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Work Is Being Redefined & The Impact On The Real Estate Industry Will Be Transformative

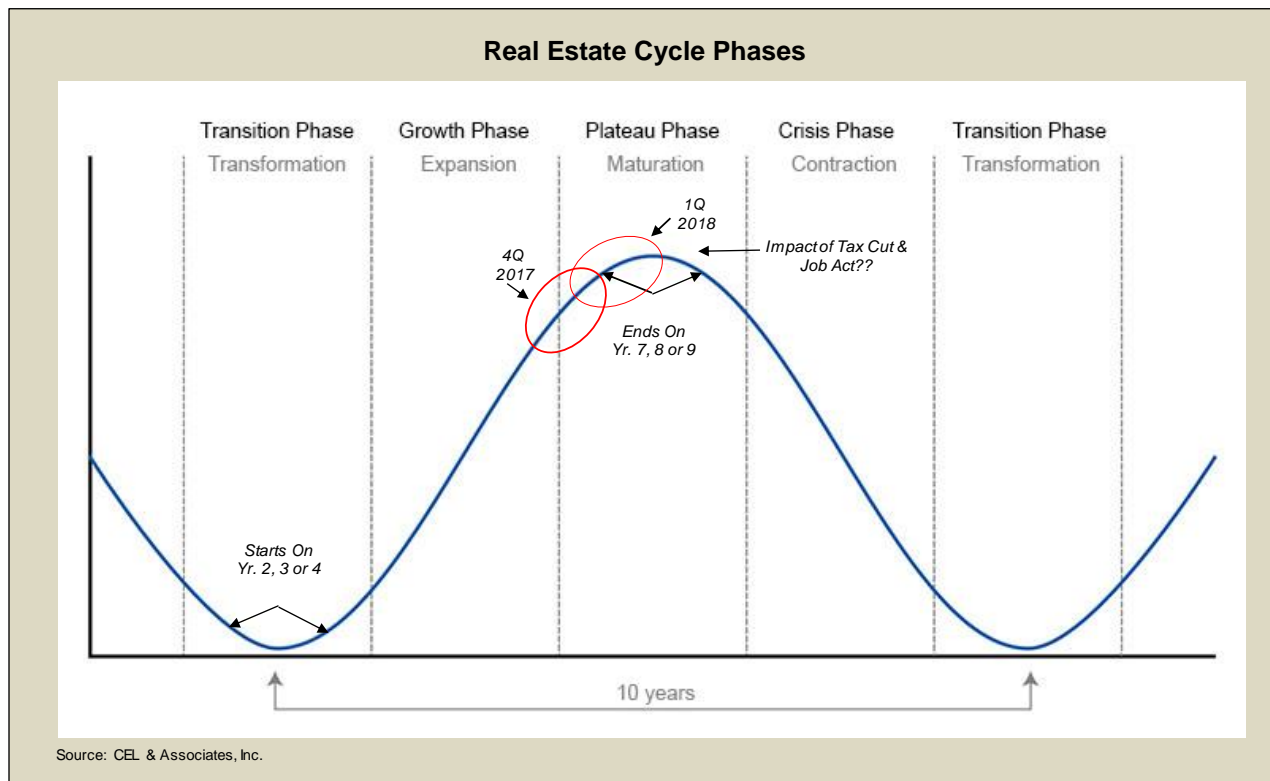
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Friends & Colleagues:

A world in which workers go to work is increasingly being replaced by work that follows the worker...wherever he/she wants to be and whenever he/she wants to work. The digitization of the workplace, the growing role of robotics, the Internet of Everything, the Gig economy, automation, and artificial intelligence are creating a marketplace of promise and challenges for the real estate industry. According to McKinsey & Company, technology can now automate 45% of the activities that people are currently paid to perform, and 60% of all occupations could see 30% or more of those activities automated. Advanced social technologies are gaining traction and becoming more integrated into organizational architecture and operations. While work performed by knowledge workers is likely to remain untouched over the next decade, interactive work should thrive, and the rise of the independent workforce will be transformative. **In the Gig economy, work will be shaped or orchestrated through technology that cannot be seen, touched or, in many cases, attended to by the worker.** While automation technologies will displace workers, the benefits of increased productivity, the creation of new jobs, and **an increase in value to jobs requiring cognitive capabilities will raise economic growth.** Income polarization, however, could become a national challenge if displaced workers cannot find new jobs in the Gig economy. Disruption will be painful for many. Fragmentation and income disparity in our society must be resolved, or challenges will persist for years.

