



Investment themes for 2018 and beyond

Venchuer believes that the more educated investors are, the better potential they have to generate returns.

In this article, we cover some of the long-term trends that are shaping our investment decisions. It is through our understanding of persistent, deeply rooted patterns, and the data behind the headlines, that we find investment opportunities and manage related challenges.

With average valuations at their highest for decades, interest rates flat-lined, and capital market assumptions for stock returns ranging from 1 to 4% over the next 5-10 years, investors face more significant challenges to generate real returns.

Many ponder whether the market has “paid-forward” investment returns over these last several years as markets have surged. We are in the eighth year of a very long recovery, and 2017 marked the lowest volatility since the early 1960’s. As we look ahead toward 2018, we review a few of many notable themes that continue to unfold.

1.5%

ThinkAdvisor reports that a survey of firms including GMO, Research Affiliates, AQR, BlackRock, and JPMorgan don’t expect stock returns to surpass 1.5% real returns.

Jack Bogle is only mildly more optimistic calling for 4% annualized returns.

4%

2 to 3%

Vanguard Group, which manages around \$4 trillion in client assets, advised investors to expect nominal annual returns of a 60% stocks/40% bonds portfolio to be 2 to 3% less than the long-term norm.

In October 2017, Forbes also revealed its stock market forecast for 2018 to 2043, and expected a real rate of return of just 3%, compared to 7.4% for the last 100 years.

3%

Commercial real estate

Property and technology are intersecting (prop-tech), compelling investors to look at investing in this asset class in new ways.

DEATH OF THE SHOPPING MALL Stripping the value out of the strip mall

As long-term real estate investors, we are paying close attention to the shifting market conditions and changes in consumer behaviors shaping the real estate tech sector.

The rise of e-commerce has caused a full meltdown for brick-and-mortar retailers. Vacancy rates in U.S. Community Shopping Centers continue to rise, as a wave of long-standing retailers seeks bankruptcy protection - even toy-retailer Toys R' Us filed on September 19th of this year.

