelling innovation as a whole to rapidly accelerate.



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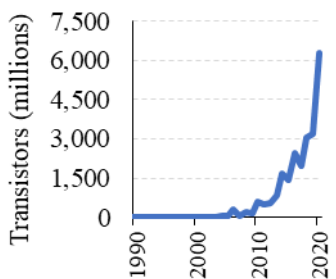
The acceleration of paradigm shifts as well as the exponential growth of the capacity of information technology are both **beginning to reach the “knee of the curve,”** which is the stage at which exponential trend becomes noticeable...**Shortly after this stage, the trend quickly becomes explosive.**

Ray Kurzweil, *The Singularity is Near*

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We maintain active dialogue with many management teams. Recently, we have been hopping on more calls than ever with CEOs of private and public companies, particularly within the technology sector. If our day-to-day was made into a movie, it would be a fast-motion montage of all these CEOs repeatedly sharing the same update that they’re seeing the pace of growth accelerate ever faster. Innovation victory favours the swift and these moving pieces have fallen into place for the absolutely perfect storm of a decade (likely longer) of dramatically outsized growth.

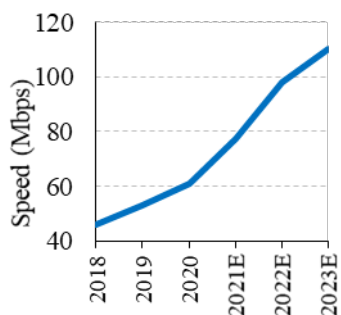
#### Transistors Per Microprocessor



#### Why is this happening now?

When we refer to technology, we are referring to the process by which an organization transforms labor, capital, materials and information into products and services of greater value. Then that means innovation is a change in one of these technologies. In the past, successfully executing certain technologies would not have been feasible. However, due to the recent ramp-up in technological innovation, we have opened the doors to the next industrial revolution. Notably, the following four factors have brought this to fruition: (i) speed; (ii) access; (iii) cost; and (iv) adoption.

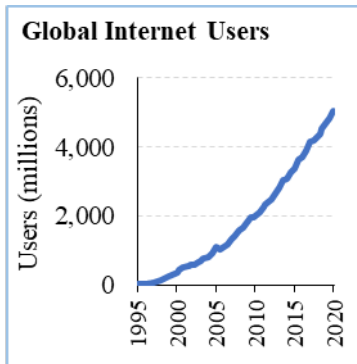
#### Broadband Speed



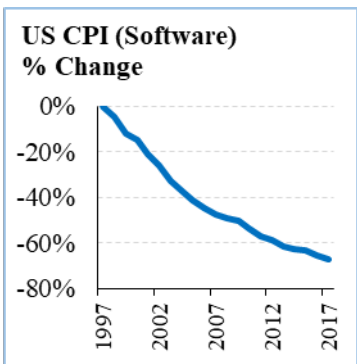
Speed<sup>1</sup>: The sheer speed of the internet and computing power has increased by leaps and bounds. Children today could never imagine a world where internet access could be interrupted if a family member suddenly used the land line phone. It’s no wonder that the concept of successfully operating an online business was unfathomable at that time with dial up internet. Due to advancements in infrastructure and technological improvements, the speed of internet has reached an inflection point. Thanks to fibre internet and 5G networks, it is accelerating even faster. Today, the average internet connection speeds are 600% higher than they were a decade ago and each incremental improvement boosts the use cases possible online.<sup>2</sup> Global multi-billion dollar businesses are now operating virtually with limited or no physical location.

<sup>1</sup> Transistors per microprocessor chart data sourced from Our World in Data, a project by Global Change Data Lab. Broadband speed chart data sourced from Cisco Annual Internet Report.

<sup>2</sup> OECD.