The social, psychological, emotional, and interactive impacts of work and worker transformation on society and its workforce remain unknown. However, one clear and indisputable fact is that work is currently being redefined. The impact of this redefinition will be dramatic and challenging for many in the "how-we-have-always-done-it" real estate industry. What real estate leaders and executives could count on in the past may not be a sure thing now. What was considered predictable, isn't...and what were considered normal business practices are now becoming outdated. **Tomorrow has arrived,** and yet few truly understand the dramatic implications ahead. It is clear from historical job statistics and emerging workforce trends that net occupational growth or decline will impact millions of workers, who will need to retool and learn new skills to remain employed. While there are concerns about having enough work in the future, **clear geographic and market winners and losers will emerge.** States with the highest taxes, the highest costs to conduct a business and those placing the most bureaucratic barriers to success are apt to lose population and jobs [check out www.freedominthe50states.org and <https://www.mercatus.org/> to discover the winners and losers]. Digital job platforms will be needed to respond to an ever-changing job marketplace.



If work is defined by a measure of output or productivity, **space or where work is performed [location] becomes less important than the web and intersection of collaborative relationships, interactive technologies, and economic and geographic mobility.** Lifelong learning will be a requirement for all workers. Loyalty to one employer will become far less important than building one's brand and unique expertise. While work is intrinsically meaningful, workers will define self-worth and relevance by the job or output. Employers and communities that value self-reliance, flexibility, entrepreneurship and foster a workplace environment of innovation and collaboration will outperform those who don't.

Within the real estate industry, the potential is rising rapidly for errors in investment market timing, supply/demand and underwriting. It is no longer a demographic exercise to quantify the population or number of jobs. To be competitive, real estate firms must better understand the dynamic and psychographic changes occurring in the digital age workforce. **Preparing for the New Era of work should be among the top two or three priorities [along with talent and capital] of every real estate firm** that intends to remain relevant and prosper in the years ahead.

In this issue of *Strategic Advantage*, we will examine the changing nature of work, the growing occupations and shrinking jobs of tomorrow, and the impact of these changes on real estate companies and each asset class. The shifting demographic patterns, pace of technological change, and the nature of the relationship between worker and work will have needle-moving implications for the real estate industry. Tomorrow has arrived!

The Changing Nature Of Work

From manual labor to horse-/ox-drawn plows, to farmer-driven tractors to self-driving tractors that "do it all" work has and continues to evolve. The invention of elevators [1853], air conditioners [1902], the steel converter [1856], cubicles [1968], and Microsoft Windows [1985] reshaped white-collar work. The Sears, Roebuck & Co. catalog [1897], rural mail delivery [1896], Google [1998], and Amazon [1994] reshaped retail expenditure patterns. Apartments provided immediate residency and flexibility to a highly mobile next-generation workforce who followed the jobs.

Robotics, RFID tags [1973] and containerization [1950s] reshaped the warehouse distribution sector, and offshoring reshaped the industrial real estate marketplace as last-mile and distribution centers proliferated the major regional hubs throughout the U.S. Cell phones [1973], first portable computers [early 80s], and tablets [2000], created a web of connectivity, 24/7 accessibility and instant communications, and they **shifted work from a place to a person – the worker.**

Employees now work in more decentralized and specialized organizations where individuality is rewarded and encouraged. Slower workforce growth rates are necessitating a more diverse, older and engaged labor force. Core functions [IT, Human Resources, Marketing, Accounting to name a few] are being outsourced. A shift to “distant-work,” a growing pool of independent workers, a desire for a more balanced work life, and the rising desk cost per worker increasingly are causing employers to shed the hiring and workplace traditions of the past.

Digital platforms are creating a very efficient marketplace that can match talent with needs. The rise of the Independent Worker is providing a readily available workforce 24/7 without the desk cost to employ full- or part-time workers. According to McKinsey & Company, 30% of Independent

Workers are “free agents” who garner their primary income from this type of work. Approximately 40% are casual earners who do “extra” work to add to their income. Reluctant workers [14%] and financially strapped workers [16%] make up the balance of the Independent Worker workforce.

Today 20% - 30% of today’s workforce [or 54 million – 68 million in the U.S.] are Independent Workers. Flexibility, autonomy, control and assignment selection are the primary reasons for the growth of this workforce. Independent workers by choice, according to McKinsey, report higher levels of satisfaction, are more engaged in their work, and enjoy the opportunity to be their own boss. Platforms like Uber, Lyft, TaskRabbit, HomeAway, Airbnb, Thumbtack, Etsy, and others actually comprise a very small fraction of independent work today while garnering much media attention. According to McKinsey, approximately 14% of those in traditional jobs and people who are not currently working would like to become independent primary earners. Over the next several years, **on-demand work is expected to grow approximately 18% per year.** The impact of this trend on office space and overall market vitality will be significant.