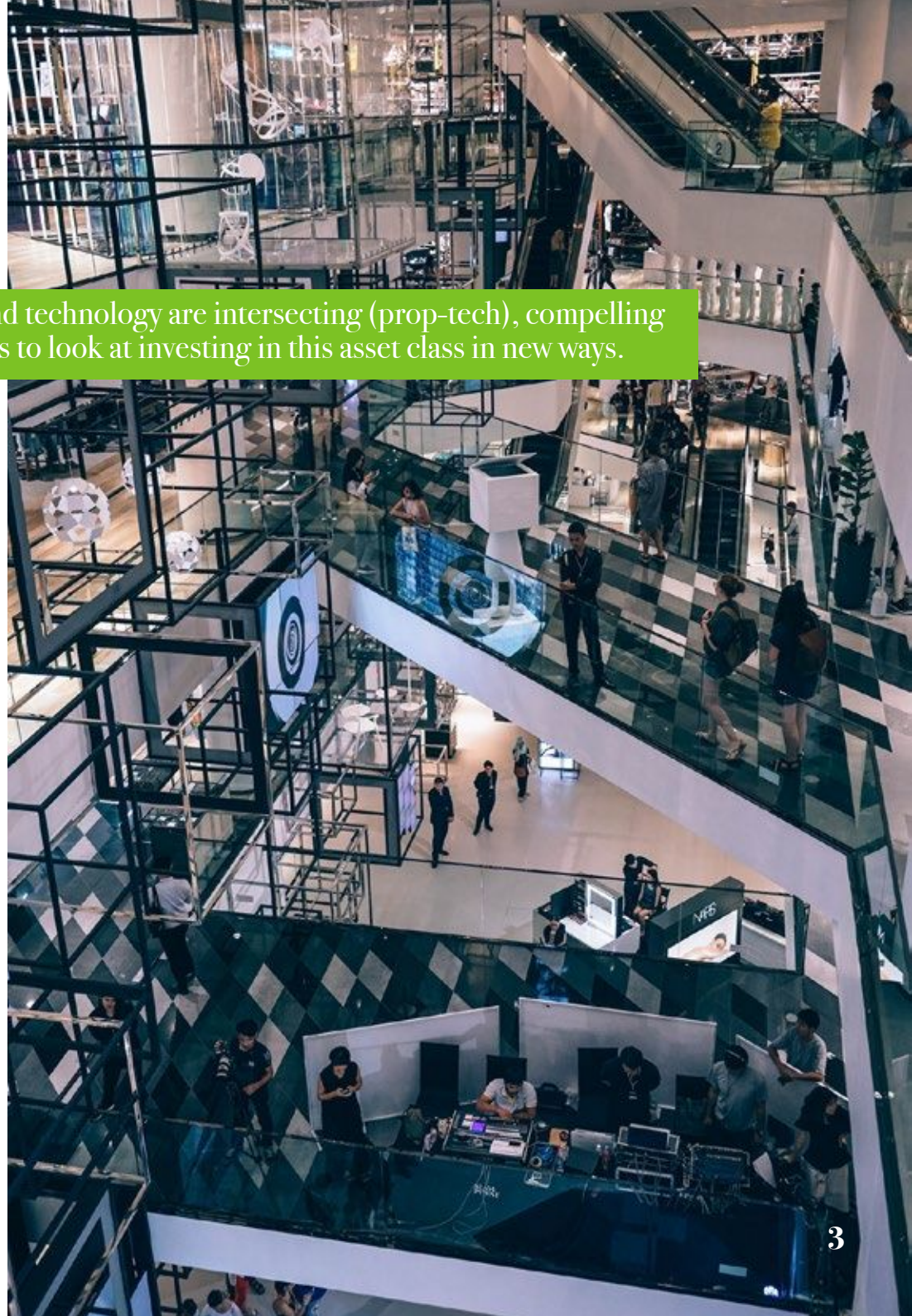
It seems clear that traditional anchor stores no longer play the critical role in driving traffic and attracting consumers to strip malls they once did, except a select few like Apple, Target, and Walmart. But even then, trouble in the space is exacerbated by the rise of the digital bank. As a result, banks now have smaller retail footprints and are moving out of retail neighborhoods.

The sector is distressed and in a secular downtrend. Malls owners across the country are placing properties up for sale, or simply walking away, as property values dip below the balance of the loan. Others are choosing to restructure in a move toward a more profitable future.

In our view, select, high-quality, malls are capable of success even as the unraveling of traditional retail continues. Whether financial gain is possible depends largely on the skill of the management team.

We think that the opportunity for profitability is available to only the most enlightened property developers - those with an understanding of "New Urbanism" principals and the forethought to design in anticipation of future densification.

We think that savvy commercial real estate developers are in the very initial stages of reinventing Centers to create city-like experiences. They are building mixed-use towns with retail, office, and residential intertwined into self-supporting systems. Suburbia is starting to be reinvented and going vertical in places that have the culture and amenities to attract worker talent. These developers are piecing together leases for last mile distribution, medical offices, senior work-live communities and are positioning for the future.





According to Green Street Advisors, the “top 300-400 malls by quality should fare well for the next several years, but it is reasonable to assume that several hundred lower quality malls will either close or become irrelevant retail destinations over the next 10 years.” We agree that outmoded malls and obsolete office campuses will not survive.

Expert Harry Seth, urban designer and architect reports, “suburbs that are performing well are those that emulate cities and create mixed-use, walkable places...suburbs have peaked, and I think they’re in the beginning of a long and deep decline.”

Rupa Ganatra of Millennial 20/20 says retail success in 2018 will depend on retailers’ ability to adapt to new trends and the evolution of customer needs.

