# 2015-2017 INDUSTRIAL REAL ESTATE FORECAST

UNITED STATES, CANADA, MEXICO

A Cushman & Wakefield Research Publication









### **ECONOMIC OVERVIEW**

### STRENGTHENING FUNDAMENTALS SUPPORT POSITIVE INDUSTRIAL FORECAST

U.S. GDP growth has exceeded 3.5% in four of the last five quarters<sup>1</sup>. As businesses have gone on the offensive, the pick-up has been accompanied by a long-awaited surge in hiring. Job growth, which was running at about 2.0 million per year, reached 2.95 million in 2014 and is poised to exceed 3.0 million in 2015.

Importantly, this stronger job growth is starting to create labor shortages in some industries and regions, and we are seeing early signs of even faster wage growth that is expected to accelerate in 2015. Higher wages would naturally lead to stronger income growth, which will boost household spending, which will boost demand for distribution facilities. U.S. GDP growth, forecast at 2.2% for 2014, is projected to accelerate to 3.5% in 2015 and 2016.

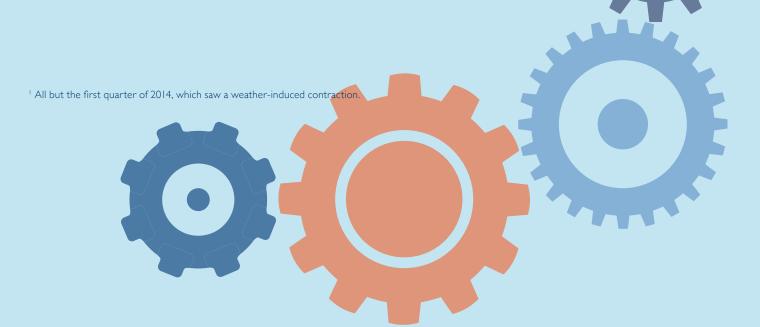
Not surprisingly, we are already seeing the impact of this upswing in the U.S. industrial sector. Measures of industry activity, including manufacturing production and shipments of goods, are at or near record levels. As the economy continues to

expand, increasing activity is expected in all the sectors that drive demand for industrial space, from imports and exports, to manufacturing production and distribution.

With increasing online and mobile purchasing volumes opening new frontiers in the way we shop and do business, we see the demand for distribution services moving from fourth to fifth gear. As of mid-2014, the internet portion of retail sales for General, Apparel, Furniture and Other (GAFO) was roughly 24%, up from 13.5% a decade ago.

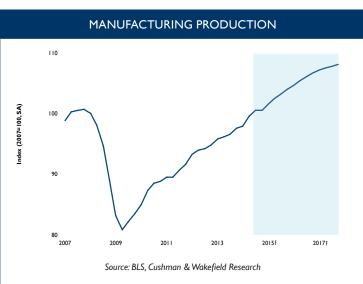
Tightening labor markets leading to faster wage and income growth, along with declining oil prices and rising confidence all point to consumer spending growth in 2015.

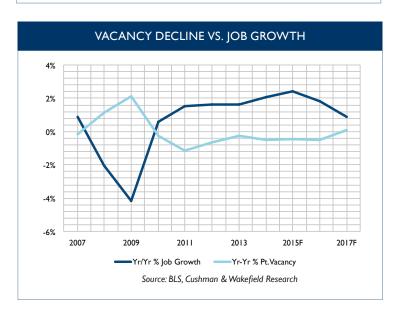
Given these factors, we fully expect that the economic conditions over the next three years will support continuing improvement and growth for the industrial real estate sector.

















The continuing economic recovery, ongoing evolution of e-commerce, and resurgence in domestic manufacturing have generated resiliency in the industrial sector. Trends in industrial real estate supply and demand are favorable across all major markets in the U.S. The overall market has already seen a significant decline in vacancy, with vacant space at its lowest level in over a decade. We expect that the shifting demand and service paradigms, demographic market forces, and global dynamics will support continuing growth in industrial real estate.

#### ONLINE SHOPPING: LEADING DRIVER

The growth of online retail sales as a significant percentage of total retail sales is showing no signs of slowing. The shift in how people are shopping is a leading demand driver that will increasingly influence real estate decision makers and markets. Forrester Research estimated that the online share of the retail sector will reach the mid-teens during the

coming decade, up from less than 10% today. As the e-commerce market grows, retailers are rapidly repositioning distribution centers to meet projected demand.

E-commerce is fueling new distribution projects in major regional distribution hubs like Dallas/Fort Worth, the Inland Empire, Chicago and Atlanta, which each have in excess of 10.0 msf in the construction pipeline. Dallas/Fort Worth, with 16.2 msf of space currently in development, tops the ranking.

Retailers are moving from using distribution centers that supply goods to stores using combined distribution and fulfillment centers that can supply those goods both to stores and to consumers placing orders online. Getting local (GL) is a key trend that will occur even more in 2015. For many retailers, future sales — and profits — will be dependent on how quickly goods can be delivered to customers in major metro areas. Developing a robust,

flexible, highly-responsive final mile network will be critical for both retailers and shippers.

While requirements for big-box space are common among e-commerce tenants, there is also growing demand for smaller- and mid-size buildings. Increasing service expectations (i.e. same-day delivery), elevated transportation costs and the need to access labor are leading e-commerce companies to establish locations around major population centers.

Omni-channel commerce is also behind some of the most creative logistics solutions the supply chain field has seen in a generation. Some of the world's largest retailers are turning their stores into mini-distribution hubs to help them compete better online against Amazon.

Instead of fulfilling web orders from warehouses hundreds of miles from shoppers' homes, companies including Walmart, Best



Buy and Gap are routing orders to stores nearby. The trend, known as Ship from Store (SFS), allows retailers to ship online orders from a physical store, which may be closer to the end consumer than the retailer's e-commerce fulfillment facility. This speeds deliveries, avoids costly markdowns and recoups sales that may have been lost to Amazon.

Demand around the edge of major cities for smaller infill facilities is also on the rise, a response to the increasing trend toward same-day fulfillment. Not only do companies covet the proximity to FedEx/UPS ground-shipping centers these locations often bring, proximity also enables them to fill and deliver orders to a large number of customers quickly.

While Business to Consumer (B2C) demand is often the focus, the rise of online purchasing for Business to Business (B2B) transactions should also be noted. A 2014 Forrester Research study found that 89% of B2B providers said adding e-commerce to their business increased annual revenue by 55%; adding this purchasing channel also resulted in larger order volumes for those businesses. As businesses respond to online purchasing

demand, there are new opportunities for them to revisit their supply chain, and the facilities they leverage to fulfill B2B orders.