Emerging trends in technology, demographics, globalization, geographic cost differentials, and public policy are creating opportunities, challenges and unintended consequences regarding work and workers. Rising workforce turnover rates are creating non-traditional employment relationships. The future will see more teams, more collaboration and less structured organizational hierarchy [a legacy created in the early 1900s]. New space will need to be designed to increase the cognitive function of teams. Building Information Modeling [“BIM”] and prefabricated building systems will likely grow dramatically over the next decade reducing cost, risk and labor.

Work Is Being Redefined

- Work follows the worker, not a fixed location.
- Technology, automation and robotics are eliminating the mundane.
- Re-tooling will become the norm.
- Assisted, augmented, and autonomous intelligence is dramatically improving efficiency and productivity.
- Innovation will outpace regulation.
- Specialists and niche entrepreneurs will flourish.
- Agility and speed are essential for relevance and success.
- The “Age of the Freelancer” is ahead (50% of U.S. workforce by 2020).
- The “on-demand” workforce is creating a new ecosystem of work.

Source: CEL & Associates, Inc.

Today, around 50% of all Americans receive some form of government check, stipend or assistance. Concerns over healthcare and monies to cover household expenditures are causing today's older workers [Baby Boomers] to work into their late 60s or 70s...more than any time since the turn of the century. Because many of these legacy employees are working by necessity, and know they probably will retire within 10 years, is often not a priority to embrace the new technologies and

Technology Disruptors	
Mobile / Wearable Technology	Cloud Technology
❖ 6 billion devices connect in 2016...75 billion by 2025	❖ 80% of all apps will run in the cloud by 2025.
❖ Hologram phones by 2020.	❖ All enterprise data will be in the cloud by 2025.
❖ Virtual reality tours [\$80 billion industry by 2025].	❖ Nearly 80% of IT budgets will be spent on cloud technology by 2025.
❖ The office, home and mobile devices are becoming one.	❖ 85% of CRM tools will be delivered by cloud in 2025.
❖ Work and commerce now follow the person.	
The Internet of Everything	Advanced Robotics
❖ Rise of personal robots [35 million by 2020].	❖ Surgeries, healthcare, legal financial services at risk.
❖ Rise of industrial robots [\$45 billion industry by 2025].	❖ Manufacturing and emergence of Fetch robots.
❖ Approximately 47% of all jobs in the U.S. can be automated.	❖ 65% of children in primary school today will work in a job that does not exist currently.
❖ \$7.1 trillion market by 2025.	❖ Driverless cars, trucks and planes.

Source: CEL & Associates, Inc.

contemporary workplace structures. In fact, for many, resisting change is considered a better option than “starting over.” Unfortunately, many real estate investment decisions are made using old paradigms created by legacy and historical precedents.

Compounding this problem is a historically low workforce participation rate [under 63%]. By 2035, 79 million Americans will be age 65 or older and, according to experts, around 10 million men age 25 – 54 are not in the workforce. Workers today only use 54% of their vacation time. While there is glass-half-full optimism that the recently passed Tax Cuts and Jobs Act will create jobs and economic growth, the economic burdens created over the past decade could mitigate the final outcome.

Thus, the challenges posed by an aging, seemingly financially impaired, and reluctantly retiring Baby Boomer population; globalization; and technological advancements are altering the nature

Technology Disruptors	
Energy Storage	3-D Printing
❖ Every home/unit will have a battery on the distributed grid.	❖ \$5.1 billion in 2016...going to \$35 billion by 2020.
❖ \$10.3 billion market by 2025.	❖ 42% of manufacturers intend to use 3D printing by 2020.
❖ Rise of the Zero-energy building...the “Living Building.”	❖ Massive supply chain distribution.
❖ Changing personal devices from space.	❖ Building materials manufactured onsite.
❖ Energy storage to grow 14X by 2025.	
Next-Generation Genomics	Social Media
❖ Medical care and cures will be revolutionary.	❖ Battle for share of engagement.
❖ Ability to improve agriculture production.	❖ Advertisers and customers connected by predictors.
❖ Ability to create bio-fuels.	❖ By 2025, clothes will detect feelings and needs.
❖ Nearly every body part is replaceable.	❖ 2.0 billion social media users in 2016.