Access<sup>3</sup>: While most of us are incredibly reliant on internet and technology as a whole, approximately half of the global population still lacks access to internet connectivity.<sup>4</sup> However, major improvements continue being made and innovations such as low earth orbit satellites and rural fibre rollouts keep boosting global access to internet connectivity. At this current pace of innovation and growth, the rest of the world will be coming online in the very near future. Fifty billion new devices are estimated to come online by 2030, dramatically increasing the addressable market for e-commerce, fintech, etc. and therefore increasing growth and profitability.<sup>5</sup>



Cost<sup>6</sup>: Ultimately, most business models can only succeed if the cost to the end user is affordable. Several years ago, the cost of storing terabytes of data in the cloud or just streaming a video was prohibitive, hence why driving to the nearest Blockbuster to peruse its library of rental videos was a weekly ritual. Since then, the cost of storing and sending data has plummeted to the point where businesses can now fully operate in the cloud. Evidence of the impact of scalability, efficiency and profitability has just started emerging in company P&Ls. Businesses operating in the cloud are producing some of the highest growth plus high margins we have ever seen.

Adoption: In the July 2020 edition of the ROE Reporter, we alluded to the three factors above with regards to the digital revolution. Since then, people who were reluctant to adopt technology beyond the bare necessities had no choice but to embrace banking online, ordering groceries online, scheduling virtual doctor’s appointments or just participating in a video conference and keeping in touch with loved ones via FaceTime. With billions of people leaning in online to some degree, they have realized this new paradigm is faster, cheaper and more convenient. The combination of less commuting and lower living costs results in more daily freedom. Just look at the growing work-from-anywhere trend and the ensuing stampede of computer engineers fleeing Silicon Valley and Toronto for cities with lower costs of living, [such as rural Nova Scotia](#). This new world is now in “snowball mode” as each element of innovation is building off the previous in an accelerating manner and the effects have far-reaching scope.

<sup>3</sup> Global internet users chart data sourced from Internet World Stats.

<sup>4</sup> Internet World Stats.

<sup>5</sup> Statista.

<sup>6</sup> US CPI (software) chart data sourced from Our World in Data, a project by Global Change Data Lab.

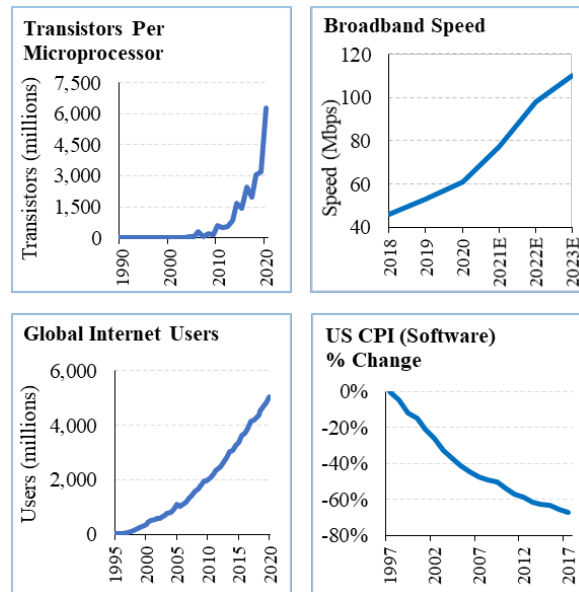
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“The time to adopt new paradigms is going down by half each decade. At this rate, **technological progress in the twenty first century will be equivalent (in the linear view) to two hundred centuries of progress** (at the rate of progress in 2000).

Ray Kurzweil, *The Singularity is Near*

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The combination of the factors above, combined with other innovation, has allowed business models that would never be viable to be extremely high growth and profitable, demonstrating a multiple of growth that you would not have otherwise. The innovation unfolding within technology today is multiplicative, not merely additive, as improvement in one technology leads to improvement in another. The growth in the next five years will not be a mirror image of the growth during the last five years. The next decade is poised to be transformational as several critical technologies achieve escape velocity. This is why we are at the knee of the curve; technology growth to date has been impressive but the past will pale in comparison to the next decade. Growth is gaining momentum and we are seeing it not just from conversations with management teams and the results in our financial models, but also by experiencing it in our day to day lives.