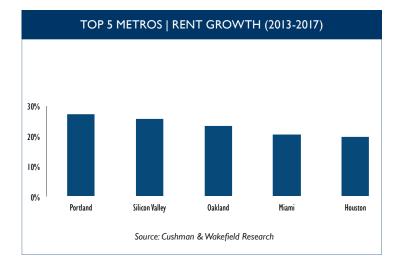
### INLAND DISTRIBUTION MARKETS: STRONG PERFORMERS

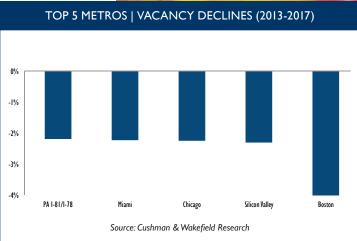
Although trucks remain today's primary shipping method for domestic distribution, a nationwide shortage of truck drivers poses a risk to existing distribution models.

The long-predicted truckload capacity crunch has everyone exploring new alternatives. Rail is fast emerging as a top criterion in both logistics strategy and industrial real estate development. As transportation costs rise, more shippers are looking to reduce long-haul trucking costs by using intermodal rail. U.S. rail intermodal traffic increased 5.2% in 2014 from the prior year, according to the Association of American Railroads.

Markets with intermodal facilities boast the highest rent growth — a trend we expect to continue as rail regains its prominence. Although the major hubs — Dallas/Fort Worth, Atlanta and Chicago — are leading the way in absorption and construction, activity is trickling down to other markets as well.









Indianapolis and Kansas City, both key intermodal and inland distribution markets, are also strong performers while Denver ranks in the top 10 U.S. industrial markets for highest occupancy. Kansas City has the newest and arguably most modern intermodal facility with direct access into Mexico via the Kansas City Southern Railroad.

Land availability, a sizable population and, perhaps most important, inland ports with rail connectivity to other major cities are some of the notable traits of these markets. For example, Dallas/Fort Worth offers rail connectivity to both Chicago, which is the nation's busiest inland port, and Southern California, which is North America's busiest seaports through which 40% of imports enter the U.S. The Dallas/Fort Worth market currently has over 11.7 msf of spec product under development. This market is set to add an additional 23 msf of new inventory in the next three years.

## INCREASED DEVELOPMENT IN CORE MARKETS BUT LAND WILL REMAIN AN ISSUE

The e-commerce impact on the industrial sector is reinforcing the need to secure the best sites that are close to population centers. This has been a tremendous boon to owners and developers of entitled land suitable for development or located adjacent to urban areas.

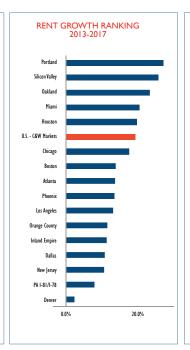
Although secondary markets have seen an increase in development, activity in primary markets has been stronger, particularly in core markets like the Inland Empire, Chicago, Dallas/Fort Worth, Houston, and Central New Jersey. The Inland Empire continues to attract its share of large industrial projects. Looking at what's being entitled and what's planned, there could possibly be an additional 60-to-70 msf of new development in the next five years, provided the economy and leasing activity stay strong. The Chicago industrial market is

also making great strides with new developments.

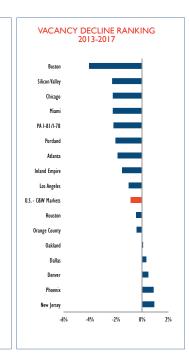
Limited availability and high land prices are making urban facilities more expensive and neighboring submarkets are becoming more and more land-constrained in many top markets. The nation's long shift to the South and the West is continuing as its population center edges away from the Midwest.

In the Midwest and the Northwest, the population edged up by less than half a percent, while in the West and the South the population grew by nearly 1%. There was strong growth not just in California, Texas and Florida, but also in Arizona, Colorado, Utah and Washington. Land is certainly a big issue and the challenge is assemblage, not just ownership. Some markets will likely see older stock demolished to meet part of the demand.

	2013	2014	2015F	2016F	2017
Atlanta	\$3.73	\$4.04	\$4.10	\$4.14	\$4.2
Boston	\$6.32	\$6.58	\$6.76	\$7.01	\$7.2
Chicago	\$4.31	\$4.67	\$4.81	\$4.96	\$5.0
Dallas	\$4.76	\$4.83	\$4.95	\$5.13	\$5.2
Denver	\$6.42	\$6.54	\$6.27	\$6.43	\$6.5
Houston	\$5.39	\$5.93	\$6.10	\$6.28	\$6.4
PA 1-81/I-78	\$3.80	\$3.87	\$3.98	\$4.06	\$4.1
Inland Empire	\$4.84	\$4.82	\$4.84	\$5.08	\$5.3
Los Angeles	\$7.17	\$7.26	\$7.53	\$7.94	\$8.1
Miami	\$6.21	\$6.45	\$6.84	\$7.22	\$7.4
New Jersey	\$5.98	\$6.22	\$6.43	\$6.53	\$6.6
0akland	\$6.15	\$6.74	\$7.14	\$7.37	\$7.5
Orange County	\$8.64	\$8.97	\$9.28	\$9.59	\$9.6
Phoenix	\$7.20	\$6.51	\$7.88	\$8.07	\$8.1
Portland	\$5.57	\$6.25	\$6.46	\$6.82	\$7.0
Silicon Valley	\$14.54	\$15.42	\$16.75	\$17.99	\$18.2
U.S C&W Markets	\$5.92	\$6.25	\$6.58	\$6.91	\$7.0



#### VACANCY FORECAST 2013 2014 2015F 2016F 2017F 7 9% 9 7% 8 0% Atlanta 13.4% 11.8% 10.9% 9.8% 9.4% Boston Chicago 7 7% 6 9% 6.8% 6 3% 5 4% Dallas 8.6% 9.6% 10.5% 10.0% 8.9% Denver 4.6% 4.9% 6.3% 5.6% 5.1% Houston 6.4% 5.6% 6.0% 5.5% 6.0% PA 1-81/I-78 8.5% 6.5% 6.0% 5.9% 6.3% Inland Empire 6.1% 6.3% 6.2% 5.7% 4.6% Los Angeles 4.4% 3.4% 3.2% 3.2% Miami 7.0% 6.8% 5.6% 5.0% 8.9% 9.1% 9.5% New Jersey 8.2% 4.0% 4.3% 0akland 4.2% 4.5% 3.8% 4.0% 3.8% 3.7% 4.2% 4.0% Orange County 9.4% 11.5% 8.8% 10.1% 10.3% Phoenix 5.7% 4.8% 4.3% Portland 6.4% 6.0% Silicon Valley 8.1% 6.9% 6.3% 6.0% 8 3% U.S. - C&W Markets 7.5% 6.8% 6.3% 6.1% 6.6%







Historically, the main benefactor of robust economic fundamentals were brick-and-mortar retail locations, which then filtered to the warehouse market, where inventory was stored and distributed. Although this remains the prevalent use of warehouse space in the U.S., e-commerce is transforming warehouses into the retail stores of the future as more and more consumers use the internet for purchasing merchandise. The increase in demand for e-commerce facilities is the major driver in the resurgence of new development throughout the country. These new buildings require build-outs not found in many existing facilities.