Source: CEL & Associates, Inc.

of work. The Internet of Work makes space and location less relevant. The customization of work mandates worker-designed workdays, where they work, how they work, and the desired “feel” of their workplace environment. Workplace wellness, security, privacy and collaborative data-sharing/accessibility will place technology and technology applications as the drivers of organizational efficiency, effectiveness and growth. The connective workforce is becoming the

new factory for productivity. Location is now as interchangeable as the velocity of connectiveness. Good jobs over the next several decades will come from new ideas, new knowledge and new

technology. Markets which are unencumbered by high taxes, high costs to conduct business and burdensome government regulations/oversight will perform far better than those with the opposite. **Markets with affordable and workforce housing challenges will suffer due to the increasing mobility and connect-from-anywhere workforce.**

Wage growth is decelerating, the savings rate is at its lowest level in a decade, the velocity of money is slowing, and the U.S. is far from full employment. Disruptive technologies are contributing to a declining workforce participation rate as workers cannot learn and keep pace with the knowledge and expertise needed to work in a digital economy. Automation is taking over select aspects of many jobs. According to some analysts, as many as one-third of the U.S. workforce may have to change careers [check out [AlphaGo Zero](#) to learn what is ahead].

When we are connected 24/7 [work and personal], it means that we have delegated “special powers” to the tools and techniques that give us that connectivity. Workers, as a result, often struggle to understand the space between what they do and what the future may hold. Thus, **workers are increasingly subjugating themselves to the very technology that has been created to make work more efficient and enjoyable.** For the real estate industry, the current methodologies to understand and underwrite market demand are becoming antiquated models for those still reliving past successes. Real estate assets are being redefined, redesigned and restructured to reflect the new digital age of work, workers and working. Several “hot” markets may soon discover there are limitations to a tenant’s or resident’s capacity to pay. **Many emerging or “undiscovered” markets that offer a multidimensional lifestyle and flexible working environment could flourish.**

The tsunami of change occurring in the workplace and to workers will dramatically transform the real estate industry. **Buildings will be increasingly rated by their functional “smartness.”** Employee, shopper and resident experiences and engagement will be the primary drivers of design features and amenities that are fully connected/integrated to and for the individual. **Connectiveness will be the crucible upon which assets succeed or fail. Real estate assets will need to create places for collision, authentic interaction, social interaction and a “bleisure” environment.** Work will increasingly blend tasks with fun and socialization. Workers and workplace environments will be more “on demand,” culture will become intellectual property [the differentiator] and dataism will determine outcomes. Wages will rise rapidly for knowledge workers, leaders, specialized professionals and creative class workers. **The “wellness score” for a building will become as valuable as a USGBC rating.**

The future of work and its impact on the real estate industry is very exciting. It means a decade or longer of “re-do” opportunities. **Less than 5% of today’s real estate assets are prepared for and able to respond to the new worker and the new way of working 10 years from now.** Yes, the future of work is a real estate game changer and there will be industry winners and losers based on one’s ability, desire and commitment to be transformative.

The following pages describe the changing nature of each primary asset class, based on the future of work and workers.

American Society By The Numbers From Multiple Surveys

- 35% worry about healthcare expenses.
- 35% worry about a lack of an emergency fund [savings].
- 33% have no retirement savings.
- 23% have less than \$10,000 in savings.
- Another 10% have less than \$50,000 in savings.
- Average IRA balance is around \$120,000.
- Only 20.6 million have an IRA.
- In 2017, the average monthly retiree benefit was \$1,360.
- 43% of unmarried persons rely upon Social Security for 90% or more of their income.
- 37% have emergency savings to cover more than \$500.

Source: Harris Poll and other surveys.



The Future Of Work Impact On Office Buildings

The rapidly changing and digitization of work will transform office buildings, moving from a place to house workers to an environment of workplace experiences, 24/7 connectivity and features/amenities

that can be customized.

Tenants will want to rent core space, with an option to rent by the day, week or month flex space. **Rent may be defined by units of consumption.**