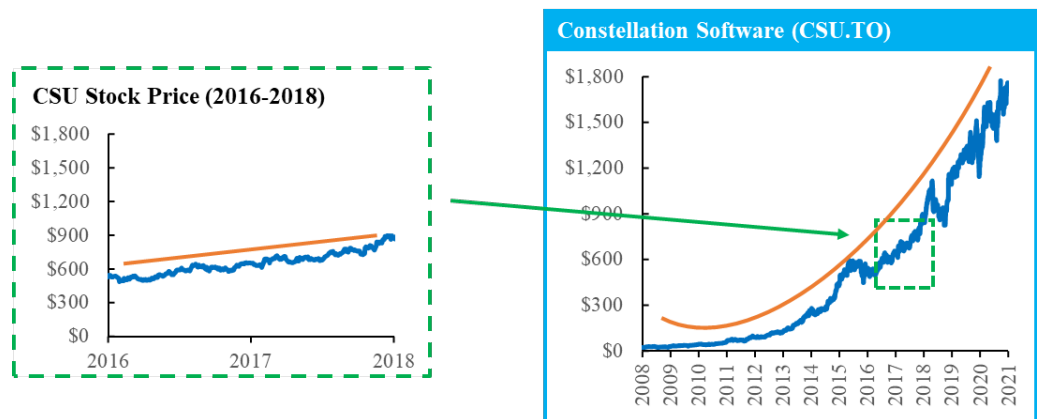


Earlier this month, Nvidia unveiled the launch of Grace, the company’s first data center CPU. Grace is an Arm-based processor that will deliver 10x the performance of today’s fastest servers on the most complex AI and high-performance computing workloads, demonstrating how leading-edge AI and

data science are thrusting today's computer architecture beyond its limits and processing unimaginable amounts of data.<sup>7</sup> This computer will be **10x faster with 30x more bandwidth and 10x more energy efficient** than what is currently being used in the market.<sup>8</sup> Right now, training a program using a trillion data points of information might take as long as a month. By using Grace, this can be completed in just three days. This is the perfect example of one generation of technology being tremendously superior compared to what is currently being used. Data centers are the power plants of computation and increases in performance of this scale will have profound impacts as it will allow other innovations to proceed which will in turn spur more innovation.

## Why does this matter?

Exponential growth, which we usually refer to as compound growth, is very deceptive. Compounders as stocks are routinely undervalued because most investors only look ahead to the next 1-2 years. When examined over such a short period of time, exponential growth looks like a straight line. For example, consider the example of Constellation Software below and how a randomly selected 2-year period (2016-2018) implies good performance but still fairly linear performance during the short-term.<sup>9</sup>



Generally speaking, most people view their investments through this narrow window. Of course, short-term gains are important but if you are seeking to generate significant returns, you must hunt for opportunities with exponential growth. And that's where Donville Kent comes in; it is our sole mission to uncover investments that will increase in value over the short-term while also having the capacity to compound into life-changing returns. This new technology paradigm is where the next exponential returns are going to come from. The faster a market grows, the easier it is for a business to grow alongside. As the old adage says, "If you want to catch fish, fish where the fish are."

<sup>7</sup> NVIDIA.

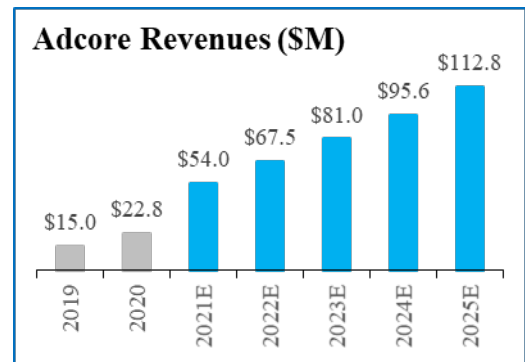
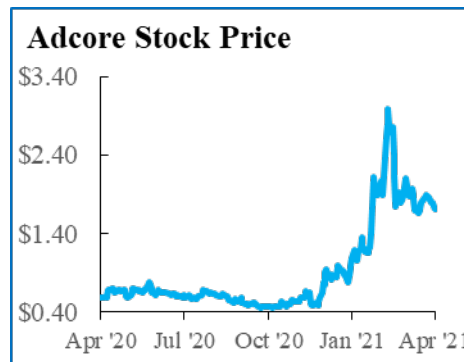
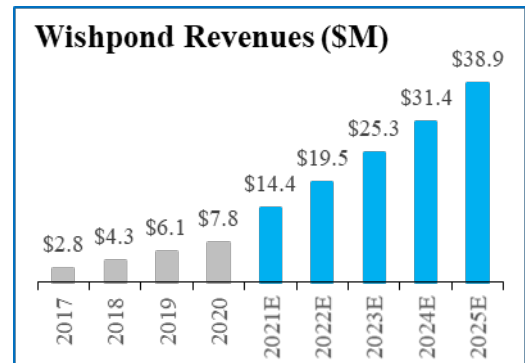
<sup>8</sup> NVIDIA.