One of the most significant trends in industrial real estate is the growing dominance of large, "big box" space in new construction.

These massive structures are generally state-of-the-art distribution facilities equipped with features that many clients desire, such as excess clear heights, larger bays, more surrounding land for additional parking, and more power for fulfillment equipment.

The warehouse of today requires features such as clear heights of 36-to-40 feet to accommodate modern conveyor systems, which need greater temperature control and

require more power than many existing locations offer. Other factors pushing distribution centers from 30'-32' to 36'-40' are mezzanines that support high velocity order picking.

Amazon is clearly making the largest e-commerce impact in the U.S. today. In the Inland Empire region of Southern California, Amazon occupied an additional 4.2 msf in the past 24 months. In a move to compete with Amazon, Walmart is building a 1.2-msf e-commerce facility in Chino, CA, and another 1.2-msf facility in the Atlanta submarket of







Union City. Home Depot, Target, and Kohl's are also making major investments in e-commerce related facilities throughout the U.S. With projected occupancy gains of 380 msf in warehouse/distribution space from 2014-2017, this demand will remain strong.

#### LAND AVAILABILITY KEY TO VACANCY

With a 6.7% vacancy rate, the warehouse sector has now posted 19 consecutive quarters of declining vacancies. Strong market demand for high-quality class A space has led to tight supply. New inventory will be added to the U.S. warehouse market at a brisk pace over the next three years as an additional 290 msf will be completed, with much of it over 100,000 sf per building. As the overall economy improves, however, the small building market will further tighten, which will then spur speculative development in this size range.

Even with the influx of new construction, increased demand should further decrease this sector's vacancy rate to 6.3% in 2015. Markets with land available to develop, including the Inland Empire, Chicago, Atlanta, Dallas, New Jersey, Phoenix, Houston, and the PA I-8I/I-78 Corridor will continue building to satisfy the changing requirements for warehouses due to e-commerce.

As interest grows in new state-of-the-art facilities, the largest distribution hubs such as

Inland Empire, Chicago, and Atlanta will recognize significant construction through 2017, and vacancy rates are expected to fall substantially over the next five years even with the addition of new supply. Mature markets including Los Angeles, Orange County and Silicon Valley, with diminished land to develop, will continue to tighten.

#### **RENTAL RATE GROWTH ACCELERATES**

Significant space absorption, coupled with historically low supply is driving strong rent growth in most major industrial hubs. U.S. warehouse rents are projected to grow by more than 5% in 2015 and by more than 10% over the next three years. The largest gains are expected to be in supply-constrained markets such as the Los Angeles Metro Area and Silicon Valley. Rents in both markets are expected to rise nearly \$0.50 psf/yr and finish significantly higher than the national average.

Although the rate of growth will slow in 2017, asking rents for warehouse space in Los Angeles Metro will finish 2017 at \$8.12 psf/yr, significantly higher than the U.S. average of \$5.79 psf/yr. Strong rent growth in Silicon Valley will make the market the most expensive for warehouse space in the country by 2017, with an asking rate of \$9.03 psf/yr.

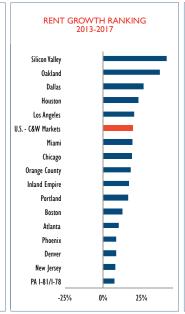
As the Gulf and East Coast port markets continue to capture modest market share from West Coast port markets, Houston has been a

stand-out, chalking up one of its best years on record in 2014. In response, rental rates have increased by more than 13% in the last year and are projected to reach \$6.17 psf/year in 2017. However, the recent drop in oil prices — while largely positive for the U.S. economy-is a concern and is prompting market watchers to focus on this strong performing market. The outlook for Houston in 2015 remains highly contingent on energy pricing. Demand for new space should abate along with the slowing in the energy sector, and 2015 is likely to see a slight correction in real estate fundamentals.

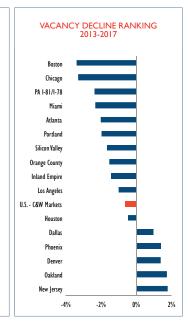
Newly added port customers and shifting cargo from U.S. West to East Coast are all fueling the growing cargo volumes at Georgia's ports. In addition to Savannah, Atlanta has also benefitted significantly from the increased trade volume with a 51.5% annual increase in leasing activity in 2014 and strong development pipeline.

Markets with significant construction activity, including the Inland Empire, PA I-81/I-78 Corridor, Chicago, and Dallas, offer the most affordable rates, which are projected to remain below the national average for the next three years. New supply will keep landlords from significantly raising asking rates.

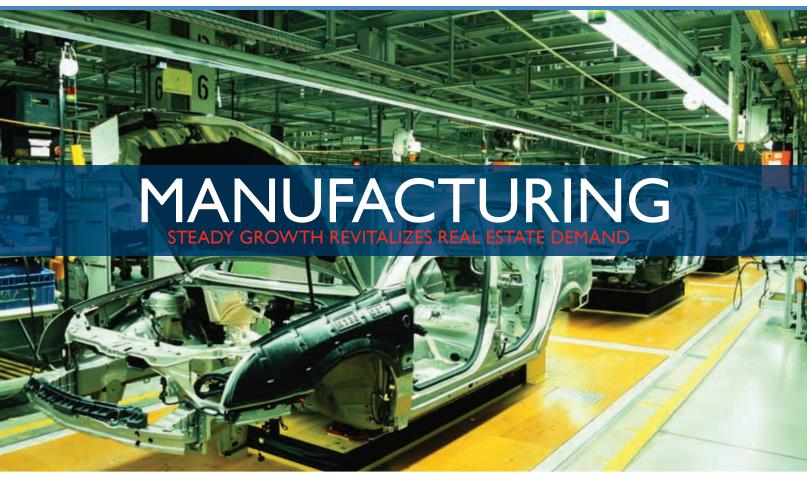
	2013	2014	2015F	2016F	2017
Atlanta	\$3.34	\$3.50	\$3.57	\$3.64	\$3.68
Boston	\$5.50	\$5.70	\$5.88	\$6.07	\$6.18
Chicago	\$4.17	\$4.60	\$4.74	\$4.86	\$4.95
Dallas	\$3.61	\$4.20	\$4.36	\$4.49	\$4.56
Denver	\$4.80	\$5.03	\$5.10	\$5.19	\$5.21
Houston	\$5.02	\$5.72	\$5.89	\$6.01	\$6.17
PA 1-81/I-78	\$3.82	\$3.87	\$3.98	\$4.07	\$4.11
Inland Empire	\$4.26	\$4.45	\$4.50	\$4.74	\$4.97
Los Angeles	\$6.75	\$7.00	\$7.49	\$7.93	\$8.12
Miami	\$6.20	\$6.31	\$6.73	\$7.13	\$7.39
New Jersey	\$5.20	\$5.36	\$5.48	\$5.56	\$5.60
0akland	\$5.11	\$6.12	\$6.51	\$6.77	\$7.01
Orange County	\$7.32	\$7.55	\$7.84	\$8.35	\$8.62
Phoenix	\$5.76	\$5.68	\$5.92	\$6.15	\$6.25
Portland	\$5.11	\$5.33	\$5.57	\$5.79	\$5.94
Silicon Valley	\$6.37	\$7.00	\$7.45	\$8.23	\$9.03
U.S C&W Markets	\$4.85	\$5.06	\$5.34	\$5.62	\$5.79