Giving customers memorable experiences is a particularly important component of the retail experience of the future, as they need to be offered something that they won’t be able to find online. Many customers like to order online and pick-up their items in-store, as this saves them having to wait for delivery. Others still prefer the delivery option, which is why retailers have to work as efficiently as possible to provide fast, flexible and accurate delivery services to maintain brand loyalty.

We see the strip mall restructure, repurpose, and redevelopment efforts picking up in 2018 and beyond as the sector reinvents itself. Properties with an opportunity to realize value for investors involve buildings in locations that are accessible and innovative. Mixed-used urban communities must meet the demographic demand for compact, walkable block systems. Innovative developers are looking to turn strip malls into community destinations of specialty experiences supported by the multi-family housing for density. As the industry acclimates to shifts due to economic, demographic, technological, and environmental realities, properties that adapt with connected, innovative urban communities can thrive.

It does seem that the sector is stabilizing as Reis reported that the vacancy rate for regional malls was 8.3% in Q3 2017, up from 8.1% in Q2, and up from 7.8% in Q3 2016, “down from a cycle peak of 9.4% in Q3 2011”.

EVOLUTION AND DENSIFICATION OF THE WORKSPACE

Technology and mobility is a game changer in how what and where space is leased.

As innovation spreads throughout the workplace, next-generation commercial real estate provides the potential for growth and income. Investment opportunities exist for top-tier firms that are curating income-producing properties in the thriving market for workspace leasing.

Today's entrepreneurs are investing in a fresh take on workspace. They are signing leases in unexpected and interesting places. As new attitudes about work evolve, tenants seek flexible office space that suits their unique and evolving needs. Workers are able to work remotely but are choosing to spend time with people. They want transit-friendly, tech-smart spaces. As major cities face an affordability crisis, entrepreneurs and worker talent alike seek smart communities, which we think is connected to the evolution of strip malls into town hubs.

The commercial office building is a model under ground-breaking transformation. Trends in the workforce have disrupted the office segment as the career spent stationed at corporate headquarters passes out of existence and the virtual worker, able to work for different companies, from anywhere, defines a new model. Wework, the ubiquitous

young firm recently valued at roughly 20 billion, snapping up real estate across the country, confirms the trend. Physical workspaces are being reconceived and encompassing a live-work model.

In our view, today's workforce seeks boutique, on-demand space that adapts to their needs where they can create, collaborate and make things happen. Demand for these spaces is expected to continue to expand. Therefore, firms positioned to provide flexible space, with an acquisition emphasis focused on investment quality, net lease transactions in vibrant work hubs can thrive in a competitive and extended market segment.

Knowledge is in. Formal, structured work environments are out. Independent production continues to dominate the marketplace. Freelance professionals are leveraging the sharing of information and technology to compete with large corporations.

A new approach to real estate is unfolding in sustainable places. Commercial real-estate investors have an appetite for income solutions in modern office space that can accommodate freelance and on-demand workers. As the

trillion-dollar industry acclimates to profound shifts due to demographic, technological, economic and environmental realities

Firms that stand with the mission to meet demand with a sustainable network of innovative workspaces can do well. Those that invest in old models will struggle to attract tenants.

The properties that have the opportunity to realize value for investors involve commercial real estate buildings in high-growth markets and locations that are energetic, transit-friendly, and collaborative.