<sup>9</sup> Constellation stock price chart data sourced from Bloomberg.

## Where is this happening?

Being on the leading edge of innovation and focusing on exponential growth trends is where the most growth and greatest returns will come from in the decade ahead. Please see below for rapidly growing small cap technology companies within various verticals.

Ecommerce<sup>10</sup>: In 2020, ecommerce comprised 14% of retail sales, doubling over the last five years.<sup>11</sup> E-commerce grew at 44% in 2020 and will continue exponentially from there.<sup>12</sup> Demographics will play a significant role in this growth, as 25-35 year-olds are entering the max spending years and ordering online is only going to become easier, cheaper and faster. The combination of these factors brings the perfect example of being at the knee of the curve.



Telehealth: The pandemic added pressure for healthcare providers to quickly cut through the barriers of legal issues, liability and insurance, enabling online doctor visits at scale. That being said, the number of companies that have surfaced in the telehealth market over the last year is astonishing. The more competition, the smaller the chance of a competitive moat and sustainable margins and earnings in the long-term. Attempting to pick the one or two companies that will ultimately succeed (while the rest fail and evaporate into thin air) is much too risky of an exercise at this point. It's interesting to consider

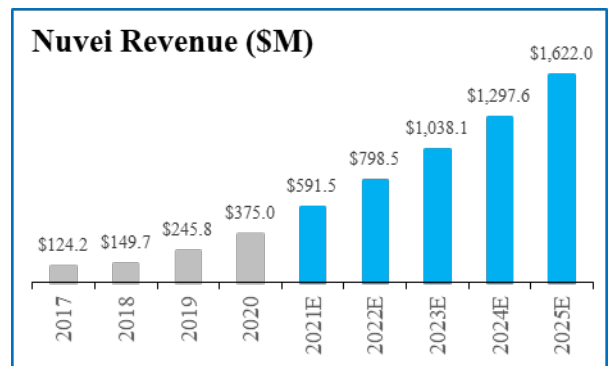
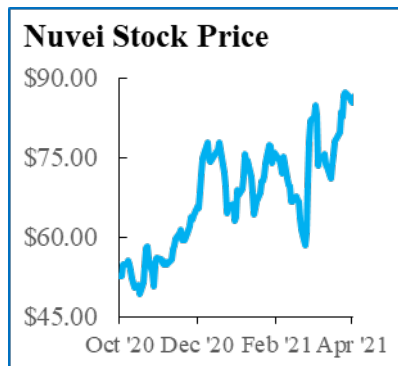
<sup>10</sup> Wishpond and Adcore stock price chart data sourced from Bloomberg; revenue forecasts based on DKAM estimates.

<sup>11</sup> Statista.

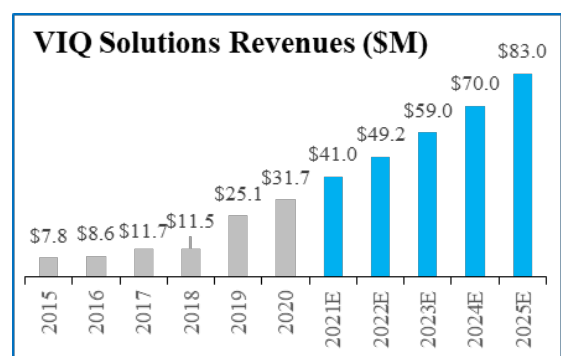
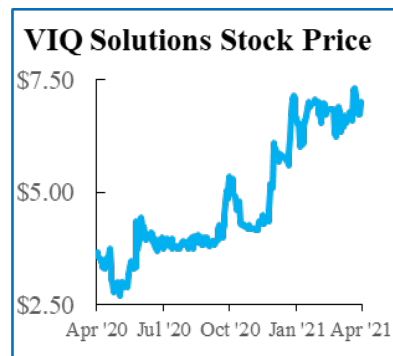
<sup>12</sup> Digital Commerce 360.

the follow-on effects of less demand for physical doctors' offices. Lower office demand also means less demand for parking and ancillary services as well as a decrease in traffic. Now multiply this across other industries experiencing the same technological disruption such as banking, engineering design & legal.