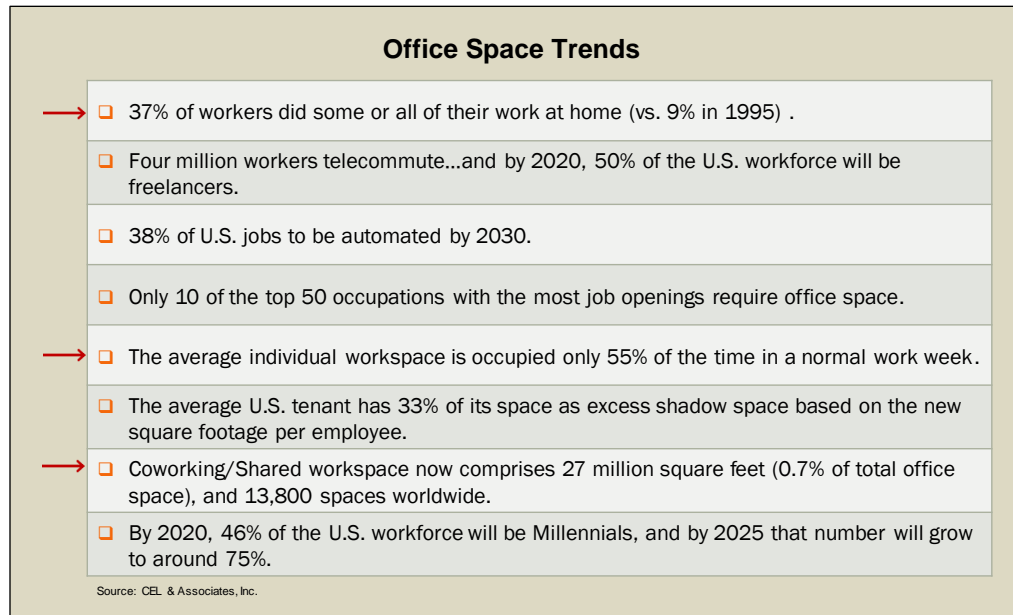
Remember, 77% of the time private offices are not occupied, and 60% of the time work stations are not occupied [Herman Miller].

Mood-based layouts, integration of art, music, “real” landscaping, natural

lighting and use of environmentally sensitive materials will be commonplace. Every large office building will offer/have its version of WeWork. Space densification will likely continue for the next three to five years, while FIRE, STEM and TAMI industries will drive office demand.

Employees in office buildings will be issued Tenant Chips that enable them to access the parking structure, common areas and suite entry. These Tenant Chips will also automatically set room or cubicle temperatures. Workers want to control temperature and lighting in their workspace from their computer. Workspaces will be designed for collision, collaboration and connectivity. Open layouts to encourage socialization, building manager-initiated communal programs and amenity/services convenience will be commonplace. Virtual tours and augmented reality will be a normal course of business for Brokers. **Artificial intelligence will update and correct any building operating system problems. TIs will be heavily weighted toward the experience, culture and workplace environment.** Walls, glass and lighting will enable space to be created to accommodate tenant needs or desires [e.g., moveable walls, windows that become computer monitors, gathering areas for project teams, etc.].

Tenant’s recruiting will be heavily weighted/influenced by the building’s contemporary functionality, experience offerings, brand and proximity to public transit systems. Workers will expect protected places to leave their bikes; and easily accessible places to buy lunch, purchase sundries and interact with other service providers. Companies will create/offer more employee ownership of “their” experience; **buildings will need to be a wellness enabler with spaces designed for networking, socialization, collision and collaboration.** Owners and/or operators of office buildings will increasingly look to Human Resources Directors [e.g., Talent Managers] for real estate decisions. Large buildings or a concentration of buildings should offer moments of spontaneity, exhibits, displays, speakers and entertainment to create a more productive workplace environment for tenants. Cafes, gyms, collaborative common spaces and user-centered workspace will be common.



Alert!

San Francisco, one of the fastest growing cities in the U.S. over the past decade, passed a law severely restricting multi-wheeled delivery bots. This action could signal a potential decline in competitiveness for the City by the Bay.

Office buildings will become 24/7 destinations and provide around the clock workplace settings.

Building Managers and Service Technicians will need to accommodate a multi-schedule workforce [e.g., “Why pay rent for 24/7 and only use the space only 8 – 10 hours a day Monday through Friday?” will be increasingly questioned by CEOs]. According to Gallup, 43% of U.S. employees work remotely all or some of the time, so access [directly or indirectly] to the office will be a 24/7 necessity. Smaller office building owners should create shared-use spaces for amenities and services available in larger buildings. Removing the potential for worker frustration and friction will be added [albeit at a small scale in the beginning] by building owners/managers [e.g., adding a concierge service].

Too often, owners and managers of office buildings are focused on the four walls and not what is inside the four

walls. That is changing...and changing rapidly. **Workers in office buildings will want and expect an environment [common areas as well as their workspace] to foster collaboration, acknowledge the necessity for socialization and networking, and wish to “like” being part of, not apart from, the actual physical structure.** Building apps will be commonplace to accommodate the unique, personal needs of every worker. Specialists and ICs will expect seamless connectivity and timely accommodations when they provide various services/expertise to office tenants. Do not be surprised to see WeWork emerge as a premier Facilities Manager.

The impact of the Future of Work is rapidly altering the office sector. With few, truly ahead of the curve office investors, developers, owners and operators fully enacting/embracing the changes needed...the plethora of opportunities to step ahead of one’s competitors is bountiful.