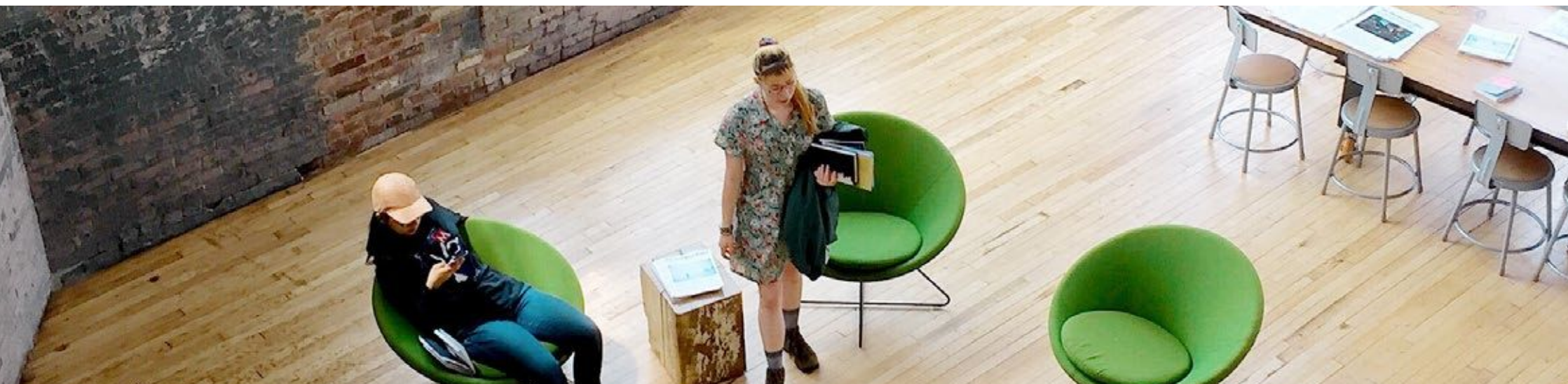
Real estate investment vehicles with access to properties in attractively located markets and with flexible spaces offer a distinct performance advantage. A combination of tactical analysis and applied expertise can be utilized to identify properties with attractive cash flow potential and this to generate competitive after-tax returns through market relevant real estate holdings in multi-use spaces.

As out-dated property types sit idle, demand is strong for flexible, creative workspaces. Private offices are being replaced by efficient space that can be modified to a specific use. Versatile real

estate holdings can benefit from noteworthy growth trends sweeping the commercial office space arena.

A portfolio of modern, commercial office space curated to meet the needs of the marketplace has the potential to generate competitive and reliable income. Commercial real estate properties with workspace suites in areas of high population growth may over-perform as the industry continues to shift from owned space to on-demand leases

Pricing is elevated, and the market is competitive, so investors are becoming more cautious. The low hanging fruit is gone. Real estate owners remain positive but measured. In short, expectations are lower, but outlooks are stable.





INDUSTRIAL WAREHOUSE SPACE Filling in Demand For Fulfillment Centers

The same e-commerce and online shopping trends that are stripping the demand from malls are fueling the need for industrial warehouse space. While the increased volume of retail transactions conducted over the Internet has forced an implosion in the shopping mall sector, it is spurring an explosion in the industrial warehouse space.

Amazon has built a network of warehouses to support its online retail expansion, but other big-box retailers are still in various phases of transitioning away from the traditional retail scene, transferring their demand for build-outs and leases from brick-and-mortar retail space to warehouse-fulfillment space. This phenomenon is not new; it has been playing out for some time, but we do think it has further to go until supply catches up for demand in what is turning out to be a larger than expected cycle.

- Moody's Investor Services Analyst Alice Chung reports 4.6% vacancy and net absorption + 44% 2Q 17 vs 1Q 17

- Cushman & Wakefield predicts that between 2017 and 2019 the market will absorb 655 million square feet.

- Urban Land Institute's Real estate Economic Forecast anticipates warehouse and datacenter grow by 3.7% from 2017 to 2019.

- JLL reports that US industrial vacancy is at a 17 year low.

The warehouse sector has been strong given strong consumer spending and the shift to online buying, requiring distribution space for order fulfillment. In 2018 additional space will come onto the market to meet demand, but we think that it will take a couple of years to bring additional warehousing and distribution space onto the market.

We think that industrial warehouse properties that are posting strong rent growth and are positioned to capitalize on the need for ecommerce-driven logistics properties are attractive investments, especially for income-oriented investors.