Fin Tech<sup>13</sup>: Similar to visiting a doctor, the need to physically visit a bank branch has lost a lot of its necessity and importance. Technologies such as DocuSign, Paypal, Square, and Robinhood as well as improvements in government regulations has led to online payments and money transfers being as easy as a quick click of a button. While baby boomers still control a majority of wealth, this is on track to change. Major banks are finally grasping that they must adapt if they want even a chance at getting business from the growing younger demographic. The shift to digital wallets goes hand in hand with the growing adoption of ecommerce, working online and the penetration of smart phones. To clarify, we are not betting against banks entirely but would prefer to invest in niche players that are profitably growing at outsized rates.



Artificial intelligence<sup>14</sup>: The last couple years have seen major breakthroughs for conversational AI as many technologies finally achieved an acceptable level of accuracy. For the first time, AI systems can now understand and generate language with human-like accuracy. Conversational AI requires 10x the computing resources of computer vision and with the introduction of technology such as Nvidia's Grace, the next decade will bring significant investments in



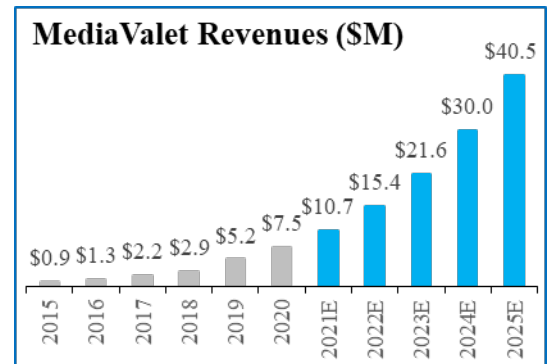
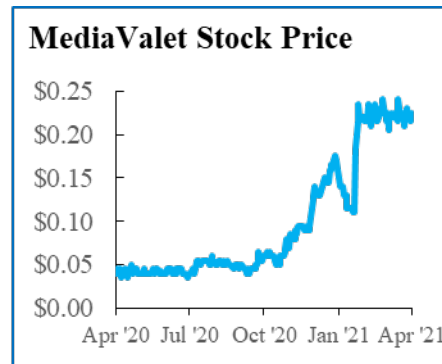
<sup>13</sup> Nuvei stock price chart data sourced from Bloomberg; revenue forecasts based on DKAM estimates.

<sup>14</sup> VIQ Solutions stock price chart data sourced from Bloomberg; revenue forecasts based on DKAM estimates.

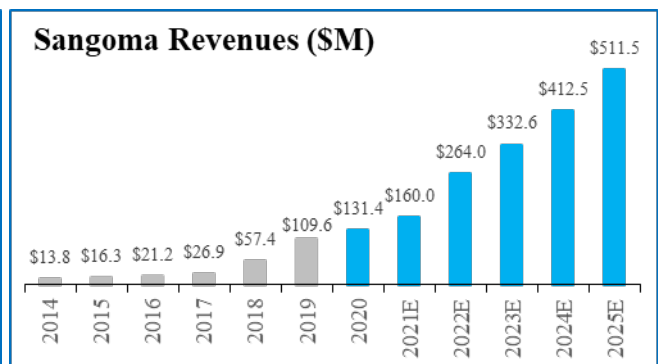
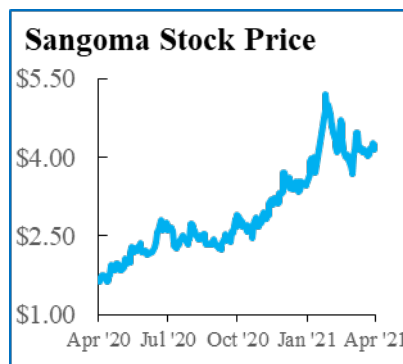


computer language processing, which will make this one of the fastest growing sectors in the market.<sup>15</sup>