	2013	2014	2015F	2016F	2017F
Atlanta	9.2%	8.8%	9.2%	7.9%	7.2%
Boston	13.1%	12.1%	11.1%	10.0%	9.7%
Chicago	9.9%	8.6%	8.6%	8.0%	6.6%
Dallas	7.6%	9.1%	10.3%	9.8%	8.6%
Denver	3.7%	4.0%	6.5%	5.8%	5.1%
Houston	6.6%	6.1%	6.1%	5.5%	6.1%
PA 1-81/I-78	8.6%	6.5%	5.9%	5.8%	6.3%
Inland Empire	5.9%	6.2%	6.3%	5.8%	4.5%
Los Angeles	4.3%	3.2%	3.0%	3.1%	3.3%
Miami	7.2%	6.9%	5.6%	5.1%	4.9%
New Jersey	8.3%	9.3%	9.6%	10.3%	10.0%
0akland	3.3%	4.3%	3.4%	4.3%	5.0%
Orange County	4.7%	3.7%	4.0%	3.4%	3.2%
Phoenix	9.6%	10.0%	8.4%	10.6%	11.0%
Portland	6.5%	6.0%	6.0%	5.1%	4.5%
Silicon Valley	5.8%	5.7%	4.9%	4.2%	4.1%
U.S C&W Markets	7.5%	6.7%	6.3%	6.3%	6.9%







Manufacturing activity plays a vital role in the U.S. economy, generating jobs for millions of workers, providing incomes for households across the economic spectrum, and producing necessary and innovative products for domestic consumption and export.

U.S. manufacturing activity has picked up in recent years and this sector is expected to continue to post steady increases in both output and employment. Since 2009, manufacturing has accounted for 12.5% of the U.S. GDP. Year-over-year job growth has been

reported in many sectors, including primary metals, fabricated metal products, apparel, leather and allied products, furniture, food, beverage and tobacco products, transportation equipment, appliances and components, paper products and wood products.







U.S. manufacturing employment has shifted significantly since its peak in 1979 at 19.6 million. After decreasing for more than two decades, employment has increased for the fourth consecutive year, now hovering near the 12.1 million mark.

### MANUFACTURING MAKES A COMEBACK

U.S. manufacturing is making a highly anticipated comeback. The promise of cheaper domestic energy sources and rising labor costs around the world are prompting more manufacturers to set up shop locally. This phenomenon, known as reshoring or in-sourcing, is being adopted by a number of major companies now expanding operations stateside.

A major factor in determining where to house production is labor costs. In the last few years, labor costs in China have increased year-over-year by nearly 20% and by 5.0% in Mexico. Meanwhile, in the United States, labor costs have risen year-over-year by only 3% — making the decision to operate in the U.S. marginally more cost-effective. Currently, the average manufacturing wage in China is \$3.50 per hour — roughly half of the U.S. minimum wage of \$7.25, and is expected to grow by another 10% per year over the next several years.

Baxter International, for instance, is constructing a new 1.0-msf state-of-the-art

manufacturing facility in Atlanta to support the growth of its plasma-based treatments. The new facility is scheduled to be fully-operational in 2018. Other companies that are favoring U.S. facilities include General Electric, Whirlpool, Caterpillar, and DuPont. All have reported expanding or building new U.S. facilities in the last few years. Some of the major advantages of having U.S.-based production facilities are the ability to meet customer demand with production centers nearby, increased exports from the U.S., a reduction of imports to the U.S., and reduced transportation costs.

#### LEASING ACTIVITY PICKS UP SPEED

Increased demand for manufacturing space led to a total of 38.8 msf being leased in 2014. Greater Los Angeles led the pack at 6.2 msf, followed by San Diego at 4.0 msf and Chicago at 3.9 msf.

A lack of quality space remains one of the biggest challenges facing manufacturers in the U.S. Emerging technological advances, such as improved measuring/process control, advanced digital technologies and sustainable manufacturing, have made many older facilities functionally obsolete, opening the door for more speculative construction to take place within the next few years. Large build-to-suit projects are currently underway in Atlanta, Denver, and Chicago, with more

facilities scheduled to break ground in the next few years. With manufacturers aiming to respond faster to local-market demands, regional manufacturing will increasingly be seen as cost effective.

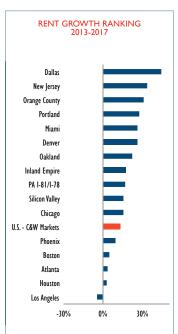
#### **RENTAL RATES RISING**

Rental rate recovery continues to be a bright spot for building owners in the U.S. manufacturing industry. National asking rental rates reached \$5.34 psf in 2014 and are expected to appreciate at an annual average rate of approximately 2.0% over the next few years.

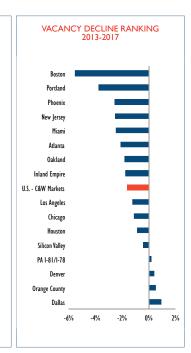
Jacksonville and Atlanta have the lowest asking rental rates at \$3.12 and \$3.36, respectively, while the highest can be found in Greater Los Angeles and Ft. Lauderdale at \$6.81 and \$6.73, respectively. Major manufacturing hubs like Chicago, Phoenix and Jacksonville have all seen year-over-year rental increases of more than 6%.