Blockchain technology

Property and technology are intersecting (prop-tech), compelling investors to look at investing in this asset class in new ways.



Put simply; blockchain is a digital ledger that makes a public and chronological record of cryptocurrency transactions. The concept was first introduced by Satoshi Nakamoto in 2008 and used a year later as a vital component of the digital currency bitcoin. Now, tech companies are looking for other innovative ways to capitalize on blockchain technology.

A study by the University of Cambridge Centre for Alternative Finance in 2017 stated that blockchains could create a more secure value transfer system, streamline business processes, improve auditability and record transparency, and reduce the need for trust between participants.

Rapid growth in the Distributed Ledger technology Ecosystem

The study also found that there has already been significant growth in the Distributed Ledger technology (DLT) Ecosystem, with over 2,000 people employed by at least 115 DLT start-ups. However, the study highlighted the legal risks and lack of regulatory clarity as key challenges, especially regarding privacy and confidentiality. Other problems include immature technology and incompatible protocols, and limited network and application deployment.

Still widely misunderstood

The study found that blockchain is both one of the most hyped and misunderstood technologies since the invention of the Internet. It pointed to a survey by HSBC, which found that 80% of respondents who had heard of 'blockchain' did not understand it, even though it has already received widespread coverage in industry reports, mainstream media and education (academic and online courses).

More research by Deloitte has highlighted the dangers of increasingly complex malware targeted at organizations. In its 2017 Blockchain and Cyber Security report, it suggested blockchains could 'improve cyber defense' by providing a more secure platform against fraudulent activities. However, on a more positive note, the Deloitte report stated that the odds of IP-based DDoS attacks disrupting operations are lower, as blockchains have 'no single point of failure'. Furthermore, bitcoin has withstood multiple cyber attacks in recent years, although operational resilience can be compromised by transaction malleability when bugs occur while transactions are in a pending validation status.

Jennifer Qin, the Asia Pacific Investment Management Leader for Deloitte, said the commercial viability of blockchain would depend on its ability to comply with 'regulatory requirements, business customs, and various business environments'.

Here are the most popular cryptocurrencies in use today:

Bitcoin

Bitcoin, created in 2009 as the world's first decentralized cryptocurrency, is seen as the gold standard in digital currency. It has received widespread media attention and can perform like a bank, although concerns have been raised over its excessively high valuations, which could suggest it is in a bubble.

Ethereum

Another popular cryptocurrency is Ethereum, which is an open source group with a blockchain-based platform that can be used to manage contracts. It surged in value from \$7 million to \$28 billion in 2017 and has a digital currency called Ether. Jez San, CEO of FunFair Technologies, predicts Ethereum will continue to boom in 2018 as Bitcoin's high fees and relatively slow transaction times makes it less suitable for payments.

Ripple

Popular with financial companies, Ripple is capable of handling 70,000 transactions a second, which makes it a very efficient option for large companies making international transactions. In comparison, Bitcoin can only handle 7 transactions a second. Ripple had surpassed Ethereum to become the second-most-valuable crypto asset with a market cap of around 90 billion.

Cardano

A blockchain platform designed in layers, has a special proof-of-stake consensus algorithm which prevents useless problems that can occur with proof-of-work models. It's more scalable than Bitcoin thanks to its separated accounting and computation. Meanwhile, Litecoin can also process transactions faster than Bitcoin and uses a script (password-based key derivation function) for its proof-of-work system, producing four times the number of coins of Bitcoin. Then there's Coinbase, which is the most popular digital currency platform for buyers and sellers. Over a million people have signed up for this service, which also stores and serves Bitcoin, Ethereum and Litecoin.



A person wearing a futuristic visor in a high-tech industrial setting.

Connectedness

The Fourth Industrial Revolution is underway as a massive, globally connected infrastructure changes the way people live and communicate.