Digital asset management<sup>16</sup>: The amount of digital information shows no sign of shrinking anytime soon (if ever) and this information is extremely valuable to many firms. The ability to efficiently manage these assets is a fairly new industry and it has one of the highest growth rates we have come across. Many of the companies addressing this need are combining cloud storage and artificial intelligence.



Work from anywhere (workflow software)<sup>17</sup>: About half of workplaces will allow full-time work from home and approximately 80% will approve part-time work from home.<sup>18</sup> Even if these numbers are overestimated, the market for software required to operate in this manner is still incredibly underpenetrated. Many businesses were caught off guard by the baptism by fire they endured while creating work-from-home infrastructure under duress in 2020. This led to many temporary set-ups haphazardly slapped together in a pinch. Now that the height of the emergency has passed, businesses can now thoughtfully strategize on which products make the most sense for their work-from-home infrastructure.



<sup>15</sup> ZDNET.

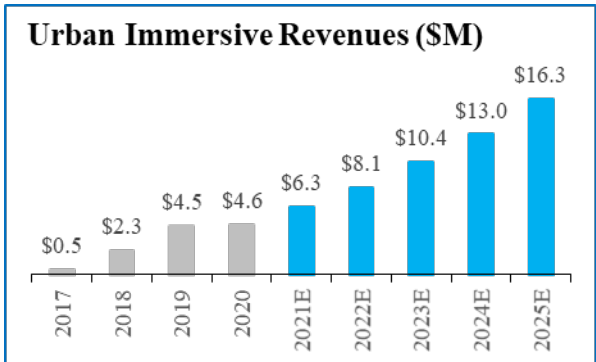
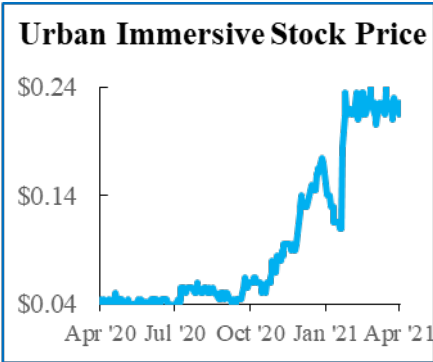
<sup>16</sup> MediaValet stock price chart data sourced from Bloomberg; revenue forecasts based on DKAM estimates.

<sup>17</sup> Sangoma stock price chart data sourced from Bloomberg; revenue forecasts based on DKAM estimates.

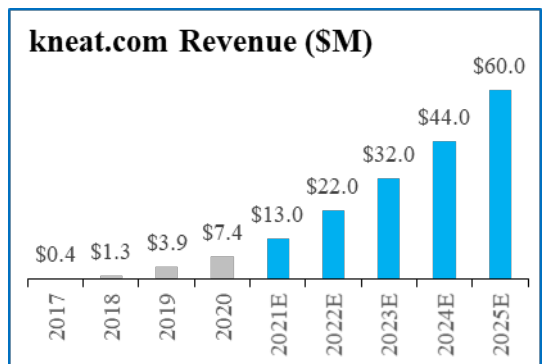
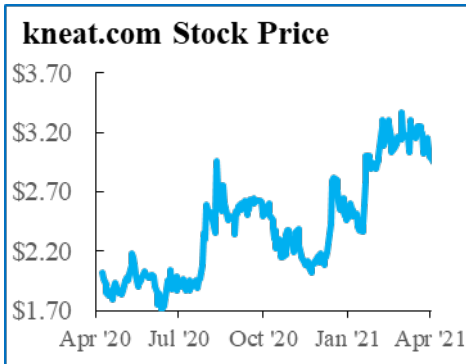
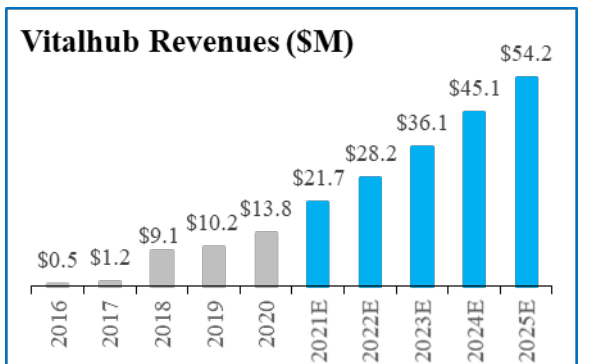
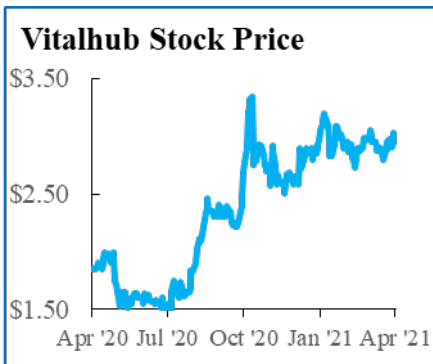
<sup>18</sup> Gartner.