About 35% of the manufacturing markets tracked by Cushman & Wakefield reported direct net asking rental rates above the national average. We see rental rates increasing for most manufacturing markets through 2018 in step with strengthening consumer demand.

#### **RENT FORECAST** 2013 2015F 2016F 2014 2017 \$3.42 \$3.41 \$3.49 \$3.54 Atlanta \$3.36 \$6.80 \$6.47 \$6.54 \$6.54 \$6.66 Boston Chicago \$4.19 \$4.34 \$4.49 \$4.58 \$3.97 \$4 75 Dallas \$4 16 \$4 36 \$4 67 \$3.29 Denver \$5.51 \$5.66 \$5.85 \$5.89 \$4 68 Houston \$5.67 \$5.63 \$5.69 \$5.72 \$5.85 PA 1-81/1-78 \$3.04 \$3.34 \$3,45 \$3.54 \$3.55 Inland Empire \$5.02 \$5.29 \$5.34 \$5.61 \$5.89 Los Angeles \$7.40 \$6.81 \$6.88 \$7.06 \$7.05 \$5.39 \$5.98 \$6.24 \$6.57 \$6.80 New Jersey \$4.43 \$4.95 \$5.34 \$5.71 \$5.93 0akland \$5.99 \$7.07 \$7.33 \$6.50 \$6.75 \$9.02 \$9.96 \$10.67 \$10.83 Orange County \$8.28 Phoenix \$5.88 \$6.12 \$6.14 \$6.30 \$6.44 Portland \$5.38 \$5.57 \$5.74 \$5.85 \$4.58 \$9.53 \$10.36 \$11.44 \$12.15 Silicon Valley \$10.50 U.S. - C&W Markets \$5.28 \$5.34 \$5.50 \$5.77 \$5.98



	2013	2014	2015F	2016F	2017
Atlanta	6.7%	6.4%	5.5%	5.0%	4.6%
Boston	14.6%	11.4%	11.1%	10.0%	9.1%
Chicago	4.9%	4.7%	4.3%	3.9%	3.8%
Dallas	11.9%	14.9%	13.4%	12.3%	12.8%
Denver	3.8%	4.8%	4.5%	4.2%	4.2%
Houston	4.5%	3.7%	3.9%	3.7%	3.6%
PA 1-81/I-78	6.0%	5.6%	5.3%	6.3%	6.1%
Inland Empire	6.5%	6.0%	5.5%	4.9%	4.7%
Los Angeles	4.9%	4.4%	4.2%	3.7%	3.6%
Miami	6.8%	6.5%	5.6%	4.8%	4.3%
New Jersey	6.8%	5.3%	5.5%	4.7%	4.3%
0akland	4.3%	4.0%	3.4%	2.8%	2.5%
Orange County	3.0%	3.5%	3.5%	3.4%	3.5%
Phoenix	6.8%	5.7%	5.4%	4.7%	4.2%
Portland	5.1%	3.2%	2.3%	1.5%	1.3%
Silicon Valley	4.6%	4.3%	4.1%	4.1%	4.1%
U.S C&W Markets	5.9%	5.2%	4.4%	4.1%	4.3%







### ACCELERATING JOB GROWTH WILL STRENGTHEN FUNDAMENTALS

While national new supply of flex space ramped up in 2014 to its highest level since 2008, it was outpaced by steady absorption. Bolstered by the technology sector, Silicon Valley outperformed all of its peers in terms of space absorbed over the past three years and is expected to remain the leader, accounting for 18% of absorption from 2015-2017.

Rounding out the anticipated top performers going forward are three metros with highly skilled labor forces: Boston (tech, pharmaceuticals, and life sciences), Denver (energy and aerospace), and Dallas (energy and tech). Together, these dynamic metros will absorb a combined total of 4.8 msf over the forecast period.

Atlanta and Portland, two markets recently hampered by negative absorption, are expected to experience positive momentum in the near term, owing to tame supply pipelines and economic expansion. Improving employment conditions nationwide should continue to drive demand for flex product over the next few years and keep fundamentals strong.

### VACANCY RATES WILL CONTINUE TO FALL

With employment gains driving demand and new supply remaining constrained in most markets, vacancy is forecast to decline in 2015. The lowest rates are anticipated in LA Metro, Orange County, and Miami at 3.6%, 5.3%, and 5.4% respectively. Vacancy rates across most metros are expected to fall further over the forecast period.

Phoenix, which added 2.5 msf of new product in 2014, is likely to struggle with elevated vacancy relative to its peers. The market is expected to see vacancy settle just south of 16% by 2017, virtually unchanged from today. In the PA I-81/I-78 Corridor, where vacancy has held near 20% since 2009, the rate is expected to fall more than 500 basis points to 14.9% over the next three years due to steady demand and an absence of new deliveries. Nationwide, vacancy is forecast to close 2017 at 8.8%.

#### CONSTRUCTION SET TO ACCELERATE

Construction remained in check from 2011-2013 as the economy emerged from the recession with just 4.9 msf of new supply delivered, but 2014 marked a turning point with 4.3 msf added in one year. Phoenix accounted for more than half of new deliveries,



with Silicon Valley adding 600,000 sf and Denver and the New Jersey Metro each adding 460,000 sf of new inventory.

Over the next three years, Silicon Valley and the New Jersey Metro are each expected to add 840,000 sf and 700,000 sf of new product, respectively. Several markets have no new supply in the pipeline: the PA I-81/I-78 Corridor, Atlanta, Phoenix, Orange County, and the Inland Empire. While new deliveries are expected to increase nationwide, demand

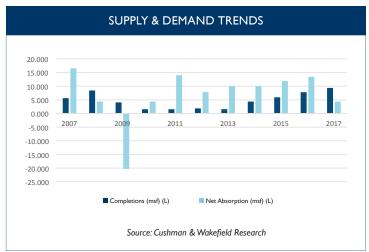
will continue to outpace supply with 29.7 msf of projected absorption from 2015-2017.

#### **DEMAND WILL DRIVE RENTS**

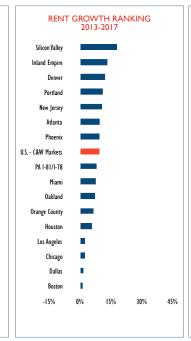
While certain markets will clearly outperform others, flex rents are projected to grow about 6.9% in 2015 and annual growth will average about 5.2% through 2017, The supplyconstrained LA Metro is forecast to post 6.7% average annual rent growth through 2017, pushing asking rates to \$12.37 psf.

Houston, where rents are among the lowest across markets, is expected to see average annual rate increases of 6.2% over the three-year forecast period, but rents will remain below \$8.50 psf. Silicon Valley, where asking rents remain the highest across markets, is anticipating rates of \$20.94 by 2017, an average of 6.1% annual growth over the forecast period. Nationwide, rents are forecast to close 2017 at \$13.09 psf.