The Future Of Work Impact On Industrial Buildings

In the next few years, approximately 1.4 million industrial robots will be entering service worldwide. In the first nine months of 2017, approximately \$1.47 billion of robot orders were placed in North America. Another \$1.50 billion of robots were shipped in the first nine months of 2017. Food and consumer goods accounted for 21% of the volume. Motion control shipments increased 10% to \$2.6 billion through the first nine months of 2017. **Between 2017 and 2025, the annual growth rate for the North America services robotic market is expected to grow at a CAGR of 15.15%. Spending on robotics and related services will reach an overall sales volume of \$135 billion in 2019, according to *Fortune* magazine. In 2017, Amazon “hired” 75,000 robots and saw its workforce decline by 24,000 workers.**

What Do Millennials Want In Office Space?

- Work-Life balance
- Flexible schedules
- Collaborative workplace
- Open work stations
- Small lounge areas
- Informal conference space
- Many places to plug-in
- Relaxation areas
- Places for unexpected collisions
- Natural lighting
- Use of recycled materials
- Carbon neutral
- Re-configurable format
- Functionality
- Storage lockers
- Scribble walls
- Informal seating areas
- Pet friendly

81% of Millennials want to choose their own work hours!

Source: CEL & Associates, Inc.

The New Silicon Valleys

Silicon Valley – Santa Clara, SF, Sunnyvale, Palo Alto, Mtn. View

Silicon Beach – Santa Monica, Culver City, Playa Del Rey

Silicon Roundabout – East London

Silicon Hills – Austin

Silicon Forest – Washington County, Oregon

Silicon Hill – Washington, D.C.

Silicon Alley – New York

Silicon Slopes – Salt Lake City and Park City, Utah

Silicon Wadi – Tel Aviv and Metro Haifa

Silicon Valley North – Seattle

Source: CEL & Associates, Inc.

According to the National Bureau of Economic Research, each robot reduces employment by 3 to 5.6 workers in the local commuting area. Amazon, which purchased Kiva Systems in 2012, has created an “arms race” among warehouse and distribution owners/operators. Digital robots can map routes in warehouses, find and secure merchandise, and work 24/7 with no time for breaks. Kiva robots can find and lift an entire stack of shelves and move them to packing areas. Workers who used to find goods are now being replaced by robots who

Industrial Transformation

- ❑ Workers are now producing 47% more than 20 years ago.
- ❑ Manufacturing workers now number 12.3 million [14.5 million in 2006].
- ❑ Amazon has over 100,000 robots working in fulfillment centers globally.
- ❑ By December 2017, there will be 1.9 million industrial robots...growing to a \$45 billion industry by 2025.
- ❑ The cost savings through technological advancements and robotics is now 25% - 33%.
- ❑ Globalization has kept wages low.
- ❑ The emergence of “Fetch Robots” will transform warehouse space.

Source: CEL & Associates, Inc.

can “pick and pack” individual items for shipping to customers. **Literally 90% or so of warehouse workers in the U.S. can be replaced by robots.** Amazon has 100,000 robots in service today.

For owners and operators of industrial buildings, the warehouse workers of tomorrow will be robots, not humans. Consequently, increased ceiling heights, access to electricity to power/recharge each robot, and 24/7 building operations will be commonplace, and the deployment of new stacking systems will be essential. End-to-end supply chain and logistics will emerge as future areas of opportunity and growth. **Data warehouse analytics, closer supply chain integration, inventory management and inventory optimization will be at the forefront of tenants.** Real estate owners and operators must be far more aware of how to optimize technology in industrial/warehouse buildings. **Workers will be secondary to creating spaces that can switch seamlessly from humans to robots,** and from buildings that are designed for operating systems of the past. **ETL technology will be replaced by new data architecture.** New RFID technology, Warehouse Management systems and the confluence of technology are changing the industrial real estate sector. It is very likely that future warehouse/distribution centers will employ more technical specialists than warehouse laborers. Success in this sector will be based on knowledge of technologies and systems.

The Future Of Work Impact On The Retail Sector

Work and workers in retail will experience dramatic and permanent changes for the entire sector. **The trifecta of Amazon, Smartphones and the Internet has altered shopping forever.** In the future, one can try on clothes, select colors, patterns, and designers from anywhere via biometric scans and augmented reality applications from one’s cell phone, tablet or laptop computer. Virtual reality shopping will have a significant impact on the demand for retail space. From gardening to camping, from personal care to entertainment, and from appliances to cars, literally everything is available online. **Demographic analysis to determine demand for retail real estate projects is no longer an only “sure-thing” methodology.** Thousands of retail stores have closed and will close in the future [8,600 in 2017], **as the consumer has taken hold of the retail experience.** The rise of e-commerce is reducing/eliminating jobs in traditional retail. Brick and mortar retail jobs are disappearing. Amazon will represent 20% of the entire U.S. retail industry’s growth in 2017.