Virtual reality<sup>19</sup>: As we saw with flat screen televisions, adoption increases as hardware costs decrease. Virtual reality is next in line to have falling hardware costs, which will drive wider acceptance. The use cases of virtual reality extend far beyond gaming and entertainment. Companies focusing on eliminating the need for physical interaction will prove to create a lot of value, such as immersive scenarios like education and training.



Healthcare Tech<sup>20</sup>: The sector which had the biggest tech wake-up call during the pandemic was the healthcare sector. For decades, hospitals have been severely underinvesting in technology and it took a global pandemic for them to acknowledge that there is a much better way to operate by using patient flow software, bed optimization software, online screening and virtual waiting rooms.

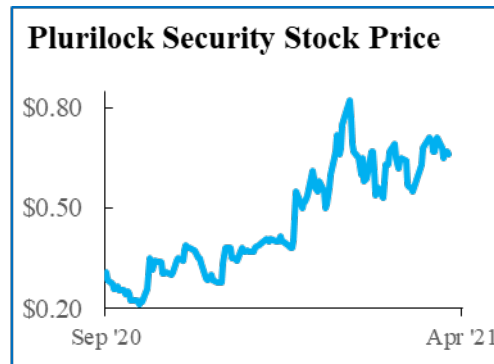


<sup>19</sup> Urban Immersive stock price chart data sourced from Bloomberg; revenue forecasts based on DKAM estimates.

<sup>20</sup> VitalHub and kneat.com stock price chart data sourced from Bloomberg; revenue forecasts based on DKAM estimates.

Green energy: The future of energy has never been more green than it is today. The most promising technologies in our view are renewable natural gas, hydrogen power and lithium batteries. Previously, the challenge was that while the technology was effective, the public companies in this space were not even close to operating profitably. Today, certain green energies can be extremely profitable but there is a dearth of public investment choices. As such, these public companies get bid up to expensive valuations. Stay tuned for new green energy companies going public and focus on those with profitable unit economics.

Cybersecurity<sup>21</sup>: There is no need to list examples of large cyber hacks for one to understand how important cybersecurity is. The largest security providers have become essential to businesses and their stocks are priced accordingly. Be on the lookout for companies who address new issues or tackle them with unique and defensible technologies.



### Final thoughts

We have entered an era where companies literally cannot operate without their software. These business models are superior to almost any other business model out there. They are asset-light, sticky, scalable and high margin. If you want to outperform and get outsized returns, prioritize investing in markets that are growing exponentially.

When it comes to digital innovation, victory goes to the swift. Here at DKAM we are looking forward to finding, researching and ultimately investing in the best innovations over the next decade. Big companies start as small companies and we will continue to focus on finding the next great investments in the small cap space.

J.P. Donville & Jesse Gamble

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All estimates, projections, and calculations have been generated by DKAM. This does not constitute advice for personal investments but rather a breakdown of how Donville Kent approaches stock analysis.

<sup>21</sup> Plurilock and Varonis stock price chart data sourced from Bloomberg.

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