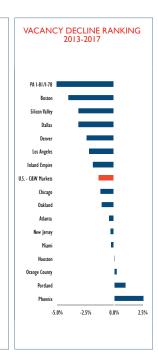




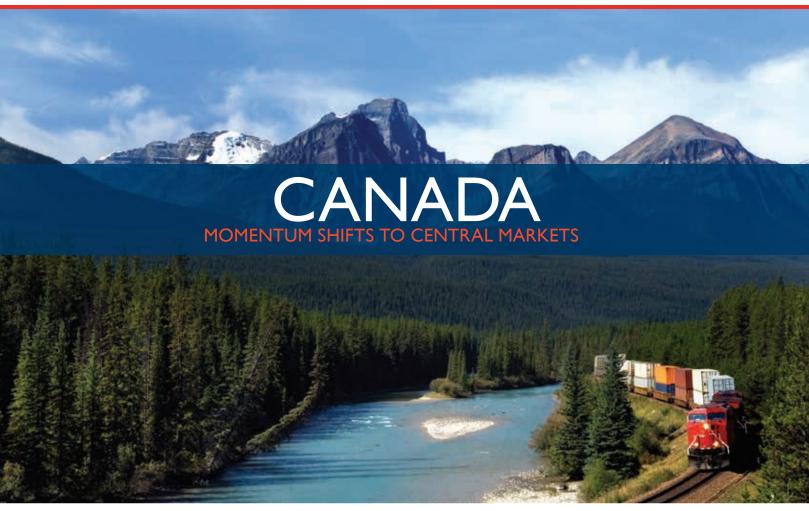
	2013	2014	2015F	2016F	2017
Atlanta	\$7.16	\$7.48	\$7.83	\$8.15	\$8.4
Boston	\$8.72	\$8.38	\$8.83	\$9.38	\$9.6
Chicago	\$8.64	\$8.65	\$8.84	\$9.06	\$9.13
Dallas	\$8.16	\$7.84	\$8.30	\$8.80	\$9.00
Denver	\$8.95	\$9.51	\$10.03	\$10.52	\$10.80
Houston	\$7.20	\$7.08	\$7.62	\$8.12	\$8.48
PA 1-81/I-78	\$5.31	\$5.58	\$5.75	\$6.25	\$6.60
Inland Empire	\$8.94	\$9.75	\$10.12	\$10.63	\$11.16
Los Angeles	\$10.81	\$10.18	\$11.07	\$11.90	\$12.37
Miami	\$8.67	\$9.41	\$9.35	\$9.51	\$10.04
New Jersey	\$10.82	\$11.21	\$11.99	\$12.75	\$13.04
0akland	\$8.61	\$9.01	\$9.23	\$9.70	\$10.07
Orange County	\$11.63	\$11.78	\$12.40	\$13.38	\$13.67
Phoenix	\$11.68	\$12.14	\$12.77	\$13.39	\$13.76
Portland	\$9.94	\$10.40	\$11.06	\$11.63	\$11.99
Silicon Valley	\$16.37	\$17.57	\$19.30	\$20.64	\$20.94
U.S C&W Markets	\$10.90	\$11.26	\$11.91	\$12.73	\$13.09



	2013	2014	2015F	2016F	2017F
Atlanta	11.9%	12.4%	12.1%	11.7%	11.4%
Boston	13.0%	11.7%	10.2%	9.0%	9.0%
Chicago	9.4%	9.0%	8.7%	8.4%	8.2%
Dallas	13.2%	11.6%	11.2%	10.7%	10.1%
Denver	8.4%	7.9%	7.2%	6.2%	5.9%
Houston	8.5%	8.6%	8.2%	8.1%	8.5%
PA 1-81/I-78	21.9%	20.1%	18.0%	16.0%	14.9%
Inland Empire	7.8%	7.7%	6.9%	6.3%	5.9%
Los Angeles	5.2%	5.2%	3.6%	3.3%	3.0%
Miami	4.8%	6.1%	5.4%	5.2%	4.5%
New Jersey	9.9%	10.7%	10.6%	10.1%	9.6%
0akland	8.2%	7.8%	7.8%	7.2%	7.1%
Orange County	5.6%	5.9%	5.3%	5.6%	5.8%
Phoenix	12.3%	16.0%	14.8%	16.1%	15.9%
Portland	8.2%	12.5%	10.6%	9.9%	9.2%
Silicon Valley	10.2%	10.0%	8.4%	7.6%	7.1%
U.S C&W Markets	10.2%	9.6%	9.0%	8.4%	8.8%







Increased U.S. demand for Canadian goods and services was a key story in late 2014, enhanced by a low-value loonie, and strengthening non-energy export activity. A more competitive dollar was good news for manufacturing activity, where profits were up by 40% year-over-year as of Q3 2014 (TD Economics). Lower oil prices will further spur manufacturing activity in Ontario and Quebec, which are both expected to see accelerated GDP growth in 2015.

However, it is a different story for oil-rich economies such as Alberta, Newfoundland and Labrador, and Saskatchewan, which are recalibrating outlooks based on dramatically lower oil prices. As well, the widely publicized retreat of Target from Canada, announced in January 2015, had a major impact on both retail and industrial sectors. The retailer, which operated in Canada for less than two years, pulled out of 133 locations and put 17,600 employees out of work. Of Target's 20 msf

footprint, 5 msf of industrial space, which is mostly located in Calgary and Toronto.

While the changing energy landscape is shifting momentum in favor of central Canada in 2015, western markets experienced the lion's share of expansionary demand in 2014. National industrial absorption rose to 3.7 msf during the third quarter of 2014, driving vacancy down to 6.1% — the lowest level since Q3 2012. Tenant growth in Calgary and Vancouver accounted for a combined 6.7 msf of positive absorption in the first three quarters of 2014.

The key driver in the Calgary market in 2014 was not the energy industry, but the distribution and logistics sector, which has been expanding to meet growing online retail demand. While the drop in oil prices generated uncertainty, the last quarter of 2014 was marked by strong growth and, at the time of publication, remained at a healthy moderate level. Edmonton's industrial market, which saw

strong demand in 2014 from both oil and gas support services, has started to see some softening in leasing activity, but still anticipates a positive 2015 given the long-term nature of major energy-related projects underway.

Central Canadian markets, including Toronto, Montreal and Ottawa, which saw weak demand for industrial space in the first half of 2014, experienced a notable rebound with positive absorption rising to 2.0 msf over the third quarter. Again, this is being driven by the growing U.S. demand for Canadian goods and services, a more competitive dollar, and lower energy costs.