THE INTERNET OF THINGS (IOT)

**If something can be connected,
it will be connected.**

The IoT has been called “the next Industrial Revolution” because of the way it will fundamentally alter the way people live their lives. Businesses across the globe are looking to capitalize on the numerous opportunities that exist in nearly every industry of the economy.

As investors, we think about market drivers, barriers, adoption rates, and growth trends for transformative trends like the IoT. While privacy and security concerns exist, low-cost sensors and significant IoT investments have caused businesses, governments, and consumers to adopt the connected technology more rapidly than initially expected.

Smart Home Automation

We have been talking about it for years, but perhaps 2018 is finally the time for smart home automation to take the spotlight among American consumers. Investors and innovators will need to stay ahead of the curve, rethinking how they can

integrate new gadgets and gear into the home in ways that consumers can cost efficiently adopt. Alexa is just the start.

We will see both niche pieces of tech, like shading and light automation, as well as more fundamental parts of the home, like security and hardwiring, made more affordable for middle-class homeowners. As the cost of this super useful technology goes down, we will continue to see more players emerge and try to pave the way for smart home automation to get mass appeal.

A study by Juniper Research predicted that more than half of American households would be using at least one smart speaker in their homes by 2022, while spending on smart home products is expected to rise from \$377 million in 2016 to \$4.7 billion by 2021.

Challenges for the growth of smart home automation

Understandably, there are concerns over the security and reliability of smart home automation, however. For example, it may be possible for criminals to hack into smart home security systems and access private data - or even enter someone's home.

Major incidents will get a great deal of media attention, which will expose the smart product industry to reputational risk, as repeated high-profile incidents could create a general perception among the public that the technology is not safe and secure. Indeed, in 2014, Forbes reported that the Boston-based 'smart' alarm company SimpliSafe had already sold its products to more than 300,000 U.S customers. However, research by IT service management company IOActive found that all of these customers were at risk of burglaries, as criminals with basic hacking

skills could easily use inexpensive hardware and software to hack into PINs and deactivate alarms – from a distance of up to 200 yards.

Also, companies will be able to collect huge volumes of data from smart products – and all of this information must be protected from third parties. Companies will also need to comply with complex new legislation such as the General Data Protection Regulation of the European Union, which aims to improve data protection for individuals in the trading bloc.

CONNECTED SMART CARS

Autonomous vehicles; a driving force

BI Intelligence predicts 94 million connected cars to ship in 2021, which would represent a compound annual growth rate of 35% from 21 million connected cars in 2016.

Automakers have correctly noticed a growing trend and a significant business opportunity for connecting their cars. BI Intelligence expects 381 million connected cars to be on the road by 2020, up from 36 million in 2015. Furthermore, BI Intelligence forecasts that connected cars will generate \$8.1 trillion between 2015 and 2020. It is an exciting time for the industry as streaming data from engines can help identify maintenance needs and facilitate repairs. The “connected car” also provides growth opportunities as consumers

look to integrate mobile devices with in-car systems for digital messaging and mapping. We see the future of the automobile following the trends of the real estate sector, where fractional ownership and sharing trends come into play. In fact, Daimler just announced its electric Smart car, built for urban ride sharing, which will be introduced at Frankfurt Motor Show in Germany.

People want to live in places where they can efficiently access public transport, hop into a shared vehicle, and have the flexibility to pay by the minute, hour, or day. Forward thinking auto manufacturers like Tesla and Daimler are the ones to watch.



Cybersecurity

Data as a Weapon

The cyber industry, globally, is a growth business. It is roughly a \$100 billion industry growing at an estimated 16% annually. Organizations must manage security and data confidentiality to make a success of the connected world. We think that 2018 will usher in a decade of increased attention on the security of data with individuals starting to join the conversation.

The weaponization of data is a real and growing threat with increasing complexity given the proliferation of cloud computing, leveraging of big data analytics, adoption of connected smart devices in the home, and the explosion of digital financial systems.