To survive and thrive in the digital age, retail centers and retailers must create a valued and desired experience, activity or ambiance to attract and retain customers. Workers in retail are no longer there to stock merchandise or tend to the cash register. **Instead, retail workers will create and foster relationships and pleasant/recurring experiences with customers.** Personalized shopping is rapidly growing, the quality and capabilities of successful retail employees is improving dramatically, and retail real estate assets are a part of, not apart from, the retail experience. Renting space and

collecting rents will not cut it in a world of well-capitalized and technologically sophisticated retail center competitors.

Retail centers must become destinations with new and constantly changing reasons to “revisit.” **Visiting a retail center is far more important to owners of retail real estate assets than visiting a specific store.** The full synchronization of the online and instore experience will be a must for retailers. In the future, the retail center will shift from 70% retail and 30% food and entertainment, to 70% food, entertainment, and lifestyle activities, compared with 30% for retail. Shopping centers and stores will know repeat customers via facial recognition. Retail asset owners and operators will need to create/add Program Directors, Experience Officers and Shopping Guides to fulfill the expectations of shoppers. Marketing of an entire center [regardless of size] will be essential. **Creating reasons to extend the length of stay and increase wallet share will be the priority of owners and managers of retail centers.**

During the next five to seven years, the retail real estate sector will go through a painful correction, rebalancing and reinvention of the traditional retail center.

Off-price retailers are transforming themselves into “treasure hunts.” Successful

retail centers will offer experiences, products, services and amenities that customers cannot get elsewhere. Visual merchandising in stores and in centers is essential, and “trip-drivers” are becoming keys to drive customer traffic counts. Restructuring TIs to be customer- not retail-centric will create job opportunities for those who are creative, innovative, and not bound by historical precedents.

As the Future of Work moves to more technologically savvy consumers, and as shopping from the comfort of your home or on your cell phone becomes common, the transformation will dramatically alter the future of retail real estate assets. Appealing to a four- or five-generation society and multi-tiered income and expenditure demographic cohorts will be critical underwriting questions in the future. **Retail real estate underwriting will place less emphasis on demographics and job growth and more on psychographics** and quantifying what is needed to attract and retain an available customer base. In the experience economy, retail real estate investors should be very careful and acutely aware of the dramatic and transformative changes in today’s and tomorrow’s digital age.

The Future Of Work Impact On The Multifamily Sector

The multifamily industry has always looked at supply and demand factors, demographics, income levels, and employment/job growth as the core underwriting criteria when acquiring and/or developing an apartment community. However, in today’s digital world, quantifying demand, jobs and income levels must now take into consideration: alternative lifestyles; rise of the Independent worker; income derived from secondary sources [Airbnb, Uber, eBay, etc.]; quality and type of the market’s workforce; psychographics; and potential resident expectations. **The potential resident pool must go through a rigorous test of non-traditional analytics to quantify current and future demand.**

Technology will alter the design and construction materials. Robotic construction will be commonplace within a decade, saving 30% on waste, 30% on labor and requiring 30% less time. Apartments will have onsite or in-each-unit medical connectivity sensors for wellness checking and healthcare notification.

What Employees Care About Most At Work

- ✓ Dedication to employee health and wellness.
- ✓ Leaders/Managers who are coaches and mentors.
- ✓ Fairness.
- ✓ Ability to learn.
- ✓ Diversity.
- ✓ Everyone feels valued.
- ✓ Positive company brand/image.
- ✓ Opportunities available to everyone.
- ✓ Technology to improve performance and contributions.
- ✓ Organizational values.
- ✓ Flexible work schedules.
- ✓ A clear vision
- ✓ A celebrated culture.
- ✓ Multiple workspace options.
- ✓ “Cool” physical space.
- ✓ A collaborative, inclusionary environment.
- ✓ A humanized workplace.

Source: Jacob Morgan and CEL & Associates, Inc.



Apartment managers will become Enterprise Directors. Leasing Representatives will be Lifestyle Directors. Every apartment community will have an Experience Director, a Resident Ombudsman, and Service Technicians [formerly maintenance personnel]. Apartment communities will become connective hubs for services, entertainment and lifestyle products. The work from home, Independent worker renters will “expect” WeWork-like business center amenities. Alexa, Google Home, Echo, Dot and Tap will be in-unit amenities.

The U.S. will require 4.6 million new apartments by 2030 [at least 325,000 units per year], and all will need to feature the plethora of digital options, cornucopia of technological amenities and easily accessible Internet of Everything services. Because of the shifting nature of jobs, the blending of work and home will accelerate. **Apartment**

units will become destination/lifestyle homes for a diverse and growing universe of residents.