### DEVELOPMENT TRACTION IN CALGARY AND TORONTO

On the development side, Western and Central Canadian markets have been most active, with Calgary and Toronto seeing a significant amount of speculative development. In Calgary, only 250,000 sf of the 1.7 msf under



construction was preleased as of the third quarter of 2014. This indicated optimism in the market's potential before sustained low oil prices started to take a toll. Development of big box industrial facilities ballooned in the Greater Toronto Area (GTA) in 2014; of the 7.3 msf under construction at the end of the third quarter, almost 5 msf was being built on a speculative basis.

### VANCOUVER INFRASTRUCTURE IMPROVEMENTS

This west coast port city — consistently one of the tightest industrial markets in the Americas — currently has a vacancy rate of 4.2%. Acquisition fever and cap rate compression were key stories in 2014, with strong demand for ownership from both foreign buyers and local owner/operators. Leasing activity has seen modest demand in recent quarters, which has held rental rate rises in check.

Additionally, with the U.S. economy gaining strength and the value of the Canadian dollar falling alongside low oil prices, Vancouver's manufacturing sector is gaining traction. Exports increased 8.3% year-over-year in August, highlighting rising U.S. demand for non-energy exports.

Major improvements made to the province's transportation infrastructure will also support improved trade and open new markets. The completion of the South Fraser Perimeter Road, for example, is spurring

demand in the Tilbury and North Surrey markets. The ongoing expansions at various ports around Vancouver, including the Fraser River Port, Deltaport, and the Port of Vancouver, are also playing a vital role in opening new trade potential.

Over 2 msf of new supply came to market in Vancouver in 2014 with more than half of this product built on a speculative basis. This level of development activity, which is down from historic norms, is expected to pick up over the near term. Leasing demand is targeted to strengthen in 2015 and into 2016, driven by the U.S.

However, weaker Asia-Pacific demand for resources and an expected drop in non-gas capital spending will offset some of these gains. Given the anticipated new supply, the vacancy rate is expected to decline slowly to 3.3% by Q4 2016.

### CALGARY FEELS THE STRAIN OF LOW OIL PRICES

Consumer-based demand was the primary driver of growth in Calgary's industrial market in 2014 and this trend will help offset the negative impact of low oil prices in 2015 and beyond. A number of significant transactions in the distribution and logistics sector were completed by tenants such as Canadian Tire and Pet Valu.

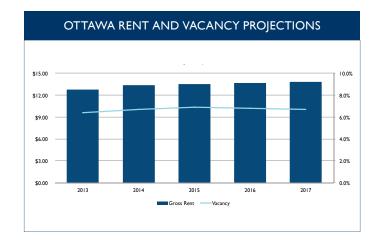
Demand has been strong for small- to medium-sized bay product and diminishing

availability exerted upward pressure on rental rates in 2014. The strength of the market gained the attention of Texas-based Hillwood Investment Properties, a "top-five" U.S. developer. It purchased land in the Balzac area of Calgary, where it is building a 500,000-sf facility on spec with an additional 3.0 msf of planned developments.

A shortage of quality product and low vacancy, along with strong absorption and leasing activity in speculative developments, triggered another major development cycle in Calgary last year. Approximately 3.6 msf of new product will be delivered over the coming year. The impact of lower oil prices and the return of Target's distribution space to market (1.6 msf), will mean softening demand and rising vacancy in 2015. Vacancy is projected to rise to approximately 8.0% by the end of 2015, but a positive shift in expansionary momentum is expected to lower vacancy in 2016 and beyond.

#### GTA POISED FOR GROWTH

The GTA industrial market, which ranks as the third largest in North America, saw long-awaited expansionary demand in Q3 2014, spurred by U.S. demand and a competitive Canadian dollar. After enduring a year-and-a half of weak demand and negative absorption, this rebound was a welcome relief. Lower energy prices and record automotive sales fueled demand for automobile parts, machinery, equipment and other products, reviving the export sector. The auto sector, which accounted for 35% of Ontario exports







in 2013, was expected to grow by 8% in 2014 (Export Development Canada). Thanks to this and other factors, positive absorption reached 1.5 msf in the third quarter of 2014 from an average quarterly absorption of negative 575,000 sf in 2013.

Against this brighter backdrop, a significant development cycle was triggered with the focus on big box speculative construction. Currently, 7.3 msf is under construction in the GTA, with 4.6 msf expected to arrive by the second quarter of 2015. Developers are banking on growing business confidence to support expansion decisions. As of the third quarter of 2014, the GTA industrial vacancy rate was 5.4%, down from 5.8% one year ago. While construction completions may push vacancy to 5.6% by mid-2015, stronger positive demand should absorb much of the new product, causing vacancy to tighten to 5.4% by Q4 2016.

#### MONTREAL SEES DATA CENTER **GROWTH**

Montreal is the second largest industrial market in Canada, and like the GTA, has seen muted demand in recent quarters. However, the third quarter marked a turning point, with a positive shift in absorption to about 565,000 sf. Montreal has been a strong beneficiary of increased demand supported by a lower dollar and oil prices. As well, the data center sector is growing due to the region's lower natural disaster risk and low electricity costs thanks to the province's abundant supply and subsidies. While the Montreal market will see little rental rate growth, demand is expected to gain momentum over 2015 and beyond. Vacancy, which sits at 9.5% is expected to drop to 8.6% by the end of 2015, and, depending on the supply response, will continue this decline.

#### OTTAWA SEES ICT GROWTH

Ottawa's industrial market is small and dominated by the distribution sector. As Canada's capital, the regional economy is driven by federal government and tight federal budgets have led to non-existent expansionary demand since about 2012. A bright spot has been the information and communication technology (ICT) services sector, which is driving new demand. Generally, the strengthening U.S. economy, weaker dollar and a federal election in 2015 should support positive growth into 2015 and 2016. With the arrival of new supply, the vacancy rate will crest at 6.9% by the end of 2015, and then begin to tighten.

#### ATLANTIC CANADA: TIDES TURN

Industrial markets in Nova Scotia and New Brunswick will remain subdued due to overall lackluster economic conditions. However, in Nova Scotia, increased energy and merchandise exports spurred GDP growth, which is expected to reach 2.2% in 2014 (RBC Economics).

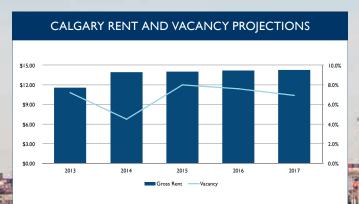
While expansionary demand remains weak, the tides may turn in 2015, as U.S. demand for goods improves. In Halifax and Moncton, absorption is down as some larger occupiers have relocated into owned facilities.