Companies and systems worldwide are not prepared, but we see significantly amplified discussion about ways to safely share information. Following some significant breaches, awareness has risen, and security is being talked about in the majority of boardrooms. Global companies, nations, and even small businesses are spending increasing resources to protect data, create cyber policy, and take security seriously.

In the burgeoning era of the IoT, cyber is cross-domain and touches everything. Security architecture is integral to our connected world where millions of people have smart devices that can introduce insecurities into the system. It may not be an exciting industry, but it is an important one.

On this, we do think that, as the industry evolves, companies will attract top talent through creating a game-like environment, pitting cyber criminals against gamer-types who can defend against vulnerabilities.

Of course, Cybersecurity has received media attention in recent years, with thousands of issues occurring each year. In fact, in January 2017, the Forbes Technology Council wrote that it 'should be the biggest concern of 2017'. Quotes like these are a powerful endorsement for the industry – and are motivating more businesses to get their IT infrastructure up from scratch.

As of 2016, the Cybersecurity industry was worth over \$122 billion, a figure that is expected to increase by about 65% to over \$202 billion by 2021. Unsurprisingly, the heightened demand for digital security means this industry is becoming attractive to investors.

For example, in December 2017, it was revealed that the cyber security company Bitdefender, the largest software firm in Romania, was valued at over \$600 million after Vitruvian Partners, a private equity group, bought around a 30% stake in the business. The company already provides cyber security services to around 500 million users, and recently announced it was collaborating with Microsoft to offer security services for businesses using its Mac devices and Linux endpoints.



Cybersecurity consists of three phases:

Sense - Sensing the cyber threats

Resist - Developing the technological infrastructure to resist these threats.

React - Administering a reaction protocol for effective damage control in the worst-case scenario.

Basic cyber breaches still commonplace – even at the top of government

Unfortunately, humans are still extremely vulnerable to even the most basic (and avoidable) breaches. For example, earlier this year, President Trump confirmed that his Twitter account had been temporarily hacked, while the British politician Nadine Dorries revealed she shared her Twitter passwords with staff - even temporary interns.

2017 – cyber threat reaches a critical junction

This has been a turbulent year for cyber security, with one of the most notable breaches NHS, Britain's national health service. The NHS's IT systems were rendered inaccessible after the global WannaCry ransomware attack, affecting thousands of computers and hospitals. Another was the Petya ransomware attack, which impacted organizations in the US and Europe, from legal firm DL Piper to advertiser WPP.

Naturally, high-profile cases like these should motivate businesses of all sectors and sizes to take their own cyber security more seriously.

Already, 55% of organizations responding to PwC's Global State of Information Security Survey 2017 said they were working with outside partners. As the number of internet users rises to nearly 5 billion by 2025, and methods and targets of ransomware becoming increasingly diverse, the industry faces immense challenges.

The growth of IoT, AI, and machine learning, with tech giants like Amazon, Facebook, and Google all getting in on the action, makes Cybersecurity more important than ever before.

Companies like Palo Alto Networks, the leader in next-gen firewalls, is expected to experience strong growth in the years to come as customers seek to protect against data breaches.

Palo Alto already serves the majority of Fortune 100 companies and 63% of the Global 2000, but those figures could climb even higher. That's why analysts expect Palo Alto's revenue and non-GAAP earnings to respectively rise 23% and 25% this year.

Other noteworthy cybersecurity companies include CyberArk, which protects company networks from internal threats like disgruntled employees or corporate spies; and Check Point Software, which provides firewalls and other security solutions to a wide range of businesses. And large players like Cisco, Honeywell and Semantec are increasing their reach.

Summary

As there are many factors which will affect the way people live and work in the coming years, it is not possible to list every trend which will shape the future, neither is it possible to accurately predict long-term political and economic trends. However, as always, we will continue to share our insights as 2018 unfolds.