Do not be surprised to see the emergence of some fairly robust resident portals that reward resident loyalty and increasingly capture additional resident purchase preferences. Advertising and sponsorship revenues could equal 15% - 25% of rental revenues in the future. As the nature of work and the characteristics of the worker change, so will the design/functionality of **apartment communities as they transform into connective lifestyle nuclei for tomorrow’s residents.**

Top 10 Trends That Will Shape Commercial Real Estate Leasing Decisions

1. The asset’s capacity to attract and retain talent for tenants due to the ability to offer a positive experience, engaged services and locational amenities.
2. Space that can accommodate a collaborative, creative, open and efficient workplace.
3. The building’s environmental, wellness and brand rating.
4. Cost of living, proximity to mass transit systems, and accessibility to lifestyle services and goods.
5. Lease rate, TI allocation, term, pass-throughs and lease covenants.
6. Proximity to talented workforce.
7. Opportunity to lease “special project” space for an interim period.
8. Proximity to clients/customers, food service and entertainment venues, and airports.
9. Presence of complementary tenants nearby.
10. Proximity to the residences of the CEO/Owners and Key Executive.

Source: CEL & Associates, Inc.

Creating The Perfect Workplace Environment

- Make the employee experience an integral part of your business strategy and operating systems.
- Assign one leader and multiple owners of the employee experience.
- Establish clear measurable performance goals that hold each individual accountable for their contributions.
- Create a collaborate, cross-functional, open and stimulating workplace environment. Combine or balance between work and socialization.
- Create and provide places for collisions, meeting hubs and gathering places.
- Adopt a hospitality mindset to your workplace environment. Remove inhibitors or barriers to performance.
- Implement workplace schedules that are dynamic, customized and anticipatory of needs.
- Shift from humans doing work that can be automated to humans using their minds to accelerate performance and service.
- Utilize technology to improve efficiencies and employee engagement.
- Embrace a “healthy” workplace environment.
- Utilize the new organizational architecture to create a flexible, adaptive and more agile enterprise.

Source: CEL & Associates, Inc.



Impact of Technology On Select Real Estate Positions

Position	Impact On Position				
	Very Significant	Significant	Neither Positive / Negative	Some	None
Chief Operating Officer		✓			
Chief Financial Officer			✓		
Capital Markets Executive		✓			
Marketing Executive		✓			
IT Executive	✓				
Research Director	✓				
Human Resources Director		✓			
Controller		✓			
Accountant		✓			
Financial Analyst		✓			
Top Asset Mgmt. Executive		✓			
Asset Manager		✓			
Top Property Mgmt. Executive		✓			
Property Manager		✓			
Community Manager		✓			
Building Engineer		✓			
Maintenance Specialist			✓		
Commercial Leasing Manager	✓				
Commercial Broker	✓				
Multifamily Leasing Rep.		✓			
Development Manager			✓		

Source CEL & Associates, Inc.

Closing Comments

Henry Ford once said, **“Coming together is a beginning; keeping together is progress; working together is success.”** The rapidly changing characteristics of work and workers is transforming the real estate industry. In the digital age, work follows the worker. Generational differences create workplace challenges. A lack of a qualified workforce in many industries, government regulations, minimum or living wage initiatives, income disparity, and rising costs of labor [healthcare, desk cost, etc.], are accelerating the shift to robotics, automated processes, and outsourcing/offshoring tasks. There is a dramatic shortage of workers in many industries, and many colleges are not adequately preparing a workforce for the future.

The real estate industry will need to reinvent itself over the next decade. Those who are able to do so will assure their prosperity and relevance for years to come.

I welcome your comments, feedback, insights and perspectives.

Regards,



Christopher Lee



CEL & Associates, Inc.

Building Materials Of The Future

- Translucent concrete
- SensiTile
- eWood
- Flexicomb
- Richlite
- Self-repairing concrete
- Low e glass film
- Carbon fiber
- Liquid granite
- Bendable granite
- Transparent aluminum
- Polymer nanotrusses
- Transparent solar concentrator for electricity-generating windows

SPECIAL ANNOUNCEMENT

Over the past 23 years, we have received hundreds of emails and inquiries asking us to create a more frequent “one- to two-pager” on matters of strategic importance. We are pleased to announce that **we have launched a bi-weekly brief entitled *Leadership Conversation***. This features one topic, provides recommended strategies, includes a prediction and highlights key questions to ask at your next Executive or Management Committee. The feedback for this concept and format has been very positive, and we are excited for this kickoff. ***Strategic Advantage*, our regular newsletter, will continue as a quarterly publication.**

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