In Newfoundland and Labrador, the oil industry continues to drive demand and new construction, with more land being made available for development and vacancies increasing in older warehouse facilities. However, if sustained, low oil prices are expected to slow new development and growth over 2015.









#### TORONTO RENT AND VACANCY PROJECTIONS \$12.00 8.0% \$9.00 6.0% 0.0% \$0.00 2013 2014 2015 2016 2017 Gross Rent







### MAJOR FORCE IN GLOBAL AUTOMOTIVE INDUSTRY

Mexico is becoming one of the world's most dynamic automotive manufacturing industry locations. In 2009, it was the world's 10th largest auto producer. By early 2014, it had soared past Spain, France, and Brazil to become the world's No. 7 automaker and the fourth largest exporter. Once a sleepy railway crossroads, Aguascalientes now has two massive auto plants and a third on the way. Later this decade, new plants will be producing premium vehicles, BMWs and Mercedes, Infinitis and Audis. Many Nissan vehicles that roll out of the existing plants in Aguascalientes are bound not for domestic showrooms or to auto dealers in the United States but for Brazil. Colombia, the United Arab Emirates, and dozens of other markets.

In Monterrey, the automotive industry is playing an increasingly important role, having an ever-growing number of companies

engaging in the manufacturing of auto parts and vehicles. Recently, KIA Motors selected Pesqueria on the outskirts of Monterrey as the location for its first plant in Mexico.

### MEXICO CITY AND MONTERREY SUSTAIN DYNAMIC GROWTH

The two largest industrial real estate markets, Mexico City and Monterrey, are experiencing sustained dynamic growth, while the cities of Tijuana and Ciudad Juarez remain in clear recovery and the central estates (Bajio region) are experiencing significant growth.

As one of the largest cities in the world, Mexico City's industrial real estate is focused on logistics activity to support increasing e-commerce demands. More sophisticated intermodal logistics platforms are becoming common, propelling demand. On the supply side, real estate developers are bringing increasingly specialized buildings to market, with different layouts particularly adapted for

logistics; these may include large cross-dock areas or 60-foot clearance for robotic racks.

In Mexico City, year-end overall vacancy is expected to stabilize at its historical level of close to 5%, in spite of almost 3 msf of new buildings to be completed in the year. Overall class A asking rent, at US\$5.80 psf, will sustain a moderate year-over-year decrease.

Major drivers of industrial real estate activity continue to reflect the prominent role of distribution and logistics sectors. They include large renovations, like Kuehne+Nagel's 341,000 sf at O'Donnell Logistics Park, or expansions, like Walmart's 132,000 sf at Parque Industrial El Convento.

Mexico City's industrial submarkets have maintained low vacancy rates, and large speculative buildings are under development, such as the 400,000-sf W3 at El Peral in Cuautitlán. Notably, preleasing remains strong,



helping to drive healthy build-to-suit activity. One example is O'Donnell Logistics Park W. VI, a 100% preleased building.

Increasingly large sales, like that of Átomo 3 — the former Gillette plant in Naucalpan—showcase the expanded investment activity. Also, many redevelopment projects are strong indicators of more robust investor confidence.

Monterrey's leasing activity in the third quarter, at approximately 2.9 msf, forecasts an extremely healthy market expected to grow by more than 90% year-over-year.

### HIGH QUALITY GREEN DEVELOPMENTS IN DEMAND

The development of high-quality and environmentally friendly industrial parks is a growing trend in Monterrey. In terms of the current construction activity, 52% of new facilities are being built on a speculative basis and 46% are build-to-suits.

The OMA-Vynmsa Aero Industrial Park in the Apodaca submarket will be the first in Mexico to be located within an airport. To be

delivered in the first quarter of 2015, the park will have its first speculative building completed, a 53,000 sf facility.

### QUERETARO: AEROSPACE MANUFACTURING CENTER

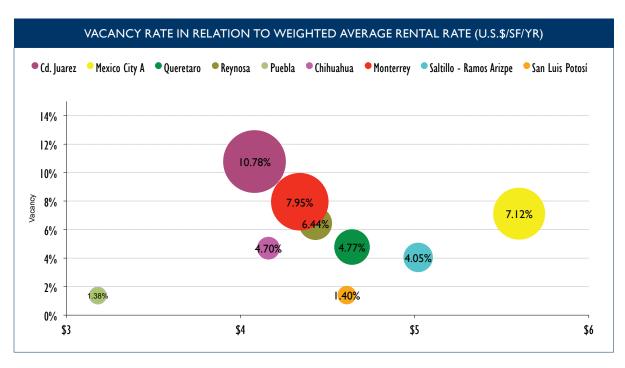
The most prominent hot spot in the Bajio, central Mexico, is the city of Queretaro. More than 36% of Mexico's aerospace manufacturing is done in this city. Aerospace is experiencing double-digit annual growth rates and its success is extending to aeronautical industry services. For example, the largest aircraft repair and overhaul facility in Latin America, Aeromexico-Delta, is located next to the city's airport.

Beyond the aerospace industry, a varied set of industries, including home appliances, auto parts, food and beverage, Information Technology and Communications, along with agro-industries, continue expanding Queretaro's industrial landscape. Companies are taking advantage of the very competitive land prices. Average industrial land costs range from \$638.08 psf to \$231.85 psf for private industrial parks sites and raw land respectively.

Generally, Mexico is increasingly developing a pool of high-skilled workers and rapidly integrating its manufacturing industries with global production lines. Also, in addition to a successful macroeconomic reform agenda, an ambitious investment program by the federal government is expected to bring further improvements to Mexico's transport and logistics infrastructure.

The energy reform bill approved by Congress in 2013 set limits on the longstanding monopoly on the extraction, production and distribution of oil, gas and electricity by permitting private investment. The reform not only marks a paradigm shift in Mexican thinking about oil and gas, but offers the very real prospect that major investment will result in rising production, strengthened reserves and the direct and indirect creation of hundreds of thousands of high quality jobs for Mexican citizens.

Given such factors, Mexico's industrial real estate market is forecast to continue growing and benefiting from increased demand from a diversified range of industries.





#### **METHODOLOGY**

Cushman & Wakefield's office and industrial market forecasts are derived utilizing least-squares regression analysis, isolating trends identified in historical occupancy and rental rate movements as they relate to other predictive factors, including employment growth, new construction and absorption tendencies. All of our forecasts are structured to achieve a 90% confidence level, with a margin of error of (+/-) 5.0%. This approach allows us to quantify benchmark associations in an impartial, scientific and statistically significant way to help ensure we provide our clients with the best information available and on which they can lean to support future real estate decisions.

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